SINGAPORE

EXPLANATORY MEMORANDUM ISSUED BY THE INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY OF SINGAPORE

FINAL DECISION ON THE REQUEST BY SINGAPORE TELECOMMUNICATIONS LIMITED FOR EXEMPTION FROM DOMINANT LICENSEE OBLIGATIONS WITH RESPECT TO THE BUSINESS AND GOVERNMENT CUSTOMER SEGMENT AND INDIVIDUAL MARKETS

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PART I: INTRODUCTION

1 Singapore Telecommunications Limited ("**SingTel**") has requested the Info-communications Development Authority of Singapore ("**IDA**"), pursuant to Sub-section 2.5.1 of the Telecom Competition Code 2005 ("**Code**"), to exempt it from the application of Dominant Licensee requirements contained in Sections 4 and 8 of the Code to most telecommunication services that SingTel provides to business and government End Users ("**SingTel's Request**"). Specifically, SingTel seeks exemption for the provision of: (a) telecommunication services in six individual markets ("**Market-Based Request**"); and (b) all retail telecommunication services to customers in the business and government customer segment with an annual spend on telecommunication services of at least S$250,000 ("**Customer Segment Request**").

2 As required by the Code, IDA issued an initial Consultation Paper ("**First Public Consultation**") on 16 November 2007, in response to which eight parties filed comments. IDA also conducted extensive interviews with SingTel, several other Licensees who are SingTel's competitors or customers and a cross-section of End Users – including government agencies, Multi-National Companies ("**MNC**s"), and Small and Medium-sized Enterprises ("**SME**s") – many of which were recommended by SingTel or one of the other Licensees. IDA issued a Preliminary Decision, about which it solicited comments ("**Second Public Consultation**"), on 26 August 2008. Four parties filed comments in the Second Public Consultation. Based on its review of the comments submitted in the Second Public Consultation, IDA determined that the conclusions reached in its Preliminary Decision were correct. However, as IDA had considered new information provided by SingTel during the Second Public Consultation, and because IDA concluded that the public would benefit from a further elaboration of the bases on which IDA reached its conclusion; IDA issued a Revised Preliminary Decision on 30 January 2009 and invited interested parties to submit further comments ("**Third Public Consultation"**). Three parties filed comments in the Third Public Consultation. SingTel's Request and the comments received during the three Public Consultations are available on the IDA website, www.ida.gov.sg under "Policies & Regulation - Consultation Papers & Decisions".

3 This Explanatory Memorandum describes: (a) the regulatory relief that IDA previously granted SingTel; (b) SingTel's Request; (c) the comments received

in response to IDA's three Public Consultations, and through interviews with Licensees and End Users; (d) the legal standards and procedures that IDA uses to assess requests for exemption from Dominant Licensee requirements; (e) IDA's analysis of SingTel's Request; and (f) IDA's Final Decision.

PART II: EXECUTIVE SUMMARY

4 SingTel's Request is far broader than its three previous exemption requests. If IDA were to grant SingTel's Request in its entirety, SingTel would be relieved from Dominant Licensee regulation for *all* telecommunication services that it provides to government and business customers who spend at least S$250,000 per year on telecommunication services, and for *most* of the telecommunication services that it provides to government and business customers who spend less than S$250,000 per year on telecommunication services.

5 IDA declines to grant SingTel's Request in its entirety. Rather, after considering the comments submitted during the three Public Consultations, IDA has concluded that the Terrestrial International Private Leased Circuit ("**Terrestrial IPLC**") and Backhaul markets are now effectively competitive and that continued imposition of *ex ante* Dominant Licensee obligations in the Terrestrial IPLC and Backhaul markets is no longer necessary. IDA will therefore grant SingTel an exemption from *ex ante* regulation in these markets. In addition, IDA will not make changes to the current exemption from *ex ante* regulation in the International Managed Data Services ("**IMDS**") market.[1] However, because IDA believes SingTel retains the ability to leverage its market power in the Local Leased Circuit ("**LLC**") market to distort competition in the Terrestrial IPLC, Backhaul and IMDS markets, IDA will not exempt SingTel from *ex post* competition rules in these markets. IDA has further concluded that, because effective competition has not yet taken root in the Business Local Telephony Service ("**BLTS**"), LLC and Local Managed Data Services ("**LMDS**") markets, IDA will not grant any exemption in those markets. Finally, IDA has concluded that it will not grant SingTel's proposed Customer Segment Request.

PART III: REGULATORY RELIEF GRANTED TO SINGTEL IN PRIOR EXEMPTION PROCEEDINGS

6 IDA adopted the first Telecom Competition Code in September 2000, shortly after the full liberalisation of the Singapore telecommunication market. At that time, because of SingTel's significant market power as a result of its historical position as the monopoly provider of wireline telecommunication services, IDA concluded that SingTel should be classified as a Dominant Licensee. Consequently, pursuant to the Code, SingTel was subject to Dominant

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[1] IDA granted SingTel an exemption from *ex ante* Dominant Licensee obligations for the IMDS market in April 2005.

Licensee regulation in every market in which it participated pursuant to its licence.[2]

7 In the subsequent years, as competition developed, SingTel has filed four requests, seeking exemption from Dominant Licensee regulation in a wide range of markets. As set out below, IDA had carefully assessed each request and, where appropriate, had granted significant regulatory relief to SingTel.

8 On 12 November 2003, less than two years after the adoption of the first Telecom Competition Code, IDA issued its decision on SingTel's request for exemption from Dominant Licensee obligations with respect to the International Telephone Services market ("**ITS Decision**"). In the ITS Decision, IDA exempted SingTel from the application of Dominant Licensee obligations to services that SingTel provides in the Wholesale ITS market. IDA also exempted SingTel from the obligation to file tariffs for services that SingTel provides in the Residential and Commercial Retail ITS markets, which IDA found to be substantially competitive.

9 Less than one year later, SingTel submitted a request for exemption from Dominant Licensee obligations for 10 categories of services – consisting of 28 separate telecommunication product offerings – that SingTel collectively labelled as the International Capacity Services ("**ICS**") market ("**ICS Request**"). SingTel's ICS Request included a wide range of telecommunication services provided to government and business End Users. On 12 April 2005, IDA issued its decision on SingTel's ICS Request ("**ICS Decision**"), which granted SingTel significant additional regulatory relief.

10 At that time, IDA determined that the 28 telecommunication product offerings for which SingTel had requested an exemption did not constitute a single market because they were not reasonable substitutes for each other. Rather, IDA concluded, these telecommunication product offerings fell within 10 separate markets: Backhaul, Terrestrial IPLC, IMDS, International IP Transit, Leased Satellite Bandwidth, Very Small Aperture Terminal ("**VSAT**") Service, Digital Video Broadcast-IP ("**DVB-IP**"), Satellite TV Uplink, Satellite TV Downlink and Satellite International Private Leased Circuit ("**Satellite IPLC**") markets.

11 Based on the evidence in that proceeding, IDA concluded that continued imposition of *ex ante* and *ex post* Dominant Licensee obligations was no longer necessary for services that SingTel provided in the International IP Transit, Leased Satellite Bandwidth, VSAT, DVB-IP, Satellite TV Uplink, Satellite TV Downlink and Satellite IPLC markets, as there was little evidence that SingTel had either significant market power, or the ability to leverage its dominant position in other markets in order to impede competition in these markets. IDA further concluded that, although competition had developed in the IMDS market, SingTel retained the potential to leverage its dominance in the LLC market to distort competition in this downstream market. Accordingly, IDA exempted SingTel from the application of *ex ante*, but not *ex post,* Dominant Licensee obligations to SingTel's provision of telecommunication product offerings in the IMDS market.

[2] SingTel's separately licensed subsidiaries, SingTel Mobile and SingNet, are classified as Non-dominant Licensees.

12 Finally, IDA determined that, while competition was developing in the Backhaul and Terrestrial IPLC markets, these markets were not yet competitive. Therefore, IDA rejected SingTel's request for an exemption in these markets. However, IDA noted that it had taken significant measures – especially the adoption of the LLC and Cable Landing Station Decisions[3] – that IDA expected would promote competition in these downstream markets.

13 In 2006, SingTel submitted a request for exemption in the Retail ITS market. In IDA's Retail ITS Decision, issued on 5 January 2007, IDA granted SingTel further regulatory relief. Specifically, IDA fully exempted SingTel from Dominant Licensee regulation in the Residential Retail ITS market, and exempted SingTel from *ex ante* Dominant Licensee obligations in the Commercial Retail ITS market.

14 IDA's decisions on the exemptions that it had previously granted SingTel for the ICS and ITS markets can be found on the IDA website.

PART IV: SUMMARY OF SINGTEL'S REQUEST

15 SingTel submitted its current request to IDA on 10 October 2007. As noted above, SingTel seeks exemption from the application of Dominant Licensee regulation to its provision of: (a) telecommunication services in six individual markets; and (b) all retail telecommunication services to customers in the business and government customer segment with an annual spend on telecommunication services of at least S$250,000. The six individual markets for which SingTel requested an exemption under the Market-Based Request are: BLTS; LLC; Backhaul; Terrestrial IPLC; IMDS; and LMDS. **Table 1** below identifies SingTel's product offerings that fall within each of these markets.[4]

16 SingTel has clarified that the Market-Based Request and Customer Segment Request were intended to be cumulative, rather than alternative, requests. SingTel explained that there are some customers who acquire services in the six individual markets, but who do not fall within the scope of the Customer Segment Request, such as business and government End Users who spend less than S$250,000 per year on telecommunication services.

[3] See IDA's Decisions on Mandating Wholesale of SingTel's Local Leased Circuits (16 Dec 2003) and Allowing Greater Access to Cable Landing Stations (10 Sep 2004) on the IDA website.

[4] A Glossary, which contains further description of each telecommunication service category, is attached in **Annex A**.

Table 1 – List of Service Categories for which SingTel Sought an Exemption

Individual Markets *	Service Offers	SingTel Product Offerings
Business Local Telephony Service **(BLTS)** (retail only)	Fixed Telephone Line; ISDN; PhoneNet	• DEL • ISDN2 • ISDN30 • PhoneNet • i-PhoneNet
Local Leased Circuits **(LLC)** (retail only)	Analogue Local Leased Circuits; Digital Local Leased Circuits	• Analogue Local Leased Circuits • DigiLink • DigiPlus • WebLink • WebPlus
Backhaul	Backhaul Service, including Point-to-Point and Backhaul to GNCC	• Backhaul (to GNCC) • Point-to-Point Backhaul • Standard Point-to-Point Backhaul • Backhaul with Interface Protection • Point-to-Point Backhaul with Interface Protection
Terrestrial International Private Leased Circuits **(Terrestrial IPLC)**	Bilateral International Private Leased Circuits; End-to-End International Private Leased Circuits	• ConnectPlus Bilateral IPLC • ACASIA IPLC • ConnectPlus N2N IPLC
International Managed Data Services **(IMDS)**	International Frame Relay; International ATM; International IP- VPN; International Ethernet	• Bilateral FR • ConnectPlus FR • ACASIA FR • Bilateral ATM • ConnectPlus ATM • ACASIA ATM • ConnectPlus IP-VPN • Acasia Ethernet VPN[5] • ConnectPlus Ethernet VPN • ConnectPlus Ethernet- Line
Local Managed Data Services **(LMDS)**	Local ATM; Local IP; Local Metro-Ethernet	• Local ATM • Meg@POP (BizLink; MegaLink; EthernetLink; iLink; SymLink; DirectLink; HomeLink; VLink) • Metro-Ethernet

***** Markets are defined under Part VII "IDA's Market Definition and Competitiveness Assessment".

17 For both the Customer Segment Request and Market-Based Request, SingTel requested IDA to exempt it from application of the following Dominant Licensee obligations (to the extent applicable):

(a) Sub-section 4.2.1.1 – Duty to Provide Service at Just and Reasonable Prices, Terms and Conditions;

(b) Sub-section 4.2.1.2 – Duty to Provide Service on a Non-Discriminatory Basis;

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5 IDA issued a notification confirming that, with effect from 19 January 2009, SingTel's new Acasia Ethernet VPN service is within the IMDS market and that SingTel is exempted from Sub-sections 4.2, 4.3, 4.4, 4.5 and 4.6 of the Code for the Acasia Ethernet VPN service, pursuant to the ICS Decision. The notification is published on the IDA website at: http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level3/TCC/TCC_AcasiaEthernetVPNSvc_STIBS.pdf

(c) Sub-section 4.2.1.3 – Duty to Provide Unbundled Telecommunication Services;

(d) Sub-section 4.2.2.1 – Duty to Provide Service on Reasonable Request;

(e) Sub-section 4.2.2.2 – Duty to Allow Resale of End User Telecommunication Services;

(f) Sub-section 4.2.2.3 – Duty to Allow Sales Agency;

(g) Sub-section 4.3 – Wholesale Services;

(h) Sub-section 4.4.1 – Services for Which a Dominant Licensee Must File Tariffs;

(i) Sub-section 4.4.2.1 – Information to be Included

(j) Sub-section 4.5 – Duty to Publish Tariffs;

(k) Sub-section 4.6 – Duty to Provide Service Consistent with Effective Tariffs;

(l) Sub-section 8.2.1.1 – Predatory Pricing;

(m) Sub-section 8.2.1.2 – Price Squeezes;

(n) Sub-section 8.2.1.3 – Cross-subsidisation;

(o) Sub-section 8.2.2.1 – Discrimination; and

(p) Sub-section 8.2.2.2 – Predatory Network Alteration.

18 In support of its Market-Based Request, SingTel contended that it does not have significant market power in any of the six individual markets. To the contrary, SingTel asserted, it is "*subject to extensive and intensive competition such that the continued application of the Dominant Licensee obligations . . . is not necessary to protect customers or to promote or preserve effective competition amongst Licensees*." SingTel further claimed that each of the six markets is "*characterised by: low barriers to entry . . .; competitive new entry and infrastructure rollout; presence of local, regional and global players; a wide range of substitute services; considerable supply-side substitutability; strong countervailing power held by customers . . .; continual downward price trends; and ease of switching between service providers*."[6]

19 SingTel asserted that its Customer Segment Request is a "*narrow*" request that would "*only include large business and government customers whose telecommunications services contracts are of significant value*." SingTel further claimed that the provision of telecommunication services to these customers is "*extremely competitive*" for the same reasons as the individual markets in the Market-Based Request. In addition, SingTel contended that there is effective competition for customers who spend in excess of

[6] SingTel's Request, Paragraph 1.8.

S$250,000 per year on telecommunication services because: (a) "*it is economical*" for competitors "*to invest in infrastructure to provide services*" to these customers; (b) much of the competition for these customers is in "*managed services*" and as a result "*SingTel derives no advantage from mere ownership of infrastructure*"; and (c) business and government customers purchase "*packages*" of services, through competitive tenders, on a short-term basis, making "*large portions of the market . . . continually available for competition by both existing market participants and new entrants*".[7]

20 In response to questions from IDA, SingTel subsequently clarified that it intends for the Customer Segment Request to apply to revenues spent by business and government customers for *retail* telecommunication services purchased in Singapore from *any* operator.

21 SingTel also clarified that it is seeking exemption from the Dominant Licensee obligations applicable to wholesale services, which are contained in Sub-section 4.3 of the Code, only for Terrestrial IPLC and Backhaul services under the Market-Based Request.

22 As discussed above, in the ICS Decision issued in 2005, IDA considered the competitiveness of three of the six individual markets at issue in this proceeding: Backhaul, Terrestrial IPLC and IMDS. IDA concluded that the Backhaul and Terrestrial IPLC markets were not yet sufficiently competitive to allow removal of any Dominant Licensee regulation. IDA also concluded that SingTel should remain subject to *ex post* prohibitions against abuse of dominance in the IMDS market because, while that market was competitive, SingTel retained the ability to leverage its control of LLCs to restrict competition in the IMDS market. This proceeding thus requires IDA to determine whether, during the last three years since IDA's ICS Decision:

(a) SingTel has lost its significant market power in the Backhaul and Terrestrial IPLC markets; and

(b) SingTel has lost the ability to leverage its dominance in the LLC market to distort competition in the IMDS market.

This proceeding also requires IDA to assess the level of competition in the BLTS, LLC and LMDS markets.

PART V: SUMMARY OF COMMENTS RECEIVED FROM THE THREE PUBLIC CONSULTATIONS AND INTERVIEWS

23 Eight parties filed comments in response to IDA's First Public Consultation: Asiakomnet Multimedia Pte Ltd; Asia Pacific Carriers' Coalition ("**APCC**"); AT&T Worldwide Telecommunications Services Singapore Pte Ltd ("**AT&T**"); BT Singapore Pte Ltd ("**BT**"); China Motion Singapore; France Telecom Group Orange ("**FT**"); MobileOne Ltd ("**M1**"); and StarHub Ltd ("**StarHub**"). All of the commenting parties opposed SingTel's Request.

[7] SingTel's Request, Paragraphs 1.4, 1.6 and 2.5.

24 IDA subsequently requested additional information and market data from SingTel and other major industry participants to determine the market participants and their market shares. In determining the industry participants from which to request market data, IDA relied on information contained in SingTel's Request regarding its key competitors[8], as well as IDA's understanding of conditions in the relevant markets. IDA also conducted interviews with SingTel, most of the commenters who participated in the First Public Consultation, other significant industry participants and a number of End Users from various sectors. The purpose of these interviews was to determine the market structure, such as the existence of barriers to entry and product substitutes, and actual market performance, such as evidence of actual competitive entry and the existence of price competition.

25 On 26 August 2008, IDA issued, and requested comments on, a Preliminary Decision. In the Preliminary Decision, IDA tentatively decided to:

(a) exempt SingTel from continued imposition of *ex ante* Dominant Licensee obligations in the Terrestrial IPLC and Backhaul markets, while retaining *ex post* competitive safeguards in these markets;

(b) make no changes to the current exemption from *ex ante* regulation in the IMDS market, while retaining *ex post* competitive safeguards in this market;

(c) not exempt SingTel from either *ex ante* or *ex post* regulation in the BLTS, LLC or LMDS markets; and

(d) not grant SingTel's proposed Customer Segment Request.

26 Four parties filed comments regarding the Preliminary Decision: APCC; BT; FT; and SingTel. In its comments, SingTel agreed with IDA's tentative decision to grant exemptions from *ex ante* regulation in the Backhaul and Terrestrial IPLC markets, and not to make any changes to the exemption from *ex ante* regulation in the IMDS market, but objected to IDA's Preliminary Decision to retain *ex ante* regulation in the BLTS, LLC and LMDS markets, to retain *ex post* safeguards in all six markets and to deny its Customer Segment Request. By contrast, APCC and FT objected to IDA's tentative decision to grant SingTel an exemption from *ex ante* regulation in the Backhaul market, and BT reiterated past comments regarding the role of *ex post* regulation. In addition, APCC and BT raised concerns on the procedures used by IDA to make its determination.

27 On 30 January 2009 IDA issued a Revised Preliminary Decision. In the Revised Preliminary Decision, IDA reaffirmed its tentative conclusions. As IDA had considered new information provided by SingTel during the Second Public Consultation, and because IDA concluded that the public would benefit from a further elaboration of the bases on which IDA reached its conclusion, IDA provided an opportunity for further public comment. However, IDA specifically stated that:

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[8] SingTel's Request, Non-Confidential Annex 2.

"*The parties should confine their comments to new evidence and arguments made in the Revised Preliminary Decision. They should not repeat the comments submitted during the First and Second Public Consultations*."[9]

28 Three parties filed comments in the Third Public Consultation: APCC; FT; and SingTel. Notwithstanding IDA's directions, the commenters – to a significant extent – repeated comments submitted in the First and Second Public Consultations. In reaching its Final Decision, IDA has not considered these repetitive assertions. However, the commenters did raise some new points, which are addressed in this Explanatory Memorandum.

29 IDA thanks all parties for their active participation throughout this proceeding. The information and comments provided significantly assisted IDA in assessing SingTel's Request and in reaching this Final Decision.

Comments Regarding the Applicable Legal Standard and Review Procedures

30 The commenters raised several issues regarding the applicable legal standard and review procedures.

(a) *Confidentiality of Information*. In comments filed in the First Public Consultation, AT&T, APCC, BT, FT and StarHub expressed strong concerns regarding their ability to effectively comment on SingTel's Request because much of SingTel's evidence was submitted to IDA on a confidential basis. APCC and BT reiterated these concerns in their comments in the Second Public Consultation. In particular, APCC contended that IDA should disclose, and allow comment on: the survey methods used, the data relied on, the methods used to assure reliability, the methods used to calculate market share and the analytic methods used. Finally, in the Third Public Consultation, APCC contended that IDA is less transparent than regulators in other benchmark jurisdictions and that IDA should publish more of the market statistics and quantitative data, including those extracted through routine carrier filings.

(b) *IDA's Process for Reviewing SingTel's Request.* In the First Public Consultation, several commenters contended that, prior to issuing the Consultation Paper, IDA should have conducted a detailed and independent analysis of relevant markets, made these results known and allowed the public to comment on its preliminary assessment. In the Preliminary Decision, IDA explained that it had conducted an independent assessment, and suggested "*other operators are capable of providing their own independent assessment of the market*". In its comments filed in the Second Public Consultation, BT rejected IDA's suggestion on the basis that non-Dominant players (especially operators with low market shares) would not have realistic insights to perform independent market assessments. At the same time, in its comments filed in the Second Public Consultation, SingTel insisted that IDA had "*failed to consider*" the "*extensive verifiable evidence*" that SingTel has provided and, instead, relied "*on largely anecdotal and*

[9] IDA's Consultation Paper on the Revised Preliminary Decision in the Third Public Consultation, Paragraph 152.

untested responses from what appears to be a very limited customer sample". SingTel also contended that IDA failed to "*analyse markets using a forward looking approach*", and placed "*too much emphasis on market share, while failing to take account of other factors, such as evidence of extensive facilities-based competition and continuing price reductions*". In the Third Public Consultation, SingTel claimed that IDA's "*over-reliance*" on market share data is not consistent with practices in the European Union ("**EU**") which, SingTel noted, has expressly rebuked one National Regulatory Authority ("**NRA**") for classifying an operator as dominant "*on the sole basis of market shares*." SingTel also requested IDA to specify the "*weight*" it gives to each analytic factor. In the Third Public Consultation, APCC also submitted that IDA has failed to "*set out the data and methodology on which proposed findings are based.*"[10], and should release a Further Revised Preliminary Decision for another round of consultation.

(c) *Exemption from ex post Dominant Licensee Obligations.* In the First Public Consultation, several commenters opposed granting SingTel any exemption from Section 8 of the Code, which contains *ex post* "competition law" rules. Indeed, BT suggested in its public comments that, "*No exemption should be granted to SingTel until the telecommunication sector is included in Singapore's national competition regime, the Competition Act 2004*." BT reiterated these concerns in the Second Public Consultation. At the same time, relying on the decisions of European regulatory authorities, SingTel contended in the Second Public Consultation that there is no risk that it can act anti-competitively in the retail market by "*leveraging*" its dominance in the LLC market into other markets. Therefore, SingTel concluded, IDA should exempt it from *ex post* competitive safeguards.

(d) *Permissibility of Customer Segment Request*. In the First Public Consultation, APCC, BT and FT contended that SingTel's Customer Segment Request does not constitute a "*narrow*" request, as provided for in advisory guidelines issued by IDA on 30 September 2005 governing reclassification and requests for exemptions under Sub-section 2.5 of the Code ("**Exemption Guidelines**"), because grant of SingTel's Request would result in a substantial portion of SingTel's services being deregulated. As APCC observed, the Customer Segment Request would give SingTel *"a free hand to operate in virtually the entire government and enterprise sector free of all the normal competition safeguards."*

Comments Regarding SingTel's Market Position

31 In the First Public Consultation, almost all the commenters claimed that SingTel has significant competitive advantages, which preclude grant of regulatory relief in any market. In particular, the commenters asserted that:

(a) Business and government End Users have a strong preference for purchasing telecommunication services from a single operator.

[10] APCC's Comments, Third Public Consultation, Paragraph 2.6.

SingTel is the only Licensee that has deployed a ubiquitous network throughout Singapore, which provides a significant competitive advantage;

(b) Operators have little incentive to roll-out infrastructure, as evidenced by the limited amount of deployment since market liberalisation in 2000, and the Singapore Government's decision to fund a Next Generation National Broadband Network ("**Next Gen NBN**");

(c) SingTel has the ability to use its control over LLCs, to impede competition in downstream markets, such as BLTS and LMDS;

(d) SingTel's ownership of NCS Pte Ltd ("**NCS**") provides it with a competitive advantage in bidding for business and government tenders involving telecommunication and IT services; and

(e) SingTel does not provide appropriately priced wholesale services, especially LLCs, which are necessary to facilitate competition in the downstream markets.

32 During the interviews, the business and government End Users offered the following feedback:

(a) A few large MNCs stated that, because of their multi-million dollar annual telecommunication spend; they have the ability to obtain telecommunication services (in particular, Terrestrial IPLC and IMDS) from multiple carriers at competitive rates. Even so, several MNCs also suggested that the LLC market is not competitive and that the cost for LLCs remains higher in Singapore than in comparable jurisdictions, such as Hong Kong.

(b) By contrast, the majority of End Users stated that they were "locked-in" to SingTel, (i.e., they have no choice but to obtain their telecommunication services from SingTel). These users noted that, outside the Central Business District ("**CBD**"), SingTel is virtually always the *only* provider of LLCs. This is a particular concern for government End Users, which typically require telecommunication services at multiple locations outside the CBD. Moreover, business End Users observed that, even within the CBD, SingTel often is the *only* Licensee willing to serve SMEs and business End Users located in shophouses or low-rise buildings.

(c) Some End Users agreed with the commenters that SingTel had a competitive advantage because it is the only operator that can meet their demand to obtain the full range of telecommunication services from a single operator. A number of End Users indicated the growing importance of having carrier diversity for ensuring service continuity.

(d) None of the End Users interviewed believed that SingTel's ownership of NCS provides SingTel with any competitive advantage.

Comments Regarding Specific Markets in the Market-Based Request

33 The commenters and interviewees raised a number of issues regarding the individual markets for which SingTel has sought an exemption.

34 <u>BLTS</u>

(a) In the First Public Consultation, StarHub asserted that SingTel's share of the BLTS market is substantially above 90 percent, creating a very strong presumption of dominance. APCC and StarHub also challenged SingTel's claim that Voice over Internet Protocol ("**VoIP**") services are a reasonable substitute for conventional BLTS such as business Direct Exchange Line ("**DEL**") and ISDN, given the differences in line quality and access to emergency services. StarHub further suggested that if End Users regard VoIP as an effective substitute to fixed local telephony services, there would have been a significant reduction in the number of DELs SingTel provides with the growth of VoIP, but that this has not occurred.

(b) Several End User interviewees commented that they sometimes use VoIP for inter-company and/or international calls to reduce costs, where VoIP can result in significant cost savings, but not as a substitute for conventional local telephone services such as business DEL and ISDN.

(c) In the Second Public Consultation, only SingTel objected to IDA's tentative decision to retain SingTel's *ex ante* and *ex post* Dominant Licensee obligations. SingTel further requested that, if IDA does not grant SingTel's Request, IDA should exempt it from Dominant Licensee regulation "*in CBD areas and any other areas where StarHub is able to offer a competing fixed line business telephony service to end-users*" and for "*certain individual services that comprise the BLTS market, such as PhoneNet, i-PhoneNet and ISDN services*". In support of this proposal, SingTel claimed that it faces competition from StarHub's "*nationwide network*" and that charges for its business telephone fixed line service tariffs "*are amongst the lowest in the world*". SingTel further claimed that it lacks market power in the BLTS market because potential competitors can acquire Unbundled Local Loops ("**ULL**s") from SingTel at cost-based prices, terms and conditions to provide fixed telephony services, and that SingTel's ability to exercise market power in the BLTS market is constrained by the growth of IP-based voice services. In support of this, SingTel submitted new evidence that shows that several thousand PhoneNet and i-PhoneNet lines have been terminated in the last three years, and that it has offered substantial discounts of up to 50 percent on those services. Finally, SingTel disputes IDA's conclusion in the Preliminary Decision that the cost of switching between operators is high, thereby reducing the ability of competitive entry to constrain SingTel's market power. In the Third Public Consultation, SingTel contended that IDA's decision not to remove regulation of "downstream" services – such as BLTS, LMDS and the corporate and government customer segment – that can be provided using regulated LLCs as an input is inconsistent with the approach taken in the EU, which focuses on regulation of the wholesale market.[11] SingTel also disputed IDA's finding that regulation, rather than competitive market forces, is the reason why SingTel's BLTS prices remain low.

35 <u>LLC</u>

(a) In the First Public Consultation and during the interviews, both operators and End Users observed that SingTel remains the only Licensee that is able to provide nationwide LLC coverage. Indeed, the only area in Singapore that is served by multiple LLC providers is the CBD. Even within the CBD, End Users observed that many buildings are served only by SingTel. In addition, APCC claimed that there remain significant barriers to entry into the LLC market. In particular, APCC noted that IDA's effort to promote wholesale LLC competition had not been effective because SingTel must only provide access to its tail circuits if a carrier interconnects at the local exchange, but need not provide access at its tandem switches. Therefore, to achieve nationwide access, a competitive carrier must build its network to reach each of SingTel's local exchanges, which would be very costly. Moreover, as APCC observed, SingTel has announced that it will close many of its local exchanges, but has not disclosed which ones, thereby reducing competitive Licensees' incentive to roll-out infrastructure to the exchanges.

(b) During the interviews, several operators noted that the deployment of the Next Gen NBN in the relatively near future also reduces their incentives to deploy infrastructure today. Some of the global operators that have presence in many countries also stated that their strategy is to provide international services by leveraging on the infrastructure of incumbents such as SingTel, and not to roll-out infrastructure in every country they operate in. Finally, APCC and StarHub disputed SingTel's claim that ADSL, wireless local loops and ULLs are reasonable substitutes for SingTel's LLCs.

(c) As noted above, in the Second Public Consultation, SingTel objected to IDA's tentative decision to retain SingTel's *ex ante* and *ex post* Dominant Licensee obligations. SingTel strongly objected to IDA's tentative conclusion that the retail LLC market is not competitive, especially within the CBD. SingTel made several distinct arguments.

(i) *Existence of sufficient facilities-based competition.* SingTel contended that it is subject to significant facilities-based competition both inside and outside the CBD. Specifically, SingTel asserted that, as of September 2008, at least one competitor had installed fibre in 90 percent of the MDF rooms in the CBD and, therefore, that End Users in these locations have access to competitive LLC providers. SingTel also claimed that, since 2002, it has lost some tenders to provide LLC service to government agencies outside the CBD. In the Third Public

[11] SingTel's Comments, Third Public Consultation, Paragraphs 2.3 and 2.4.

Consultation, SingTel relied on public statements made by StarHub between 1998 and 2004 as "evidence" that StarHub has deployed a ubiquitous nationwide network.

(ii) *Impact of potential competition.* Relying on decisions from UK and Australian regulators, SingTel also argued that, in assessing the level of competition in the LLC market, IDA should not only look at actual current facilities deployment. Rather, in SingTel's view, IDA should consider whether an LLC provider has "*close proximity*" to the End User. SingTel reasoned that a competitor in "*close proximity*" to the End User could either deploy its own "*fibre spur*", or purchase wholesale LLCs, to connect to End Users. SingTel therefore proposed that IDA remove Dominant Licensee regulation in any geographic area in which there is at least one competing LLC provider within "*close proximity*" to End Users.

(iii) *Barriers to entry.* SingTel also challenged IDA's findings that there are high barriers to entry into the LLC market that enhance its market power. SingTel contended that, given Singapore's small size, population density, the concentration of businesses in the CBD, and the large number of MNCs with high communication volumes, the cost of deploying fibre in the CBD is not prohibitive. In support of this contention, SingTel cited a World Bank and an ITU study regarding the cost of fibre deployment.

(iv) *Disincentives to entry.* SingTel also disputed IDA's finding, in the Preliminary Decision, that the Government's decision to fund the Next Gen NBN indicates that the cost of deploying a nationwide infrastructure remains significant. Indeed, SingTel contended that the Next Gen NBN is a justification to remove regulation. Relying on practice in the EU, SingTel contended that IDA should take a "*forward-looking*" approach, under which the deployment of a competitive infrastructure in the *future,* justifies elimination of regulation *today*. SingTel also disputed IDA's conclusion, in the Preliminary Decision, that SingTel's decision to close various exchanges increases the risk and cost of competitive entry into the LLC market.

(v) *Existence of wholesale competition.* SingTel further stated that it "*strongly disagrees*" with IDA's conclusion, in the Preliminary Decision, that SingTel's pricing practices for wholesale LLC create a barrier to competitive entry into the LLC (and other downstream) markets. SingTel stated that it has provided substantial discounts to wholesale customers. SingTel also contended that those cases in which it has provided a smaller volume-based discount reflect situations in which the competing provider has decreased its purchase volume because it has chosen to deploy its own infrastructure. SingTel further contended that the decline in the number of LLCs that SingTel provides on a wholesale basis shows that competitors are either deploying their own LLC infrastructure or obtaining wholesale LLCs from another provider.

(vi) *Pricing.* Finally, SingTel disputed IDA's conclusion that LLC prices are higher in Singapore than in other jurisdictions, and that SingTel's transacted prices have not fallen significantly.

36 Backhaul

(a) In the First Public Consultation, APCC, FT and StarHub urged IDA to continue to include self-supply Backhaul (i.e., Backhaul capacity that a Licensee "provides to itself") when calculating market shares, as IDA did in the ICS Decision. Some commenters also contended that SingTel has market power in the Backhaul market as a result of its control over LLCs and cable landing stations.

(b) The interviews with operators and End Users provided evidence that operators today frequently purchase Backhaul from carriers other than SingTel and terminate the Backhaul in carrier-neutral data centres such as Equinix and Global Switch, thereby eliminating the need to use SingTel's LLCs.

(c) In the Second Public Consultation, FT objected to IDA's tentative decision to exempt SingTel from *ex ante* regulation in the Backhaul market.

(i) FT requested that IDA disclose the means by which it determined that SingTel's share of the Backhaul market has fallen below 40 per cent. Specifically, FT requested that IDA disclose: which landing stations were included; whether the data collected was consistent; how IDA dealt with Backhaul used for transit traffic; and whether there was any "*double counting*" of capacity supplied to Facilities-Based Operator ("**FBO**") customers as inputs to provide downstream services, such as Terrestrial IPLC and IMDS.

(ii) FT also contended that the Backhaul market is not competitive because, except where a Backhaul customer (i.e., another FBO) is co-located at FT's Point of Presence ("**PoP**"), FT is unable to offer a competitively priced service. According to FT, when FT seeks to provide Backhaul to an FBO customer that is not co-located at its PoP, FT is only able to self-provide the connection from the cable landing station to FT's PoP. At that point, FT must purchase an LLC from SingTel to connect from its PoP to the FBO customer's PoP. By contrast, FT notes that SingTel is able to self-provide a connection from the cable landing station all the way to the customer's PoP regardless of the customer's location. FT notes that it is not able to obtain the LLC from SingTel under the Reference Interconnection Offer ("**RIO**"), at cost-based prices.[12] Rather, FT must obtain the LLC on commercial terms pursuant to SingTel's tariffs, thereby placing it at a cost disadvantage compared to SingTel, which does not have to bear this cost when it provides service to a similar customer. The situation is further exacerbated, according to FT, by SingTel's volume-based pricing structure, which can put smaller Backhaul providers at an additional disadvantage, as a large retail customer can potentially buy retail LLCs from SingTel at a lower price than an FBO can buy wholesale LLCs from SingTel for use as an input into a competitive Backhaul service.

(iii) FT proposed that IDA adopt a system, based on the approach used by the French National Regulatory Authority ("**ARCEP**"), under which SingTel would be required to unbundle the link between a SingTel exchange and the FBO customer's PoP ("*terminal segment*") from the link between the cable landing station and the Sing Tel exchange ("*complement terrestre*"), and price the terminal segment at a price that would not "*lead to the eviction from the market*" of competitive operators. The goal would be to eliminate the competitive advantage that SingTel obtains from being able to self-provide the link between a SingTel exchange and the FBO customer.

(iv) In the Third Public Consultation, APCC expressed concerns that Licensees might not have understood IDA's data requests on self-provided Backhaul, and that IDA might not have analysed the self-provided Backhaul data correctly. Specifically, APCC was concerned that IDA might have incorrectly included Backhaul capacity that the Licensees purchased from SingTel and used as an input for downstream services like Terrestrial IPLC in the computation of self-provided Backhaul. In addition, APCC and FT requested that IDA subjects any exemption for the Backhaul market to the condition that SingTel complies with certain "safeguards", such as tariff filing obligations.

(v) During the consultation process, SingTel objected to IDA's tentative decision to retain *ex post* safeguards in the Backhaul market. In particular, SingTel disputed IDA's conclusion that SingTel retains the ability to leverage its market power in the LLC market into the Backhaul and other downstream markets. Relying on the 1996 decision of the European Court of Justice ("**ECJ**") in *Tetra Pak International v. Commission of the European Communities*, SingTel contended that – consistent with internationally accepted legal principles – IDA can only find that SingTel has the ability to leverage its market power into another market if: (a) SingTel has a "*leading position*" in the downstream market; and (b) there are "*associative links*" between the two markets (i.e., there is a relationship between

[12] IDA currently requires SingTel to provide only "tail" LLCs (i.e., LLCs that connect an FBO that is co-located at a SingTel exchange to the FBO's End User's premises) at cost-based prices under the RIO.

the two markets that allows SingTel to leverage its market position in the first market to distort competition in the second market). SingTel contended that neither of these conditions has been met in the Backhaul market.

37 Terrestrial IPLCs

(a) In the First Public Consultation, FT, M1 and StarHub opposed granting SingTel an exemption from either *ex ante* or *ex post* regulation in the Terrestrial IPLC market. The commenters asserted that SingTel retains the ability to leverage its control over LLCs, Backhaul and cable landing stations to obtain a competitive position in the downstream Terrestrial IPLC market.

(b) By contrast, many of the End Users that IDA interviewed agreed that competition in the Terrestrial IPLC market has been increasing over the years and that, today, multiple Terrestrial IPLC providers are able to meet their needs at steadily declining prices. In fact, according to the interviewees, most MNCs prefer buying Terrestrial IPLC services from operators with a global presence, rather than from SingTel.

(c) In the Second Public Consultation, SingTel objected to IDA's tentative decision not to grant an exemption from *ex post* regulation in the Terrestrial IPLC market. As in the Backhaul market, SingTel argued that it lacks the ability to leverage its market power in the LLC market into Backhaul and other downstream markets. APCC, BT and FT did not object to IDA's tentative decision to exempt SingTel from its *ex ante* Dominant Licensee obligations and to retain the *ex post* Dominant Licensee obligations.

38 IMDS

(a) In the First Public Consultation, FT and StarHub claimed that SingTel is able to leverage its dominance over LLCs, which are a significant input, to obtain a competitive advantage in the market for IMDS and, therefore, that IDA should retain *ex post* safeguards in this market. StarHub also noted that most IMDS customers are migrating to International IP-VPN, and that SingTel's share of this segment of the market has been increasing.

(b) None of the End Users interviewed suggested that, during the three years since IDA's ICS Decision to exempt SingTel from *ex ante* regulation in this market, SingTel had engaged in any anti-competitive conduct.

(c) In the Second Public Consultation, SingTel objected to IDA's tentative decision not to grant an exemption from *ex post* regulation in the IMDS market. Here again, SingTel argued that it lacks the ability to leverage its market power in the LLC market into other downstream markets.

39 LMDS

(a) In the First Public Consultation, StarHub noted that SingTel's share of the LMDS market remains high, and claimed that SingTel is able to leverage its dominance in the LLC market to obtain a competitive advantage in this market. StarHub therefore opposed granting SingTel any exemption in this market.

(b) As in the LLC market, the End Users that IDA interviewed generally commented that they are reliant on SingTel for LMDS, because SingTel is the only provider that is able to provide nationwide coverage for LMDS.

(c) SingTel again argued that it lacks the ability to leverage its dominance in the LLC market into the LMDS market and, therefore, should not be subject to either *ex ante* or *ex post* regulation. In support of its request, SingTel provided information regarding the number of tariffs that it has filed in recent years.

Comments Regarding the Customer Segment Request

40 In the First Public Consultation, several commenters objected to SingTel's Customer Segment Request. In particular:

(a) Several commenters argued that granting an exemption for services provided to business and government customers, who spend at least S$250,000 per year for telecommunication services, would pose significant administrative complications, given that most of such customers do not make public their annual expenditure.

(b) APCC and BT contended that the choice of the S$250,000 threshold is arbitrary. BT and FT also argued that the S$250,000 threshold is too low, and would remove regulations for services provided to most of their Singapore customers. End Users concurred that, if IDA were to grant SingTel's Customer Segment Request, services provided to a substantial segment of the business and government customers would no longer be subject to regulation.

41 In the Second Public Consultation, SingTel disputed IDA's tentative decision to deny its Customer Segment Request. First, SingTel again challenged IDA's conclusion that LLCs – which provide the basis for numerous other retail telecommunication services that business and government customers require – are not subject to effective competition. SingTel further contended that, regardless of the level of competition in the LLC market, customers who have a telecommunication spend in excess of S$250,000 per year typically spend only a quarter of their total telecommunication expenditures on LLCs and, therefore, that the level of LLC competition should not preclude the grant of the Customer Segment Request. SingTel also challenged IDA's contention that the proposed S$250,000 threshold is too low because it would include some medium-sized enterprises. Finally, SingTel contended that any administrative issues could easily be overcome. For example, to facilitate the identification of customers that fall within the threshold, SingTel suggested that the class of customers could be limited to customers spending S$250,000

for telecommunication services purchased from SingTel, rather than customers with a total telecommunication spend in Singapore of S$250,000.

42 Finally, in the Third Public Consultation, SingTel contended that if IDA rejects its Customer Segment Request, IDA should provide *"its own proposal*" for crafting an exemption for this segment of the market.

PART VI: DESCRIPTION OF IDA'S MARKET DEFINITION AND COMPETITIVENESS ASSESSMENT FRAMEWORK

43 Under the Code, a Licensee that is classified as a Dominant Licensee must comply with provisions applicable to Dominant Licensees when it provides any telecommunication service pursuant to that licence. The Code recognises, however, that over time, as competition develops, a Dominant Licensee may become subject to competitive market forces in certain markets in which it participates and that, as a result, some regulations may no longer be necessary to deter the Dominant Licensee from acting anti-competitively. Sub-section 2.5.1 of the Code therefore provides for a process by which a Dominant Licensee may request an exemption from complying with some or all of the Dominant Licensee obligations for specific services or facilities.

44 IDA's Exemption Guidelines contain a three-step process for determining whether a market is sufficiently competitive to allow for removal of *ex ante* regulation.

(a) Market definition

The Exemption Guidelines provide that, in considering an exemption request, IDA will first define the relevant service, geographic and functional markets. Pursuant to the Guidelines:

"IDA will define the relevant service market based on a 'demand substitutability' approach. Under this approach, the relevant market for a telecommunication service provided by a Licensee consists of both the specific telecommunication service for which the Licensee seeks an exemption and any additional telecommunication service that buyers regard as interchangeable with, or a substitute for, the Licensee's telecommunication service.

* * *

IDA will next identify the relevant geographic markets. The relevant geographic market for a telecommunication service provided by a Licensee consists of the geographical area in which the Licensee (and other Licensees that provide substitutable telecommunication services) provides telecommunication services and any additional geographical locations from which Customers would obtain those services if prices charged by the Licensee increased by a small but significant, non-transitory amount. In practice, IDA will consider those areas that have similar competitive conditions to be in the same geographic market.

* * *

IDA will also determine whether a service is provided at the wholesale level (i.e., whether the product is provided to other Licensees), the retail level (i.e., whether the product is provided to End Users), or both levels. To do so, IDA will consider whether the industry practice is to offer the service to retail and wholesale customers on different prices, terms and conditions . . . . In those cases in which there are material differences between the wholesale and retail services that preclude the two services from being demand substitutes, IDA will consider the wholesale and retail services to be in separate markets. By contrast, in many cases, Licensees will offer similar functionality, at similar prices, to both wholesale and retail customers. In such cases, IDA will consider the wholesale and retail services to be in the same service market." [13]

(b) Competitiveness assessment

(i) After defining the relevant market, IDA will conduct a competitiveness assessment. To do so, IDA starts by identifying the market participants and estimating each participant's market share. As the *Exemption Guidelines* explain:

"Where reliable information is available, IDA will seek to use the unit of measurement that best reflects the characteristics of the market. In doing so, IDA may look at revenues, unit sales, capacity or other relevant units of measurement . . . . In markets for 'upstream' services that could be used as an input for other services, and in which self-supply accounts for a significant portion of the market [IDA generally will use capacity] . . . because it is often not feasible to assign revenues to self-supplied inputs."

(ii) The Exemption Guidelines further provide that "*IDA will make an initial presumption that a Dominant Licensee that has a market share in excess of 40 percent has Significant Market Power."* However, the Guidelines make clear that determining a Dominant Licensee's market share is only one step in the analytic process. The presumption that a Dominant Licensee with a market share in excess of 40 percent has Significant Market Power "*may be over-come by evidence that demonstrates that the Licensee, in fact, is subject to effective competition.*"[14]

(iii) IDA next considers other factors that would affect the Licensee's ability to act anti-competitively. For example, IDA will consider: (a) whether there are significant barriers to entry; (b) whether "*the Licensee has the ability to leverage market power that it possesses in a vertically integrated market*"; (c) whether

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13 *Exemption Guidelines* Paragraph 2.4.1.

14 *Exemption Guidelines* Paragraph 2.4.2(a)(i)-(iv).

"*Licensees that currently provide other telecommunication services can shift resources, relatively quickly and costlessly, in order to provide a service that is a substitute for the Licensee's service*"; and (d) whether there are "'*strong' Customers [that] can exercise countervailing buying power*". [15]

(c) *Market performance.* Finally, IDA considers evidence regarding the performance of the market. This may include evidence regarding actual market competition, including evidence of: (a) successful new entry; (b) changes in market share; (c) price changes; and (d) non-price competition. IDA will also consider "*any prior anti-competitive conduct by the Licensee.*" [16]

45 In conducting its assessment of SingTel's Request, IDA has followed the approach specified in the Exemption Guidelines. As part of this approach, IDA solicited data from various operators and, where appropriate, requested clarifications or additional data. **Annex B** contains the list of operators required by IDA to provide their revenue and capacity figures for each of the six individual markets within SingTel's Market-Based Request. Pursuant to the requirement under their licences, these operators have an obligation to provide true, accurate and complete information to IDA. In determining which industry participants to request market data from, IDA considered the key competitors identified in SingTel's Request, as well as its knowledge of the relevant markets.

46 IDA also conducted interviews, over a three-week period, with a cross-section of End Users. To ensure a reasonable representation, IDA interviewed a wide range of End Users, including government agencies as well as MNCs and SMEs from various industries, with annual telecommunication spend below and above S$250,000, which purchase various types of telecommunication services. These include business End Users from the finance, banking, hotel, petrochemical, telecommunication, education, retail, logistics and SME sectors, and government End Users such as the Ministry of Education, Housing Development Board, Civil Aviation Authority of Singapore and IDA's Government Chief Information Office (which is responsible for the procurement of information technology and telecommunication services on behalf of the Government). These End Users were suggested by SingTel and some of the operators that participated in the First Public Consultation. In addition, IDA interviewed eight operators.[17] The purpose of these interviews was to validate the tentative conclusions that IDA drew from the data. In many cases, the information obtained during the interviews confirmed IDA's preliminary conclusions. In other cases, information provided during the interviews helped to explain the data or provided a basis for IDA to request further information.

[15] *Exemption Guidelines* Paragraph 2.4.2(b).
[16] *Exemption Guidelines* Paragraph 2.4.2(c).
[17] IDA interviewed the following operators: BT, Pacnet, FT, StarHub, M1, Cable & Wireless, Verizon and SingTel.

PART VII: IDA'S MARKET DEFINITION AND COMPETITIVENESS ASSESSMENT

Applicable Legal Standard and Review Procedures

47 *Confidentiality of Information.* IDA notes the significant concerns that have been raised regarding the amount of information for which SingTel has sought confidential treatment.

(a) In deciding whether to grant SingTel's request for confidential treatment of certain information in SingTel's Request, IDA applied the standards contained in the Code. Under the Code, a party submitting information to IDA may request that the information be treated as confidential. IDA will decide whether to grant the request based on whether the standards provided for under Sub-section 11.7.1 of the Code are met. Pursuant to the Code, IDA will grant the request if the requesting party is able to demonstrate with reasonable specificity that: (a) the information for which confidential treatment is sought is commercially sensitive (including information that is subject to a pre-existing non-disclosure agreement with a third party); or (b) the disclosure of the information would have a material adverse impact. IDA considers information to be commercially sensitive if: (a) it is not otherwise available to the public; or (b) there is a reasonable possibility that its disclosure would cause harm to the requesting party or otherwise provide a commercial benefit to the party's competitors.

(b) The information submitted by SingTel which IDA has not disclosed includes market share data for individual markets, details of competitive tenders lost by SingTel, and names and number of customers who migrated from SingTel to competitors in individual markets. In granting the request by SingTel for confidential treatment, IDA agreed that the information is commercially sensitive. IDA also notes that some of the data provided by SingTel was purchased from third-party sources, which did not permit SingTel to make the information public. More importantly, IDA does not agree that the commenters need to have access to this information to comment effectively on SingTel's Request. Because they are direct competitors of SingTel, the commenters are capable of providing their own independent assessment of the market. Indeed, StarHub submitted market information prepared by an independent consultant. Other carriers – either individually or collectively through organisations such as APCC – are free to commission similar studies, or submit the results to IDA.

(c) IDA does not agree with APCC's repeated contention in the Third Public Consultation that it is less transparent than regulatory authorities in other jurisdictions. Information regarding the market share of individual market participants is commercially sensitive. Regulators in the EU and the United States - which have advanced competition and telecommunication regulatory regimes - do not publish detailed market share data regarding individual market participants when conducting merger reviews, dominance assessments or similar market-based reviews.

(d) Finally, IDA notes APCC's suggestion that IDA publishes more of the market statistics and quantitative data including those that IDA extracted through routine filings by Licensees under the "Provision of Information" ("**POI**") framework.[18] APCC's suggestion goes beyond the scope of the current proceeding on the review of SingTel's Request.

48 *IDA's Process for Reviewing SingTel's Exemption Requests.* IDA notes the concerns that have been raised regarding the process IDA used for reviewing SingTel's Exemption Request.

(a) As noted above, commenters urged IDA to conduct a detailed and independent analysis, and to allow the public an opportunity to comment on its Preliminary Decision. IDA has in fact used exactly the process that AT&T and FT proposed in the First Public Consultation. As required by Sub-section 2.5.2 of the Code, IDA *"provide[d] an opportunity for public comment* <u>*before*</u> *issuing a preliminary decision*". As IDA explained in paragraph 3.5 of the First Public Consultation Paper, IDA then sought "*further public comments on the Preliminary Decision, prior to issuing its final decision*". IDA subsequently collected data from market participants, performed an independent analysis, prepared a Preliminary Decision and provided an opportunity for further public comments. This is the same review process that IDA used to consider SingTel's previous exemption requests.[19] Indeed, in the present case, IDA has provided an additional round of public consultation. Finally, APCC's assertion, in the Third Public Consultation, that IDA has failed to "*set out the data and methodology on which proposed findings are based"* is unsubstantiated. IDA has clearly explained the data and the methodology used to assess each market. IDA also disagrees with APCC's suggestion that IDA should release a Further Revised Preliminary Decision for an additional round of public consultation. As commenters submitted no new evidence and IDA reached no new conclusions in this round of consultation, there would be no benefit from another round of public consultation.

(b) In the Second and Third Public Consultations, SingTel also insisted that IDA had "*failed to consider*" the "*extensive verifiable evidence*" that SingTel has provided and, instead, relied "*on largely anecdotal and untested responses from what appears to be a very limited customer sample*". This is incorrect. IDA has considered carefully SingTel's submissions and had sought to verify the data submitted with those that IDA collects separately from the industry, and also from interviews with business and government End Users. IDA also notes that for certain data, such as market share estimates, SingTel has submitted data from third party sources, without independently verifying its

[18] IDA currently publishes some of the data on the IDA website, which can be found at http://www.ida.gov.sg/Publications/20090304182010.aspx.

[19] SingTel's requests for exemption from Dominant Licensee obligations with respect to the provision of ICS and the retail ITS markets.

accuracy or even assessing the methodology used to derive the estimate.

(c) SingTel also commented that IDA placed too much emphasis on market share. This is also not correct. The Exemption Guidelines make clear that determining a Dominant Licensee's market share is only the first step in the analytic process that IDA uses to assess an exemption request. Pursuant to the Exemption Guidelines, IDA presumes that a Dominant Licensee with a market share in excess of 40 percent has Significant Market Power, although this "*may be over-come by evidence that demonstrates that the Licensee, in fact, is subject to effective competition*". Therefore, as an example, even though a Dominant Licensee may have a market share in excess of 40 percent in a particular market, IDA may grant an exemption if it concludes that barriers to entry are sufficiently low such that the potential for rapid competitive entry is sufficient to constrain the behaviour of the Dominant Licensee. This is evident in the ICS Decision, in which IDA exempted SingTel from Dominant Licensee regulation in the market for Satellite-based IPLCs based on the low barriers to entry, even though SingTel was the only market participant. Similarly, in the current proceeding, IDA has decided to exempt SingTel from the application of *ex ante* Dominant Licensee obligations to its provision of Terrestrial IPLC services, notwithstanding its market share of more than 40 percent.

(d) In the present case, as provided by the Exemption Guidelines, IDA first considered SingTel's market share in each relevant market, but then assessed all other relevant factors to determine whether SingTel retains the ability to act anti-competitively in the markets for which it seeks an exemption. For example, as discussed below, IDA has given significant consideration to a number of factors besides market share – such as the cost of entry, the effectiveness of existing regulation and evidence of price competition.

(e) Contrary to SingTel's suggestion, it is not possible to assign a precise mathematical "weight" to each analytic factor. The goal of any market analysis is to determine whether an undertaking has the ability to unilaterally restrict output, raise prices, reduce quality or otherwise act, to a significant extent, independently of competitive market forces. In making this assessment, a regulator must consider all aspects of the relevant market. In some cases, the extent to which there are barriers to competitive entry will be the most relevant factor in making this assessment. In other cases, however, the regulator may assign significant weight to additional factors - such as availability of close substitutes, the ability of customers to switch from one provider to another or the extent to which large customers can exercise countervailing buying power. In reaching a decision, each relevant factor must be considered.

(f) In those cases in which IDA has decided against granting an exemption in a market in which SingTel has a market share in excess of 40 percent, it is because, upon careful consideration, *the evidence* failed to overcome the presumption that SingTel is not subject to effective competition in that market. IDA has fully discussed its assessment of this evidence and our approach is fully consistent with international best practices.[20]

49 *Exemption from ex post Dominant Licensee Obligations.* In response to the concerns raised by several commenters, IDA clarifies the standard that it uses to assess requests for exemption from *ex post* rules is contained in Section 8 of the Code, which provides a "competition law" remedy in the event that a Dominant Licensee abuses its dominant position in any telecommunication market.

(a) As stated in the Exemption Guidelines, to the extent that SingTel "*retains, or has any reasonable possibility of regaining, Significant Market Power in a market, or using its dominant position in another market to adversely affect competition in the relevant market, IDA generally will conclude that retaining these prohibitions is necessary to deter anti-competitive conduct and, where necessary, to take appropriate enforcement action*". In other words, IDA will only grant an exemption if the evidence demonstrates that SingTel no longer has the ability to engage in an abuse of dominance in a given market because it is no longer dominant in that market, has no reasonable chance of regaining a dominant position in that market and cannot leverage its market power in another market to distort competition in that market. Following such an exemption, IDA will treat SingTel in precisely *the same way as it would a non-Dominant Licensee* in that market: IDA will not subject SingTel to the prohibitions against abuse of dominant position in that market, because SingTel does not have a dominant position to abuse.

(b) However, no exemption is permanent. Should market conditions change such that SingTel *regains* significant market power in a relevant market, or obtains the ability to leverage significant market power from another market to distort competition in the relevant market, IDA may re-impose the *ex post* regulatory requirements and

[20] In the recently issued European Commission Guidance on Article 82 of the EC Treaty concerning Abusive Exclusionary Conduct by Dominant Undertakings, the Commission acknowledged that it considers low market shares of below 40% as a good proxy for the absence of substantial market power. The EU's experience also suggests that the higher the market share and the longer period of time over which it is held, the more likely it is that it constitutes an important preliminary indication of the existence of a dominant position and, in certain circumstances, of possible serious effects of abusive conduct justifying regulatory intervention. Indeed, in *Hoffmann-La Roche v Commission*, the European Court of Justice stated that, save in exceptional circumstances, large market shares that exist for some time may in themselves be evidence of a dominant position. SingTel's attempt, in the Third Public Consultation, to compare IDA's approach to the approach rejected by the European Commission in the *Ficora* case is completely unjustified. In that case, the Finnish national regulatory authority, Ficora, relied almost entirely on the incumbent operator's 50 per cent market share in the mobile access market as justification for imposition of wholesale access requirements. In reversing that decision, the European Commission found that the regulator had failed to consider other highly relevant evidence - especially the fact that competing mobile operators had negotiated access agreements with the incumbent and used these agreements to successfully enter the retail market - that demonstrated that the wholesale market was effectively competitive. In the present case, by contrast, IDA has considered all relevant factors.

take appropriate action under Sub-section 8.2 should SingTel subsequently abuse its dominant position.

(c) IDA recognises that the procedural approach contained in the Code differs from the process that has been adopted in the EU and other jurisdictions.

(i) Under the EU regime, a NRA must demonstrate that an operator has significant market power in a relevant telecommunication market before the NRA can impose an *ex ante* “remedy”. At the same time, all operators are subject to the application of *ex post* competition law requirements, including the prohibition against abuse of dominant position. There is no process for an operator to seek a general exemption from the application of the prohibitions against abuse of dominant position on the grounds that it no longer has significant market power. In practice, however, the relevant competition enforcement authority must first find that an operator has significant market power before it can conclude that the operator has abused that power.

(ii) In Singapore, by contrast, IDA has adopted a “licensed entity” approach under which a Dominant Licensee is presumed to have significant market power in all markets in which it participates pursuant to its licence, and is subject to both *ex post* and *ex ante* regulation unless exempted by IDA. Under the Code, the burden is on the Dominant Licensee seeking an exemption to demonstrate that a market is competitive and, therefore, that there is no current need for regulation. In order to gain relief from *ex post* safeguards, a Dominant Licensee must pass a very stringent test: the Dominant Licensee must demonstrate that it does not have significant market power in a market, that there is no “reasonable possibility” that it will regain significant market power in that market and that it lacks the ability to leverage market power from other markets to adversely affect competition in the relevant market.

(iii) While there are procedural differences between Singapore and the EU, in practice IDA’s approach leads to substantive results that are fully consistent with international best practices. Thus, just as in other jurisdictions, where IDA determines that a Dominant Licensee no longer has Significant Market Power in a given market, IDA will eliminate *ex ante* regulation. At the same time, because IDA will only grant an exemption from *ex post* safeguards where it has a very high degree of confidence that the Dominant Licensee could not engage in conduct in a particular market that would constitute a violation of these rules, there is little chance that a Dominant Licensee could engage in an abuse of dominant position and yet be exempt from enforcement. Nonetheless, IDA notes that there is room for more clarity in how IDA would apply Sub-section 8.2 of the Code. Therefore, IDA intends to review – and, if appropriate, revise – Sub-section 8.2 of the Code in the ongoing triennial review.[21]

50 *Customer Segment Request.* Finally, IDA finds that, contrary to the argument made by some commenters, SingTel's Customer Segment request is a permissible request under the Code. IDA, therefore, has assessed SingTel's Request on the merits. The Exemption Guidelines provide guidance as to how a Dominant Licensee may present its request. In particular, Section 2.1(f) states that a "*Dominant Licensee may submit a narrow Request.*" By way of example, the Guidelines state that a Licensee can limit its request "*to a particular class of Customers*." The only requirement is that "*the Dominant Licensee must clearly identify the scope of the Request, and the basis on which the Dominant Licensee believes that application of the provision to that Customer class … is no longer necessary*." SingTel has met this requirement.

Market 1: Business Local Telephony Services

Market Definition

51 The BLTS market consists of nationwide local fixed-line telephony services to business and government End Users, including ancillary services (e.g. voicemail, call waiting, call forwarding and equivalent services).

52 IDA agrees with SingTel's contention, in its Request, that its business DEL, ISDN, PhoneNet and i-PhoneNet services are all part of the BLTS market for two reasons.

(a) First, there is some demand substitutability among the services, which provide nationwide local fixed-line telephony services to business and government End Users. For example, in response to increased costs for business DEL service, some business and government End Users would switch to a Centrex or Private Branch Exchange ("**PBX**") based service. However, IDA finds that the degree of substitutability may depend on the size of the End User. For instance, larger End Users that subscribe to a Centrex or PBX-based service would be unlikely to switch to DEL in response to an increase in the price of PBX-based services. Likewise, for smaller enterprises, the cost of a PBX-based service may preclude switching, even if SingTel were to increase the charges for its DEL service.

(b) Second, these offerings are subject to the same market conditions. In particular, all the services are offered over the same basic infrastructure, which includes the "last mile" local loop. Therefore, as provided in IDA's Exemption Guidelines, IDA has considered the competitiveness of these offerings together.

53 IDA has considered the extent to which VoIP services should be included within the BLTS market.

(a) IDA has previously recognised that "VoIP" is a *generic* term used to refer to a wide range of services that provide "*the transport of voice*

[21] IDA is reviewing this issue in its ongoing triennial review of the Code.

traffic using IP technology."[22] Many forms of VoIP services plainly should not be considered to be part of the BLTS market. For example, many corporations today carry voice traffic over their IP-based global private networks. However, these business End Users generally do so only for calls between different corporate offices and, in some cases, for international calls. Thus, these applications are not substitutes for the local calling functionality provided by BLTS. If the price of BLTS were to rise, business and government End Users would not switch to such VoIP services. Similarly, VoIP services that transport traffic over the public Internet, such as services provided by Skype, are also not demand-side substitutes for BLTS. Such VoIP services do not provide the basic functionality, service quality, emergency access features and reliability that business and government End Users typically require, and have not yet been widely adopted by business and government End Users. There is no evidence that the existence of these VoIP services constrains SingTel's ability to raise the price of its BLTS.

(b) However, one form of VoIP services, "IP Telephony services", is part of the BLTS market. In IDA's policy framework for IP telephony and electronic numbering in Singapore, IDA defined "IP Telephony services" as a form of VoIP that requires telephone or E.164 numbers[23], which allows a user to make and receive voice, data and video calls in any domestic or overseas location where broadband Internet access is available. Applying this definition of "IP Telephony services", IDA agrees with SingTel's statement in its Request that its i-PhoneNet service should be included in the BLTS market. Like SingTel's other BLTS, this service provides fixed local telephony, delivered over leased lines or copper infrastructure. The only difference is that SingTel converts the traffic into IP protocol for transmission within its network, a process that is transparent to End Users.

54 The geographic market in which SingTel offers BLTS is national. Business and government End Users in Singapore who require BLTS must purchase it from a BLTS provider within Singapore.

55 SingTel sought exemption only for its retail BLTS. While SingTel offers a small amount of BLTS on a wholesale basis, there is no evidence that SingTel provides different functions for its retail and wholesale BLTS, or prices its BLTS at different levels for retail and wholesale customers. Therefore, retail and wholesale BLTS could appropriately be considered together for this proceeding. Doing so, however, would not have any impact on IDA's assessment of this market, given the small amount of BLTS that SingTel sells on a wholesale basis.

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[22] IDA's Explanatory Memorandum on the policy framework for IP telephony and electronic numbering in Singapore, paragraph 7. Available on the IDA website.

[23] An ITU-T standard network addressing format for telephone numbers. E.164 addresses are 15 decimal digits long and include a country code, area or city code, and a local number.

Competitiveness Assessment

Market Participants and Market Share

56 IDA requested data from operators for three categories of services, corresponding to SingTel's retail services in the BLTS market: fixed telephone service, ISDN service, and PBX/Centrex service, for 2006 and 2007. From the data received, IDA notes that SingTel's competitors in this market include StarHub, MediaRing Communications Pte Ltd, LGA Telecom Pte Ltd ("**LGA**"), NTT Singapore Pte Ltd ("**NTT**") and T-Systems Singapore Pte Ltd ("**T-Systems**"). The data shows that SingTel's market share (based on revenue) is in excess of 90 percent for *each* of these three categories for 2006 and 2007, and that SingTel's *overall* retail BLTS market share is above 95 percent.

57 SingTel challenged IDA's conclusion that its market share in the Centrex/PBX category is in excess of 90 percent. SingTel contended that its PBX-based services, PhoneNet and i-PhoneNet, are subject to competition from "*significant players*" such as Nortel, Ericsson, Siemens, Panasonic, Toshiba, NEC, Cisco, Alcatel and Avaya and that, as a result, SingTel's share in this category is below 40 percent. Given the significant difference between IDA's and SingTel's estimates, IDA requested SingTel to explain the basis on which it made its estimate. In response, SingTel conceded that it had obtained the estimate from third party sources and that it could not explain the methodology used to develop the estimate or verify the data. SingTel further acknowledged that customers who purchase services from companies such as Cisco and Avaya must still purchase their "last mile" connection from a licensed telecommunication operator – virtually always SingTel. Given SingTel's clarification, IDA reaffirms its conclusion that SingTel's share in this category is in excess of 90 percent. Companies like Cisco and Avaya are not providing a telecommunication service. Rather, these companies act as system integrators, and hardware and software equipment providers; End Users must still purchase the underlying connectivity from SingTel. Thus, for purposes of assessing SingTel's market share, these companies should not be considered participants in the BLTS market.

58 In the face of such overwhelming market share for the BLTS market, well above the 40 percent threshold at which IDA presumes a Dominant Licensee has significant market power, which SingTel had managed to sustain over time, IDA would require the most compelling evidence to conclude that SingTel has no significant market power and is subject to effective competition. Based on its review, IDA does not find *any* evidence that demonstrates that SingTel is subject to effective competition in the retail BLTS market.

High Barriers to Entry

59 As noted above, in appropriate cases, the presumption of market power can be overcome by evidence of lower barriers to entry. In the present case, however, the barriers to entry to the retail BLTS market, especially access and financial barriers are quite high. The significant upfront cost required to deploy infrastructure, a ubiquitous network and the economies of scale and

scope of the incumbent, and the inertia of existing End Users to switch appear to have deterred investments in local fixed line telecommunication services such as BLTS.

(a) SingTel's claim that competitors are able to enter the retail BLTS market by purchasing ULLs is unavailing. Indeed, as SingTel must know – although ULLs have been made available by SingTel since 2001 – at the end of March 2009, only *eleven* ULLs were leased by competing Licensees in Singapore, which suggests that they do not provide a viable means of significant competitive entry.[24]

(b) Similarly, there is no merit to SingTel's suggestion, in the Third Public Consultation, that IDA's continued *ex ante* regulation of LLCs is "*more than sufficient to address any alleged competition issues that may exist"* in "downstream" markets such as BLTS that use LLCs as an input. Neither does IDA agree with SingTel that it is "*standard regulatory* practice" - in the EU and elsewhere - to remove regulation of downstream services such as BLTS based on the existence of regulation in upstream markets, such as LLCs .

   (i) As an initial matter, contrary to SingTel's assertion, the EU has not eliminated all regulation of retail (downstream) services based solely on the existence of wholesale (upstream) regulation. Rather, where competitive concerns exist at the retail level, the EU retains retail regulation. In assessing the need for retail regulation in those markets, the EU considers all factors that affect competition in those markets. Under EU law, an NRA may maintain retail-level regulation in a market if: (a) there are high non-transitory entry barriers; (b) the structure of market does not trend towards effective competition in the foreseeable future; and (c) the application of *ex post* competition law alone would not adequately address market failures. Consistent with this approach, the vast majority of EU Member States continue to regulate retail fixed-line telecommunication services that are comparable to BLTS.

   (ii) SingTel also failed to note that NRAs in the EU have imposed stringent regulation at the wholesale level. For example, in the EU, NRAs frequently require dominant operators to offer cost-based wholesale LLC products, which can facilitate competitive entry into retail LLC markets, as well as downstream retail markets.

   (iii) IDA recognises that if a competitive operator can easily enter the retail market by purchasing wholesale LLC, this may provide a significant constraint on the ability of the dominant operator to exercise market power in downstream markets and, therefore, may provide a basis for reducing regulation in those markets. However, in contrast to the EU, IDA's current wholesale regulatory regime provides SingTel significant pricing flexibility.

[24] By comparison, the total Fixed Line Subscriptions as at March 2009 numbered 1,843,000.

SingTel is only required to offer *Tail* LLCs at cost-based rates. SingTel also has wide latitude in structuring its wholesale LLC offerings. As a result, as discussed further below, SingTel has imposed a pricing structure for LLCs that discourages competing operators from using wholesale LLC to enter downstream markets, such as BLTS. Thus, the existence of IDA's wholesale regulation does not reduce SingTel's market power in the BLTS and other downstream markets. As a result, regulation remains necessary in those markets.

(iv) In the present case, IDA has considered the actual level of competition in the BLTS market - including the impact of existing wholesale-level regulation. Based on this assessment, IDA has concluded that the BLTS market is *not* competitive. Therefore, there is no justification for removing regulation in this market.

No Evidence of Effective Competition from Successful New Entry

60 There is also no evidence suggesting that SingTel faces effective competition from another operator in the provision of BLTS. IDA specifically rejects SingTel's request in the Second Public Consultation to exempt it from the application of Dominant Licensee regulation to the provision of BLTS in geographic areas served by StarHub's "*nationwide network*". StarHub, as the owner of StarHub Cable Vision ("**SCV**"), does have access to a nationwide cable network. Contrary to SingTel's contention, however, StarHub is not able to use this network "*to offer a competing fixed line business telephony service to end-users*". Rather, as SingTel is well aware, the SCV network can only be used to provide service to *residential* customers. This is because SingTel leases the network infrastructure to SCV and, as part of the network lease agreement, has imposed a contractual restriction precluding the use of the leased network to provide service to government or business customers. Thus, the existence of the SCV network has no relevance whatsoever to the level of competition in the government and business segment of the market. The fact that StarHub, with the most developed fixed line network amongst the market participants, remains a very distant second in terms of number of subscribers and revenue, attests to its inability to make inroads into the retail BLTS market. While there are a few other participants in the BLTS market, their share of the market is insignificant and the presence of these niche competitors does not act to constrain SingTel in the BLTS market.

No Evidence that IP-Based Services Constrain BLTS

61 Likewise, SingTel has not provided persuasive evidence that IP-based services are constraining BLTS. SingTel had relied on two claims. First, SingTel stated that several thousand i-PhoneNet and PhoneNet lines have been terminated. Second, SingTel claimed that it has been offering significant discounts on these services. Neither assertion is convincing. As an initial matter, there is no evidence that SingTel subscribers that terminate i-PhoneNet and PhoneNet services have *moved to competitors* providing IP-based services. Even if SingTel is losing i-PhoneNet and PhoneNet customers to system integrators or providers of IP-based equipment, these services still require LLCs or BLTS (such as ISDN lines) as an input, and thus

do not diminish SingTel's market power in offering any BLTS. In addition, the information regarding tariff filings and discount levels on PhoneNet and i-PhoneNet services that SingTel submitted does not provide evidence of competition. SingTel has simply stated the number of tariff filings, and the broad range of percentage promotional discounts that it has offered. SingTel has provided no evidence of the percentage of its BLTS customers who have received discounts or the average discounts provided to such customers.

No Evidence of Supply Substitutability

62 SingTel has also not provided evidence of supply substitutability (*i.e.*, the ability of licensees that currently provide other telecommunication services to shift resources, relatively quickly and costlessly, in order to provide a service that is a substitute for SingTel's BLTS).

No Evidence of Price Changes due to Competition

63 SingTel has not provided evidence of price competition, especially for business DEL. SingTel's contention that the fact that its business DEL prices are "*amongst the lowest in the world*" is a sign of effective competition is incorrect. SingTel's low prices are the result of IDA's price regulation, not due to the existence of effective competition, and plainly do not refute the inference of market power. Indeed, even with regulation, SingTel *increased* its business DEL prices, effective January 2009.[25] This does not reflect the behaviour of a firm facing the pressures of effective competition.

No Evidence of Customer Switching or Countervailing Market Power

64 Contrary to SingTel's assertion, IDA's interviews showed that business and government End Users are generally not willing to switch providers for their business DEL and ISDN services. This is likely due to the costs of switching to a different operator – such as risks of business disruption and having to procure new infrastructure – that often exceed any cost savings that could be realised. Further, based on IDA's interviews with government and business End Users, IDA does not find any convincing evidence of "strong" End Users exercising countervailing buying power with respect to the purchase of business DEL. This is understandable, given the absence of competitive alternatives. Indeed, when SingTel announced in October 2008 its plan to raise the business DEL rental and usage prices in January 2009, there was hardly any change in business DEL subscriber movements.

Conclusion

65 Given the above findings, IDA has determined that SingTel is not subject to effective competition in the BLTS market and continues to possess significant market power in this market. Therefore, IDA determined that continued application of Dominant Licensee regulation to services provided in the BLTS market remains necessary to protect End Users, and promote and preserve competition.

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[25] SingTel's press release: *Fixed-line telephone subscription and call rates to be revised from 1 January 2009* on SingTel's website.

66 In its Request, SingTel requested that, even if IDA does not grant an exemption for all of SingTel's retail BLTS offerings, IDA should exempt its retail BLTS product offerings other than business DEL service. SingTel explained that its business DEL is its basic telephone service, and the only BLTS that SingTel is required to provide pursuant to its licence. With the continued application of Dominant Licensee obligations to its business DEL, SingTel submits that it is unnecessary to continue imposing Dominant Licensee obligations on the other BLTS product offerings. In the Second Public consultation, SingTel specifically asked IDA to exempt it from the application of Dominant Licensee regulation to its ISDN, i-PhoneNet and PhoneNet services as an alternative to full market exemption. IDA declines to do so. As noted above, SingTel's market share for non-DEL BLTS is well in excess of 90 percent. As these services are offered over the same "last mile" local loop, barriers to entry are high. Thus, even if IDA were to consider SingTel's DEL and non-DEL BLTS separately, nationwide or in particular geographic areas, IDA would reach the same conclusion: given the absence of effective competition, continued application of Dominant Licensee regulation to these services remains necessary.

Market 2: Local Leased Circuits

Market Definition

67 The LLC market consists of services that offer a dedicated telecommunication link between two premises for customers' exclusive use. IDA does not agree with SingTel's contention that there are numerous demand substitutes for LLCs.

68 Contrary to SingTel's suggestion, LMDS are not substitutes for LLCs. As IDA previously recognised, LMDS do not offer the "*superior quality features of both reliability and versatility, as is the case for LLCs*."[26]

69 Similarly, IDA does not agree that other technologies – such as xDSL, wireless local loop, wavelength division multiplexing, cable modem, free space optics, microwave links, Universal Mobile Telecommunications System and General Packet Radio Service – should be considered to be in the same market as LLCs. Again, IDA sees no reason to depart from its previous decision that these connectivity services are not demand-side substitutes because they lack LLCs' reliability and versatility. Neither do these services represent potential supply-side substitutes, because in many cases, they use entirely different facilities than the ones used to provide LLCs, thereby precluding redeployment of these facilities to provide LLCs.

70 In its Request, SingTel submitted that the relevant geographic market for wholesale and retail LLC is national. Nonetheless, in conducting its analysis, IDA has considered whether to define two separate geographic markets – one in the CBD and a second in the Non-CBD areas. The evidence gathered in this proceeding indicates that there are some competitive differences between the CBD and Non-CBD areas. While some LLC End Users in the CBD have a choice of more than one operator, End Users outside the CBD must rely

[26] IDA's Explanatory Memorandum on designation of SingTel's LLCs as a mandated wholesale service, Paragraph 6.

almost exclusively on SingTel for LLCs. However, even within the CBD, SingTel's market share remains very high, and barriers to entry are significant.[27] Indeed, as noted above, many End Users located in the CBD – such as small businesses and those located in shophouses and low-rise buildings – must still rely exclusively on SingTel for LLCs. Consequently, IDA's assessment as to whether SingTel has significant market power in the LLC market would be the same regardless of whether IDA defines one nationwide market or two smaller geographic markets. Therefore, for the purpose of this proceeding, IDA has treated the LLC market as a single national market.[28] This, however, does not preclude IDA from defining two geographic markets – CBD and Non-CBD – in future reviews, should market conditions change.

71 IDA previously defined two functional markets: (a) a retail LLC market consisting of LLC services sold to business End Users; and (b) a wholesale LLC market consisting of LLC services sold to other telecommunication operators for the supply of telecommunication services.[29] IDA sees no reason to alter this market definition. In the present proceeding, however, SingTel seeks an exemption only for the retail LLC market. IDA's competitive assessment, therefore, addresses only the retail LLC market.

Competitiveness Assessment

Market Participants and Market Share

72 To assess the number of market participants and market share, IDA requested Licensees to provide revenue and capacity data for self-use LLCs; LLCs sold to end-users; and LLCs sold to FBOs and Services-Based Operators ("**SBO**s"). IDA also requested operators to break the data down into: (i) LLCs that originate and terminate in the CBD, (ii) LLCs that originate and terminate in non-CBD areas, and (iii) LLCs with one end in the CBD and one end in a non-CBD area. IDA asked operators to report the data for both 2006 and 2007. Because operators could not report revenue for self-use capacity, but did provide capacity data for these links, IDA finds that capacity is a better measure of market share than revenue, given the inclusion of self-use capacity.

73 Unfortunately, several operators were unable to breakdown their LLC sales by CBD and Non-CBD areas. In those cases, IDA assigned their *entire* capacity sold to the CBD. This does not significantly impact the operators' overall market shares. However, to the extent that these operators had some sales outside of the CBD, this approach *under-estimates* SingTel's market share in the CBD, and *over-estimates* SingTel's market share outside the CBD.

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[27] Indeed, even if all of the LLCs sold by other operators were assumed to be sales in the CBD, SingTel's share of the "CBD market" would still be quite high.

[28] Exemption Guidelines Paragraph 2.4.1(e): "*In some cases, IDA may conclude that, even though different product offerings may theoretically be in different markets, it is appropriate to assess the need for continued regulation of these product offerings together because they are subject to similar market conditions*."

[29] IDA's Explanatory Memorandum on designation of SingTel's LLCs as a mandated wholesale service, Paragraph 5.

74 From the data received, SingTel's competitors in the LLC market include StarHub, T-Systems, Pacnet Internet Corporation (S) Pte Ltd ("**Pacnet Internet**") and Verizon Communications Singapore Ptd Ltd ("**Verizon**"). StarHub is the only other major participant in the LLC market. Even then, StarHub remains a distant second to SingTel. Moreover, in many cases, SingTel and StarHub do not compete directly. Rather, a growing number of End Users, who are concerned about service reliability, choose to divide their LLC purchases between two operators – a practice known as carrier diversity. Thus, a portion of StarHub's market share reflects situations in which an End User routes most of its traffic over SingTel's LLCs, while sending the remaining traffic over StarHub's LLCs.

75 The market data reveals that, although SingTel's market share declined between 2006 and 2007, SingTel's share of the nationwide retail LLC market, based on capacity, was still close to 70 percent in 2007, more than three times that of its nearest competitor, thereby creating a strong presumption of dominance.

76 For End Users that require LLCs outside the CBD or nationwide coverage, SingTel is generally the only provider of LLCs. Indeed, SingTel's estimated market shares were almost 90 percent in Non-CBD areas and for LLCs that run between the CBD and Non-CBD areas. Although SingTel's market share in these areas may be slightly overstated for the reasons described above, SingTel's share in these areas is indisputably above its overall nationwide retail LLC market share of close to 70 percent. This creates a strong presumption that SingTel is dominant outside of the CBD. At the same time, SingTel's estimated market share in the CBD is slightly above 50 percent and, for the reasons described in the preceding paragraph, SingTel's actual market share for CBD is likely somewhat higher. Even at 50 percent, this creates a presumption of dominance for SingTel in the CBD.

77 The market is also highly concentrated with other participants' market share significantly smaller than SingTel. In the face of such a high market share, which SingTel has managed to sustain over time, IDA would require compelling evidence to conclude that SingTel has no significant market power and is subject to effective competition.

No Evidence of Effective Facilities-Based Competition

78 The evidence collected by IDA does not support SingTel's contention that it is subject to effective facilities-based competition in both the CBD and Non-CBD areas.

(a) *Facilities-based competition in the CBD.* SingTel claims in its comments to the Second and Third Public Consultations that StarHub has co-located in 90 percent of MDF rooms in the CBD.[30] IDA's study revealed that the figure is closer to 60 percent. IDA estimates that the number of buildings in the CBD is roughly *double* the number of MDF

[30] In the Third Public Consultation, SingTel clarified that it has used a definition of "CBD area" that comprises a smaller geographic area than the "Central Zone" used in its Request. For consistency, IDA adopted the broader definition of CBD used in IDA's LLC Decision 2003, SingTel's LLC tariffs and SingTel's Request.

rooms.[31] Based on this estimate, StarHub only has a presence in about 30 percent of the buildings in the CBD. Further, a separate survey conducted by IDA among all facilities-based Licensees revealed that there is a second operator in less than 40 percent of the CBD buildings, and third operator in less than 20 percent of these buildings.[32] Thus, even within the CBD, End Users in fewer than half of the buildings have a choice of two LLC providers and only a small minority of the End Users can choose from among three LLC providers.

(b) *Facilities-based competition outside the CBD.* SingTel also asserts that the declining number of LLCs provided to its competitors shows the growth of facilities-based competition. However, this evidence does not demonstrate that other operators are rolling out their own networks. To the contrary, as usage increases, operators may migrate from multiple smaller circuits to larger circuits, thereby decreasing the *number of circuits* provided by SingTel, while increasing the total *capacity* provided by SingTel. Indeed, the data provided by SingTel show *increases* in LLC capacity sold to other operators. Likewise, the evidence provided by SingTel regarding the number of government tenders that it has lost outside the CBD does not contradict IDA's conclusion that SingTel still controls almost 90 percent of the LLC market outside the CBD. Moreover, based on IDA's interviews, almost all government and business End Users experience difficulties in switching service providers, given SingTel's extensive reach of its LLC network relative to any other competing operator.

(c) *Reliance on StarHub public statements*. SingTel's quotation of StarHub's public statements in the Third Public Consultation of its intentions to deploy a ubiquitous network, does not introduce new evidence for IDA's consideration. StarHub had made most of these statements in 1998 and 1999. Whatever StarHub's intent might have been a decade ago, the data collected by IDA conclusively demonstrates that StarHub has not deployed a ubiquitous, nationwide End User telecommunication network to date. In its comments, SingTel also quoted StarHub's 2004 prospectus, which stated that StarHub operates "*a high capacity fibre optic network which directly connects over 800 commercial buildings with wide coverage across the Singapore central business district*". In response to IDA's inquiry, StarHub clarified that the coverage figure actually refers to the number of commercial buildings that it serves nationwide, not just in the CBD. IDA's independent assessment of the extent of StarHub's rollout in the CBD corroborates with StarHub's clarification.

High Barriers to Entry

79 Contrary to SingTel's contention, the cost to enter the LLC market remains high. Even in a small, densely populated country such as Singapore, the cost

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[31] IDA has estimated that the number of buildings in the CBD is roughly double the number of MDF rooms based on data submitted by SingTel to IDA, and postal codes provided by SingPost.

[32] In arriving at this estimate, IDA included commercial buildings in the CBD where FBOs have deployed their own infrastructure and/or leased infrastructure from third party operators to provide services.

to roll-out a ubiquitous "last mile" access to End Users (i.e., tail LLCs) is significant. Indeed, as noted above, *actual* evidence shows that, eight years after full market liberalisation, a significant number of commercial buildings in the CBD are not served by a second operator. While SingTel has cited a World Bank and an ITU study showing that fibre deployment costs have fallen, this study was not conducted in Singapore and its conclusion may not be applicable to Singapore. Moreover, the Singapore Government's decision to offer a grant for the construction of the Next Gen NBN, and the proposals received from the participants in the NetCo tender requesting the full grant amount, provide further evidence that deployment costs are prohibitive.

Potential Competition from Competitor at Close Proximity Does Not Constrain SingTel's Market Power

80 In the Second Public Consultation, SingTel also proposed that, regardless of the level of *actual* competition, IDA should consider granting relief to SingTel based on *potential* competition. Specifically, SingTel proposed that IDA remove Dominant Licensee regulation in any geographic area in which there is at least one competing LLC provider within "*close proximity*" to End Users. In particular, SingTel requested the removal of regulation of LLCs in the CBD because at least one *potential* competitor to SingTel is already located within "*close proximity*" to every End User in that area. In support of this proposal, SingTel contended that competitors located in the CBD could readily provide service to any End User within that area either by deploying fibre spurs or purchasing wholesale leased lines. SingTel further asserted that its proposal was consistent with a 2004 decision by the Australian Competition and Consumer Commission ("**ACCC**"), which resulted in partial deregulation of the incumbent Australian operator, Telstra.

81 Evidence that rapid competitive entry is likely within a relatively brief period can provide a sufficient basis to overcome the presumption of significant market power.[33] In the present case, however, the market evidence shows that competitors face high barriers of entry into the market. Therefore, the threat of potential entry – even in the CBD – is not sufficient to constrain SingTel. Indeed, two FBOs provided evidence that an operator in the CBD could not "readily" provide service to any End User within that area by deploying fibre spurs. Both operators estimated that trenching would cost S$200 to S$300 per metre in the CBD based on normal road conditions, and that a typical distance of 200 metres would cost S$40,000 to S$60,000. This excludes the cost of telecommunication equipment. The operators estimated that it would take three to six months to get service into a new customer's premise given the time needed to: obtain approval from the relevant authorities; retain contractors; and perform pipeline work, in-building work and

[33] For example, the EU considers that the dominant operator can be deterred from abusing its market power if potential entry is likely, timely and swift. For the EU to consider entry to be "likely" it must be sufficiently profitable for the competitor or entrant, taking into account factors such as barriers to entry, the likely reactions of the dominant operator and other competitors, and the risks and costs of failure. For the entry to be considered timely, it must be sufficiently swift to deter or defeat the exercise of substantial market power. For entry to be sufficient, it cannot be simply small-scale entry into some market niche, but must be of such a magnitude as to be able to deter any attempt to increase prices by the dominant operator. *See Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings*, Brussels, 3 December 2008.

testing. Given these costs, operators stated that there would have to be a sufficient business case for an operator to commence deployment of a fibre spur to a building, and they would avoid deploying to single-tenant buildings, or buildings with low telecommunication requirement. One operator commented that they would consider trenching to a building only if the customer has requested telecommunication capacity of at least STM-1 and above. At the same time, for some customers, a three- to six-month wait is too long and they would likely award the contract for the service to SingTel.

82 SingTel's contention that competitors located in the CBD could access any customer by leasing wholesale LLCs from SingTel is not supported by evidence. IDA previously designated SingTel's Tail LLCs as an Interconnection Related Service, which SingTel must provide at cost-based prices under its RIO. However, to date, *no operator* has obtained a Tail LLC from SingTel under its RIO. In particular, *no operator* has built-out its infrastructure to SingTel's exchanges in order to compete in the retail market by leasing SingTel's Tail LLCs. IDA does not anticipate that operators are likely to do so in the near future for several reasons:

(a) First, a number of global operators stated that their business strategy is to rely on the incumbents' infrastructure in overseas countries – including Singapore – to provide international services, rather than to roll-out their own infrastructure in those locations.

(b) Second, some operators disclosed during the interviews with IDA that they are reluctant to roll-out infrastructure to SingTel's exchanges after SingTel has announced that many of them may be closed down.

(c) Third, two aspects of SingTel's pricing structure effectively preclude many operators from competing in the retail LLC market by purchasing wholesale LLCs from SingTel.

(i) Unlike incumbent operators in many other jurisdictions, SingTel does not offer a standard wholesale service, available without restriction, at a fixed discount. Rather, SingTel sets the price of both retail and wholesale LLCs based on volume purchased. As a result, SingTel may provide End Users that purchase large quantities of retail LLCs with larger discounts than SingTel provides to a competing operator that purchases smaller volumes of wholesale LLCs – thereby precluding all but the largest competitors from using SingTel wholesale LLCs to compete for those retail LLC customers.

(ii) In addition, SingTel provides wholesale customised LLC schemes with further volume discounts only to competing operators that purchase LLCs for the *sole purpose of originating or terminating international services,* such as IPLCs or IMDS. If a competing operator wants to resell the LLC to retail customers, SingTel will charge the competing operator the standard retail LLC rate (with standard discounts such as volume and term discounts) which is offered to End Users. Given this restriction, it is not feasible for a competing operator to use a SingTel wholesale LLC to compete in the retail LLC market.

(d) Fourth, operators are adopting a "wait-and-see" view of infrastructure deployment, given the impending nationwide deployment of Next Gen NBN.

83 SingTel's reliance on the ACCC's 2004 decision is also misplaced. As an initial matter, IDA does not agree with SingTel's suggestion that Singapore should always adopt the approach taken by overseas jurisdictions, without considering the context and the effectiveness of the approach. In many cases, the legislation, the history, unique market conditions and geography of the overseas jurisdiction may require a certain approach to be taken which may not be entirely applicable to Singapore.

84 In any event, the ACCC decision on which SingTel relies concerned an *entirely different* issue: de-regulation of Telstra's *inter-city* transmission service, not LLCs in the CBD. In that case, ACCC found that the operator of an inter-city transmission network located within "close proximity" to the centre of a regional city could connect that city to its inter-city network for the "relatively small" price of A$100,000 (S$88,000). The ACCC reasoned that, because the cost of entry was not "prohibitive", if three competitors (including Telstra) are within "close proximity" to the centre of a regional city, the threat of potential entry would constrain Telstra's ability to act anti-competitively on the route between that city and the state capital and, therefore, that regulation could be removed on that route.

85 At the same time, the ACCC *rejected* Telstra's request to deregulate two services that Telstra offered in Australia's CBDs: CBD inter-exchange transmission (i.e., transport between two exchanges located within a CBD) and CBD tail circuits (i.e., leased circuits between an exchange and an end user in a CBD). In reaching this conclusion, the ACCC recognised that the cost of entry into the CBD tail circuit market could be prohibitive. Indeed, ACCC specifically relied on evidence provided by competing operators that "*securing building access to install their own optical fibre can be time consuming and costly to organise."* The ACCC also noted that it had *"received information from at least one carrier that it would not install its own infrastructure to supply transmission services to a particular building, unless it had first secured that customer using a Telstra transmission service* [i.e., a wholesale tail circuit]".

86 In 2008, Telstra again asked the ACCC to remove regulation of services that it provides in Australia's CBDs. This time, the ACCC agreed to remove regulation of Telstra's CBD inter-exchange transmission wherever three competing fibre owners (including Telstra) are present within an area serviced by an exchange. However, the ACCC again rejected Telstra's request to remove regulation of Telstra's CBD tail circuits on the grounds that this "last mile" market was not yet competitive. Thus, the fact that other operators had

deployed facilities within the CBD in "close proximity" to end users did *not* provide a basis for ACCC to deregulate Telstra's CBD tail circuit service.[34]

87 Based on the above, IDA declines to remove regulation of LLCs that SingTel provides to end users within the CBD based on the presence of other operators within that area. As discussed above, SingTel's basic assumption – that a competitor located in the CBD could readily serve any End User within the CBD, either by rolling-out a fibre spur or by accessing SingTel's wholesale LLCs – is not correct. The presence of these operators within the CBD does not constrain SingTel's ability to act anti-competitively when providing this "last mile" service to End Users. Therefore, Dominant Licensee regulation remains necessary to protect consumers and prevent anti-competitive conduct.

No Evidence of Price Changes due to Competition

88 Contrary to SingTel's contention, there is no significant evidence of price competition in the LLC market.

(a) SingTel's claim that international competitiveness of SingTel's retail list price is evidence of strong competition is not persuasive. SingTel's LLC retail list prices are subject to IDA's price regulation. The fact that they are internationally competitive is the result of IDA's regulation rather than competition. Between 2001 and 2006, SingTel did not reduce the list prices of its standard retail LLCs. The most significant list price reductions since 2001 occurred after SingTel submitted its Request, in September 2007 and February 2008.[35]

(b) In any case, SingTel's *transacted prices* (i.e., the actual prices charged to End Users taking into account the discounts offered) do not appear to have fallen significantly, based on interviews with End Users.[36] Operators and End Users stated that the transacted price of LLCs in Singapore remains high by international standards. Indeed, data provided by operators indicate that the transacted price of an LLC in Singapore constitutes a higher proportion of the cost of an IPLC than the transacted price of an LLC in other jurisdictions, such as Hong Kong and Japan. While SingTel denies this, it has not provided specific evidence comparing transacted prices in Singapore to those in other jurisdictions.

[34] A recent decision by the Australian Competition Tribunal **("ACT**"), which reversed an ACCC decision to deregulate Telstra's provision of certain other "last mile" services, went even further, finding that – in some cases – even *actual* competitive entry may not justify the removal of regulation. As ACT observed, "*the fact of entry by one firm, or even by more than one firm, of itself does not establish that the incumbent is either presently restrained or is likely to be subject to the constraints of the competitive process in the future*."

[35] In the European Commission Guidance on Article 82 of the EC Treaty, the Commission considers that an undertaking which is capable of profitably increasing prices above the competitive levels for a significant period of time does not face sufficiently effective competitive constraints and can be regarded as dominant. Specifically, the EU emphasised that "increased prices" would include the power to *maintain* prices above the competitive level.

[36] In the Second Public Consultation, SingTel provided a confidential annex containing a range of discounts on retail LLCs. However, SingTel did not provide any information regarding the extent to which it *actually* offered such discounts, and the actual transacted prices. This does not help IDA in assessing the extent to which SingTel's prices have actually declined.

89 While SingTel has submitted evidence of some competitive tenders lost and customers switching to alternative LLC providers between 2002 and 2006, the evidence does not convey the scale or significance of the churn as a proportion of SingTel's overall LLC business. Thus, the data does not provide a basis to determine whether SingTel is in fact facing *some* competition, or whether it is facing effective competition.

90 Finally, SingTel has not submitted any evidence to support the presence of "strong" End Users exercising countervailing buying power to curtail SingTel's market power in the retail LLC market.

Potential Competition from Future Infrastructure Does Not Constrain SingTel's Current Market Power

91 In the Second Public Consultation, SingTel also proposed that IDA adopt the "*forward looking approach*" taken by the EU, and contended that – using such an approach – the deployment of Next Gen NBN in 2012 is a justification for removal of regulation. IDA does not agree. IDA's regulatory regime differs from the EU's. Under the EU approach, which was adopted more than a decade after the liberalisation of the European telecommunication sector[37], the burden is on the regulator to periodically review markets and to demonstrate that, during the period between market reviews, regulation will be necessary because of the lack of effective competition. In Singapore, by contrast, where the market has been liberalised for eight years, the burden is on the Dominant Licensee to demonstrate that a market is *currently* competitive and, therefore, that there is no current need for regulation. To the extent that IDA considers likely *future* developments, such as competitive entry, it is to assess whether they constrain the Dominant Licensee's *current* ability to act anti-competitively. IDA anticipates that the Next Gen NBN will bring competition to the "last mile" for government and business customers. Once this happens, IDA will make any appropriate reductions to the level of regulation. However, the future deployment of the NGN does not constrain SingTel's current ability to exercise market power. Therefore, IDA must retain regulatory requirements necessary to prevent anti-competitive conduct.

No Case for Exemption within a "CBD Market"

92 As explained above, IDA specifically considered whether market evidence warrants a separate CBD geographic market to be defined and whether SingTel could be granted an exemption in such a market. The evidence does not justify this approach.

(a) As mentioned above, SingTel's share of the LLC market within the CBD alone is in excess of 50 percent, which is indicative of the presence of significant market power. Many LLC customers in the CBD do not have any alternative to SingTel (less than half of the buildings have a choice of two LLC providers and only a small minority of End Users can choose from three LLC providers). The cost of entry, in the form of financial and access barriers of entry, in the CBD remains high.

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[37] For example, the UK telecommunications market has been liberalised for more than 20 years.

(b) SingTel does not offer a competitively priced wholesale LLC product that would facilitate entry into the CBD. Operators wishing to enter the market would need to rollout their own network or to obtain Tail LLCs from SingTel and to rollout their own trunk networks. This poses some entry barriers for operators wishing to enter and compete in the LLC market.

(c) Many customers in the CBD include SMEs, which lack the bargaining power to counter SingTel's market strength. For competitive constraints to be effectively curbed by countervailing buyer power, the buyer power would not be considered a sufficiently effective constraint if it only ensures that a particular or limited segment of End Users is protected from the market power of the dominant operator.

(d) Retail prices of SingTel's LLCs in the CBD, particularly the lower bandwidths, have not fallen significantly. The list prices for SingTel's standard retail LLC services remained unchanged between 2001 and 2006. In 2006, the prices of standard retail LLCs of 2 Mbps and below were reduced by about 10 percent, when SingTel introduced a standard one-year contract term scheme for its retail LLC service, and have remained unchanged since. For larger bandwidths, the decrease in the list prices in the CBD since 2001 has only been around 20 percent[38], and the most significant reductions occurred only after SingTel had submitted its Request. This does not provide convincing evidence that SingTel is facing the pressures of effective competition in the CBD. In contrast, SingTel's retail prices for Backhaul and Terrestrial IPLC fell by 80 to 90 percent over the same period.

Conclusion

93 Given the above findings, IDA has determined that SingTel is not subject to effective competition in the LLC market and continues to possess significant market power in the retail LLC market. Therefore, IDA determined that continued application of Dominant Licensee regulation to services provided in this market – in both the CBD and non-CBD areas – is necessary to protect End Users, and to promote and preserve competition.

Market 3: Backhaul

Market Definition

94 IDA concluded in the ICS Decision[39] that:

"*The Backhaul market consists of services that use fibre optic links to enable a Licensee that has capacity on an international submarine cable system to transport that capacity from a cable landing station in Singapore to the Licensee's international gateway or point-of-presence ("PoP") in Singapore. The Backhaul market includes both self-provided backhaul (i.e., the provision*

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[38] This figure excludes the latest price reductions by SingTel, in September 2008 for its 45Mbps and 155Mbps service, which had been mandated by IDA as part of SingTel's price regulation requirements.

[39] IDA's Explanatory Memorandum on the ICS Decision, Paragraphs 49-52.

of backhaul, by a Licensee, to itself) and third-party backhaul (i.e., the provision of wholesale backhaul, by a Licensee, to another Licensee).

The geographic market in which SingTel offers backhaul is national. Customers in Singapore that require backhaul service must purchase it from a backhaul provider within Singapore.

Backhaul is provided exclusively on a wholesale basis. The only customers requiring backhaul are facilities-based operators ("FBOs") seeking to access capacity on international submarine cables."

IDA sees no reason to depart from these conclusions for this proceeding.

95 In SingTel's Request, SingTel did not object to IDA's market definition, but renewed its objection to the inclusion of self-provided Backhaul, on the grounds that it is not "*within the relevant field of rivalry*" between SingTel and its competitors.[40] IDA does not find SingTel's argument to be persuasive. As IDA previously stated, both self-provided and third-party Backhaul "*are in the same market because self-providing backhaul is a substitute for purchasing backhaul from another carrier*."[41] In response to a significant price increase, a Licensee could use self-provided Backhaul capacity to provide Backhaul to third parties. The existence of self-provided Backhaul capacity therefore constrains SingTel's ability to act anti-competitively in the Backhaul market and, consequently, should be considered to be in the relevant market.

Competitiveness Assessment

Market Participants and Market Share

96 IDA asked all FBOs to provide revenue and capacity data on Backhaul services sold from all cable landing stations, including both self-use and sales to FBOs and SBOs, for 2006 and 2007. As operators did not report revenue from self-use capacity but were able to provide capacity data, IDA finds that capacity is a better measure of market share than revenue, given the inclusion of self-use capacity. All the operators with Backhaul sales reported at least some self-use capacity. In the Third Public Consultation, APCC asserted that most operators' self-provided Backhaul is actually obtained from SingTel and is used as an input to provide other downstream services. Such capacity, APCC claimed, "*does not enhance competition in the Backhaul market*" and, therefore, should not be considered to be a part of the Backhaul market. APCC's concerns are unwarranted. The self-provided Backhaul data provided to IDA covered Backhaul that the operators provided either using their own facilities or using dark fibre obtained from another operator.[42] IDA does not consider Backhaul that an operator purchases from SingTel (or any other Backhaul provider), and uses for provision of downstream services, as

[40] SingTel's Request, Paragraph 6.218.

[41] IDA's Explanatory Memorandum on the ICS Decision, Paragraph 50.

[42] Because dark fibre is an input into Backhaul and other services, IDA does not consider dark fibre *sold to* an operator to be in the Backhaul market. Therefore, as dark fibre inputs are not included in the Backhaul market, including the Backhaul capacity provided using dark fibre *purchased from* another operator in the Backhaul market does not result in double counting.

self-provided Backhaul. IDA has no basis to believe that any operator included third-party Backhaul in its calculation.

97 From the data received, IDA notes that SingTel is subject to competition from a number of providers in the Backhaul market, including StarHub, FT, Verizon, Pacnet Cable (S) Pte Ltd (formerly known as C2C Singapore Pte Ltd) ("**Pacnet Cable**"), Pacnet Global (S) Pte Ltd (formerly known as Asia NetCom Singapore Pte Ltd) ("**Pacnet Global**"), Reach International Telecom (S) Pte Ltd ("**Reach**"), and Telecom Italia Sparkle Singapore Pte Ltd ("**Telecom Italia**"). IDA estimates that SingTel's market share had declined by close to 10 percentage points between 2006 and 2007, to approximately 30 percent in 2007, making it the number two operator in this market.

Lower Barriers to Entry

98 In the ICS Decision, IDA stated that it had taken significant measures – including the adoption of Cable Landing Station Decisions – which IDA expected would lower entry barriers and promote competition in the Backhaul markets. The evidence gathered in this proceeding demonstrates that, as IDA anticipated, the market for Backhaul is now competitive.

99 Operators that IDA interviewed generally agreed that IDA's Cable Landing Decision in 2004 has lowered the barriers to entry, and has enabled them to compete more effectively in the Backhaul market. Six FBOs have since co-located their equipment in SingTel's cable landing stations and have obtained connection services from SingTel to provide Backhaul services. Additional new entrants (including Viewqwest Pte Ltd, Matrix Networks Pte Ltd and Tata Communications International Pte Ltd ("**Tata Communications**") have entered the Backhaul market in 2008, which means that SingTel's market share today is likely to be even lower.

Evidence of Price Changes due to Competition

100 In the three years following the ICS Decision, SingTel's list prices for Backhaul fell by as much as 20 percent, in addition to the 80 percent price reduction in list prices from 2001 to 2005. Furthermore, SingTel filed more than 40 customised schemes for its Backhaul service during this period, offering further discounts of up to 50 percent off its list prices and even deeper discounts for operators who purchase higher bandwidth services (e.g. STM-4 and STM-16) that SingTel does not offer as part of its standard Backhaul service.

Evidence of Customer Switching

101 IDA's review also found compelling evidence that business End Users are increasingly co-locating at third-party data centres, such as Global Switch and Equinix, which are served by multiple Backhaul providers. Thus, Backhaul capacity is frequently terminated at a shared data centre, rather than at the premises of an FBO. This increases competitiveness in the Backhaul market in two ways. First, because a data centre provides a large concentration of potential customers, the same infrastructure can be used to serve multiple customers, thereby reducing costs to serve any one customer and fostering new entry. Second, customers can switch between cables (and, indeed,

between cable landing stations) at the data centres without SingTel's involvement, thereby reducing SingTel's ability to use its control of the cable landing stations to impede competition. Indeed, IDA's interviews with the operators confirmed the relative ease with which they are able to switch Backhaul providers and, therefore, that they are not restricted to SingTel in their choice of Backhaul providers.

102 In these circumstances, IDA's continued application of the *ex ante* Dominant Licensee regulations to services provided by SingTel in this market is no longer necessary.

Consideration of FT's Proposal

103 IDA declines to adopt the proposal made by FT to require SingTel to unbundle the link from the SingTel exchange to its FBO customer's PoP, and to offer this link at a regulated rate, which would be set at a level high enough to ensure that it will not lead to FT's "*eviction from the market*".

(a) As an initial matter, FT's suggestion that the Backhaul market is not competitive because FT cannot effectively compete against SingTel for every customer is not correct. The test of whether the market is competitive is whether Backhaul customers have a choice of providers – not whether a particular provider is able to provide a competitively priced service to every potential customer. As noted above, the evidence clearly demonstrates that customers have a meaningful choice in this market. Indeed, despite the advantages that SingTel obtains from being able to self-provide the full link from the cable landing station to an FBO customer's PoP, most third-party Backhaul customers obtain service from another operator. Indeed, SingTel's share of third-party Backhaul sales is estimated to be only 20 percent.

(b) Second, the scenario described by FT does not reflect actual market conditions in Singapore. Rather, as noted above, Backhaul customers frequently co-locate at a data centre, where SingTel enjoys no competitive advantages. Indeed, SingTel indicated that, in 2007, only 15 percent of its Backhaul customers were located at SingTel's own facilities, while the remaining 85 percent were located at a third party data centre, where SingTel would not enjoy any competitive advantage.

(c) Finally, IDA does not agree with FT's suggestion that SingTel should not be allowed to reap any benefit from the fact that it has an existing network and, therefore, can self-provide the link from its exchange to its FBO customer's PoP. IDA has effectively intervened to prevent SingTel from leveraging its control of the cable landing stations, which are bottleneck facilities, to impede competition. However, IDA does not believe that the link between a PoP/exchange and an FBO customer's PoP today constitutes a bottleneck, as evidenced by the fact that other operators (e.g. StarHub) have deployed such a link. In the end, adoption of FT's proposal would not benefit Backhaul customers by increasing competition. Rather, it could harm the Backhaul customers by artificially increasing SingTel's prices.

104 IDA also declines to adopt the suggestion, made by APCC and FT in the Third Public Consultation, that IDA "condition" its exemption on the imposition of competitive safeguards, specifically the duty to file tariffs.

(a) As an initial matter, the commenters appear to have confused the concept of a "condition" with a "partial exemption". Sub-section 4.5 of the Reclassification and Exemption Guidelines provides that:

"IDA may grant a Request [for exemption] . . . subject to a condition, such as the imposition of safeguards, where IDA determines that this will provide an effective means to protect End Users or promote and preserve effective competition among Licensees."

Thus, IDA may exempt a Dominant Licensee from a regulatory requirement provided the Licensee takes certain actions not otherwise required by the Code. For example, IDA could remove regulation of a retail service on the condition that the Dominant Licensee offers a cost-based wholesale version of the service. By contrast, when IDA grants a "partial exemption" from the application of a Dominant Licensee requirement to a specific service, IDA exempts the Licensee from some, but not all, Dominant Licensee requirements applicable to the service. For example, IDA may exempt the Dominant Licensee from *ex ante* regulation, but not *ex post* regulation applicable to a specific service.

(b) In the present case, as discussed further below, IDA has decided to grant SingTel a partial exemption. While IDA will exempt SingTel from *ex ante* regulation in the Backhaul market, IDA will retain the *ex post* competitive provisions. APCC and FT have asked IDA to grant an even *narrower* partial exemption, which would retain the requirement (contained in Sub-section 4.5 of the Code) that SingTel file tariffs for its Backhaul service. FT submitted that SingTel should continue to file tariffs for its Backhaul services as a safeguard against pricing abuses, given that LLC is an input to Backhaul. IDA declines to do so. IDA has concluded that the Backhaul market is competitive. Therefore, there is no justification for subjecting SingTel to the tariff filing requirement. FT's concern that SingTel could leverage its market power in the LLC market to restrict competition in the Backhaul market is addressed by retaining all Dominant Licensee regulation in the LLC market, and the *ex post* regulations in the Backhaul market.

SingTel's Request to be Exempted from Ex Post Rules

105 SingTel contends that it should be exempted from the application of the *ex post* competition law rules in the Backhaul market because: (1) it lacks market power in the LLC market; (2) any market power that it may have in the LLC market is constrained by IDA's wholesale regulation; and (3) it lacks the ability to leverage any power that it may have in the LLC market into the Backhaul market. SingTel's argument lacks merit.

(a) As discussed above, IDA has concluded, based on substantial evidence, that SingTel does in fact have significant market power in the LLC market.

(b) As also discussed above, IDA does not agree that SingTel's market power in the LLC market is constrained by wholesale regulation. IDA's effort to promote wholesale competition by requiring SingTel to offer cost-based Tail LLCs under the RIO has not proven effective. Rather, SingTel retains the ability to dictate the terms and conditions for wholesale LLCs – including denying volume discounts in any case in which a competing operator seeks to resell the LLC – thereby impeding competition in the LLC market.

(c) Finally, IDA does not agree with SingTel's argument that, consistent with internationally accepted legal principles, IDA must conclude that SingTel is incapable of leveraging its market power in the LLC market to restrict competition in the Backhaul market. SingTel had relied on the 1996 decision of the ECJ in *Tetra Pak International SA v. Commission of the European Communities.* SingTel contended that, consistent with the ECJ's decision, IDA cannot find that SingTel has the ability to leverage its market power into the Backhaul market unless: (a) SingTel has a "*leading position*" in the Backhaul market; and (b) there is an "*associative link*" between the two markets (i.e., a connection between the two markets that allows SingTel to leverage its market position in the LLC market to affect competition in the Backhaul market). SingTel contended that neither of these conditions has been met.

    (i) Contrary to SingTel's assertion, there plainly is an "*associative link*" between the LLC and the Backhaul markets. Competing operators continue to rely on SingTel's LLCs to provide Backhaul services to customers that are not co-located in a data centre. By increasing the price of a LLC or reducing the quality, SingTel could impede the ability of a rival operator to offer a competitively priced Backhaul service.

    (ii) To be sure, SingTel does not *currently* have a "*leading position*" in the Backhaul market. However, unlike in the *Tetra Pak* case, the purpose of this proceeding is not an enforcement proceeding to determine whether SingTel *has abused* its dominant position in the Backhaul market. Rather, the purpose of this proceeding is to determine whether there is any reasonable possibility that, in the *future*, SingTel will be able to leverage its dominant position in the LLC market to unreasonably restrict competition in the Backhaul market, and therefore to exempt SingTel from the application of *ex post* rules. Based on the present evidence, IDA cannot conclude, with reasonable certainty, that SingTel will never be able to do so.

Conclusion

106 In light of the above, IDA concludes that continued application of the *ex ante* Dominant Licensee regulations to services provided by SingTel in this market is no longer necessary, in view of the competitive market environment. However, given SingTel's ability to leverage its dominant position in the LLC market to unreasonably restrict competition in the Backhaul market, it is necessary to retain the *ex post* safeguards in the Backhaul market. IDA therefore declines to grant SingTel an *ex post* exemption in this market. IDA's decision will impose no regulatory obligations on SingTel. Indeed, it will have no impact whatsoever if SingTel does not engage in anti-competitive conduct.

Market 4: Terrestrial International Private Leased Circuit

Market Definition

107 In the ICS Decision[43], IDA stated that the "*Terrestrial IPLC market consists of services, provided over submarine cables, that offer* customers *the exclusive use of a point-to-point, dedicated transparent transmission path for voice, data or video between a location in Singapore and a location outside of Singapore*". IDA further determined that, the "*geographic market in which SingTel offers Terrestrial IPLC services is national. It consists of all Terrestrial IPLCs purchased in Singapore (so-called "A-end" sales).*" IDA noted that "*Terrestrial IPLCs may be provided on a wholesale or retail basis*", but concluded, "*both services are subject to similar competitive conditions*" and, therefore, should be assessed together. No party has suggested any reason for IDA to depart from this approach. IDA, therefore, will retain this definition.

Competitiveness Assessment

Market Participants and Market Share

108 IDA requested operators to provide capacity and revenue data for Terrestrial IPLC sales, in the following categories – self-use, A-end sales to End Users, and sales to FBOs/SBOs, for 2006 and 2007. In addition, IDA requested data on the capacity of Terrestrial IPLCs that were purchased from another operator for resale as a Terrestrial IPLC (and not used as an input to any other service), in order to avoid double-counting these sales in calculating the total size of the market. As operators did not report revenue for self-use capacity, but did provide capacity data, IDA finds that capacity is a better measure of market share than revenue, given the inclusion of self-use capacity in the market definition.

109 From the data received, SingTel's competitors in the Terrestrial IPLC market include StarHub, Pacnet Global, Pacnet Cable, Telecom Italia, Verizon, T-Systems and Tata Communications. SingTel's market share has declined to about 45 percent in 2007.

[43] Explanatory Memorandum on ICS Decision, Paragraphs 53 - 60.

Low Barriers to Entry

110 As discussed above, the removal of restrictions on competitive provision of third-party Backhaul has fostered the development of a competitive Backhaul market. This has also contributed towards lowering the entry barrier into the Terrestrial IPLC market in Singapore. The presence of multiple operators in the Terrestrial IPLC market suggests that barriers to entry in this market are relatively low. StarHub and Pacnet Global have become strong competitors to SingTel in the Terrestrial IPLC market, and several other operators also participate in this market. Although SingTel's market share (based on capacity) is about 45 percent, slightly above the level at which IDA presumes dominance, it fell nearly 10 percentage points between 2006 and 2007.

Evidence of Customer Switching

111 Several business and government End Users that IDA interviewed shared that there are multiple operators to choose from to meet their Terrestrial IPLC needs. Indeed, several MNCs interviewed stated that they did not even consider SingTel because they prefer an operator that has a global presence. Switching service providers does not appear to be an issue of concern to End Users. In fact, several of the End Users interviewed shared that they had previously switched from SingTel to competing providers to meet their Terrestrial IPLC needs.

Some Evidence of Price Changes due to Competition

112 In recent years, moreover, list prices for Terrestrial IPLCs on some key routes have decreased by approximately 90 percent. There is also significant variation between the prices offered by operators in the Terrestrial IPLC market, which is a hallmark of a competitive market.

113 In these circumstances, IDA's continued application of the *ex ante* Dominant Licensee regulations to services provided by SingTel in this market is no longer necessary.

SingTel's Request to be Exempted from Ex Post Rules

114 As in the Backhaul market, SingTel contends that it should be exempted from the application of the *ex post* competition law rules in the Terrestrial IPLC market because: (1) it lacks market power in the LLC market; (2) any market power that it may have in the LLC market is constrained by IDA's wholesale regulation; and (3) it lacks the ability to leverage any power that it may have in the LLC market into the Terrestrial IPLC market. SingTel's argument lacks merit. As discussed above, IDA has concluded that SingTel has significant market power in the LLC market. Moreover, in virtually all cases, an operator must combine Terrestrial IPLCs with LLCs to provide an end-to-end service to end-user customers. Therefore, SingTel retains the ability to leverage its dominance in the LLC market to adversely affect competition in the market for Terrestrial IPLCs.

Conclusion

115 In light of the above, IDA concludes that continued application of the *ex ante* Dominant Licensee regulations to services provided by SingTel in this market is no longer necessary, in view of the competitive market environment. However, given SingTel's ability to leverage its dominant position in the LLC market to unreasonably restrict competition in the Terrestrial IPLC market, it is necessary to retain the *ex post* safeguards in the Terrestrial IPLC market. IDA therefore declines to grant SingTel an *ex post* exemption in this market. IDA's decision will impose no regulatory obligations on SingTel. Indeed, it will have no impact whatsoever if SingTel does not engage in anti-competitive conduct.

Market 5: International Managed Data Services

Market Definition

116 In the ICS Decision[44], IDA concluded, "*The IMDS market consists of packet-based services . . . that provide managed connectivity among multiple customer sites, at least one of which is located outside of Singapore. These services allow for data to be prioritised, in order to ensure that more time-sensitive data is delivered more rapidly.*" IDA further concluded that "*The geographic market for IMDS is national; it consists of all sales of IMDS made within Singapore*". Finally, IDA stated that "*IMDS are typically provided on a retail basis*" but that, if such services were to be offered on a wholesale basis, there was no reason to anticipate that "*the wholesale service would differ from the retail service in price or non-price aspects*" and therefore that both retail and wholesale IMDS should be assessed "*as a single market*". No party has suggested any reason for IDA to depart from this approach.

117 Since the adoption of the ICS Decision, a small amount of IMDS – currently less than five percent of the total, as measured by revenue – has been offered on a wholesale basis. As IDA anticipated, such services are offered on comparable prices, terms and conditions as retail IMDS. IDA, therefore, concludes that retail and wholesale IMDS form a single market in this proceeding.

118 At the time of the ICS Decision, SingTel offered three types of IMDS: International Frame Relay, International ATM and International IP-VPN. IDA subsequently granted SingTel's request to add International Ethernet to the list of services considered to be within the IMDS market. When SingTel filed the current exemption request, therefore, it listed two International Ethernet services – ConnectPlus Ethernet-VPN and ConnectPlus Ethernet-Line – as part of the IMDS market for which it seeks a further exemption from *ex post* regulation.

Competitiveness Assessment

119 In the ICS Decision, IDA concluded, "*the market for IMDS is competitive . . . SingTel . . . is subject to competition from a number of providers – including AT&T, BT, Cable & Wireless, Equant, MCI, Infonet, Sprint and StarHub.*

[44] Explanatory Memorandum on ICS Decision, Paragraphs 61 – 63.

Based on A-end revenues, SingTel's estimated share of the market is around 35 percent. While SingTel's share in the legacy International ATM service is somewhat higher, its share of the growing International IP-VPN service is significantly lower." IDA, therefore, granted SingTel an exemption from the application of *ex ante* regulation for the IMDS market.

Market Participants and Market Share

120 IDA requested revenue and capacity data from operators in the following categories: self-use, A-end sales to End Users, and sales to FBOs and SBOs, for the four relevant segments: International Frame Relay, International ATM, International IP-VPN, and International Ethernet, for 2006 and 2007. As IMDS are not an input into other services, and in order to compare across different services with differing values, IDA chose to use revenue as the basis for market share determination.

121 Participants in the IMDS market include AT&T, BT, Verizon, Cable & Wireless Global Pte Ltd, NTT, Tata Communications, T-Systems, PCCW Global (Singapore) Pte Ltd, Pacnet Global, Telstra Singapore Pte Ltd, Sprint International Communications Singapore Pte Ltd, KDDI Singapore Pte Ltd and Reach. SingTel's estimated market share was under 15 percent in 2007.

Presence of Multiple Strong Competitors and Price Competition

122 Generally, End Users did not raise any serious concerns regarding competition in the IMDS markets. In almost all interviews, the End Users stated that they were able to choose from multiple IMDS providers. In fact, business End Users with a global presence indicated that they would typically prefer to purchase IMDS from operators with a global presence, such as BT and FT. End Users explained that SingTel might have a competitive advantage in the Asia-Pacific region, but that it lacked presence in Europe and the United States. All the End Users interviewed also shared that IMDS prices have been declining over the years.

SingTel's Request to be Exempt from Ex Post Rules

123 In the ICS Decision, IDA recognised that "*IMDS providers, like IPLC providers, typically use SingTel's LLCs to provide service to end users . . .* [therefore] *SingTel retains the potential to use its dominant position in the LLC market to adversely affect competition in the IMDS market.*" IDA therefore declined to exempt SingTel from the application of *ex post* regulation to this market. As IDA explained, "*Retaining Sub-section 8.2 will impose no regulatory obligations on SingTel. Indeed, it will have no impact whatsoever if SingTel does not engage in anti-competitive conduct.*"[45]

124 In its current Request for exemption, SingTel renews its request that IDA exempt it from remaining *ex post* regulation in the IMDS market. IDA declines to do so.

125 IDA recognises that, during the last three years, competition has grown even stronger in the IMDS market. Today, three operators have larger market

[45] Explanatory Memorandum on ICS Decision, Paragraphs 100 - 106.

shares than SingTel, whose market share fell to under 15 percent in 2007. During this time, consumers have gradually shifted away from the traditional IMDS – International Frame Relay and International ATM – towards International IP-VPN and, more recently, towards International Ethernet. As End Users shift from the more traditional IMDS, they are clearly taking the opportunity to consider other providers. As a result, SingTel today has only about five percent market share in International IP-VPN, which is by far the largest segment in the IMDS market, based on revenue data collected from the operators. As in the Terrestrial IPLC market, business and government End Users that IDA interviewed commented that they were able to purchase IMDS from multiple operators at competitive prices.

126 The continued growth of competition, however, does not change the fundamental reality: SingTel continues to have significant market power in the LLC market and retains the potential to leverage that dominance to adversely affect competition in the IMDS market. This fact precludes IDA granting SingTel an exemption from *ex post* regulation in the IMDS market. As IDA explained in the Exemption Guidelines, IDA will not exempt a Dominant Licensee from *ex post* regulations where there is "*any reasonable possibility*" that the Dominant Licensee will use "*its dominant position in another market to adversely affect competition in the relevant market*". IMDS providers incorporate LLCs in order to provide an end-to-end retail service. Therefore, SingTel retains the ability to leverage its dominant position in the LLC market to restrict competition in the IMDS market.

127 In addition, because the International Ethernet segment of the IMDS market is still developing, and because SingTel has just under 50 percent market share in that segment, IDA cannot foreclose the possibility that SingTel might develop a degree of market power in the IMDS market. In this circumstance, the prudent course is for IDA to retain *ex post* safeguards. As IDA explained in the Exemption Guidelines, IDA will not exempt a Dominant Licensee from *ex post* regulations where there is "*any reasonable possibility*" that the "*Dominant Licensee retains, or has any reasonable possibility of regaining, Significant Market Power in a market*".

Conclusion

128 Given SingTel's ability to leverage its dominant position in the LLC market to unreasonably restrict competition in the IMDS market, it is necessary to retain the *ex post* safeguards in the IMDS market. IDA therefore declines to grant SingTel an *ex post* exemption in this market. IDA's decision will impose no regulatory obligations on SingTel. Indeed, it will have no impact whatsoever if SingTel does not engage in anti-competitive conduct.

Market 6: Local Managed Data Services

Market Definition

129 In defining the market for LMDS, IDA is guided by the service market definition that it has adopted for IMDS. Thus, IDA concludes that the LMDS market consists of packet-based services – such as Local Frame Relay, Local ATM, Local IP-VPN and Local Metro-Ethernet – that provide managed

connectivity among multiple customer sites, all of which are located within Singapore.[46]

130 The geographic market for LMDS is national. Customers in Singapore that require LMDS must purchase it from a LMDS provider within Singapore.

131 While LMDS is generally provided on a retail basis, the service is also sold to wholesale customers. However, given that there is no difference in pricing or any other aspect of sales between wholesale and retail customers, IDA concludes that wholesale and retail LMDS constitute a single market.

Competitiveness Assessment

Market Participants and Market Share

132 IDA requested revenue and capacity data from operators in the following categories: self-use, A-end sales to End Users, and sales to FBOs and SBOs, for the four relevant segments: local frame relay, local ATM, local IP-VPN, and local Metro-Ethernet. As LMDS are not an input into other services, and in order to compare across different services with differing values, IDA chose to use revenue as the basis for market share determination.

133 SingTel's competitors in this market include StarHub, LGA, NTT, Pacnet Internet, Qala and NCS. SingTel's share of the total LMDS market is approximately 70 percent by revenue, more than five times that of its nearest competitor, and this remains almost unchanged for both 2006 and 2007. This is well above the 40 percent level at which IDA makes an initial presumption that a Licensee has significant market power. SingTel's only competitors of significance are StarHub and Pacnet Internet. In the face of such a high market share, which SingTel has sustained over time, IDA would require the most compelling evidence to conclude that SingTel is subject to effective competition.

High Barriers to Entry

134 As in the BLTS and LLC markets, barriers to entry in the LMDS market are high because of the need to deploy or obtain "last mile" connectivity in order to serve End Users. As discussed above, even in a small, densely populated country such as Singapore, the cost to roll-out a ubiquitous "last mile" access to End Users remains significant. Moreover, SingTel is able to leverage its control over LLCs into the LMDS market to a far greater extent than in the IMDS market. This is because, in the IMDS market, the cost of local connectivity within Singapore is a relatively small portion of the total cost – which typically includes international connectivity between Singapore and multiple foreign jurisdictions, and local connectivity in each of those

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[46] During the interviews, some operators and End Users stated that they consider certain Local Metro-Ethernet services to be substitutes for LLCs. Other interviewees, however, agreed with SingTel that Local Metro-Ethernet is a substitute for the other LMDS. In the absence of conclusive evidence, IDA will accept SingTel's position. Because IDA is denying SingTel's request for exemption in both the LLC and LMDS markets, this decision to consider Local Metro-Ethernet under the LMDS market will not have any substantive impact on the level of regulation to which SingTel is subject. That said, IDA reserves the right in the future to review whether any Local Metro-Ethernet services are substitutes for, and thus in the same market as, LLCs.

jurisdictions, along with data management services. In the LMDS market, by contrast, local connectivity within Singapore reflects a very significant portion of the cost of the total service.[47] There is no merit to SingTel's suggestion that IDA's continued *ex ante* regulation of LLCs eliminates the need for *ex ante* regulation in LMDS because this service uses LLC as an input. As discussed above, in determining whether continued regulation is necessary in a market, IDA will consider all relevant factors regarding competitive conditions in that market - including the ability of competitive operators to enter the market. In this case, the evidence shows that SingTel continues to have significant market power in the LMDS market, and that competing operators cannot feasibly enter the LMDS market by purchasing wholesale LLC's from SingTel.

No Evidence of Successful New Entry

135 Business and government End Users that IDA interviewed stated that there is a lack of choice in the LMDS market, especially if they require LMDS coverage for multiple customer sites in Singapore. There is also no evidence of countervailing buying power by any "strong" End Users in the LMDS market.

No Evidence of Customer Switching

136 SingTel claimed to have provided evidence that it has lost bids for government tenders and requests for proposal for LMDS, and that it is subject to price competition from StarHub. However, the information provided relates more to bids that SingTel lost for IMDS, Terrestrial IPLC and LLC, rather than LMDS. Given the End Users' comment above about lack of choice, IDA does not find the information that SingTel provided to be convincing as evidence of customer switching.

No Evidence of New Services Constraining SingTel

137 In its comments on the Second Consultation, SingTel also argues that its prominence is less significant in new-IP based services such as Metro-Ethernet. However, while SingTel's market share in MetroEthernet is slightly lower than for the legacy services, it is still approximately 65 percent – and actually increased from 2006 to 2007.

No Evidence of Price Changes due to Competition

138 IDA does not find SingTel's evidence of price competition persuasive. As discussed above, the fact that SingTel has filed a number of tariffs does not demonstrate either that SingTel's actual transacted prices are falling overall, or that SingTel's prices are competitive with other operators.

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[47] As discussed above, IDA rejects SingTel's assertion that IDA's continued regulation of LLCs obviates the need for regulation of downstream retail services, such as BLTS and LMDS. The evidence is clear that, as a result of SingTel's pricing structure, competitive operators have not been able to provide significant competition in the LMDS market by using wholesale LLCs purchased from SingTel.

Conclusion

139 Given the above findings, IDA has determined that SingTel is not subject to effective competition in the LMDS market and continued application of Dominant Licensee regulation to services provided by SingTel in the LMDS market is still necessary to promote and preserve competition in the market.

Customer Segment Request

140 As noted above, SingTel has also requested an exemption for all retail telecommunication services provided to customers in the business and government customer segment with an annual spend on telecommunication services of at least S$250,000. IDA has considered this request on the merits, but has determined that it should be denied.

141 SingTel has not demonstrated that continued application of Dominant Licensee obligations to telecommunication services that it provides to business and government customers with an annual spend of at least S$250,000 is no longer necessary "*to protect End Users or to promote and preserve effective competition amongst Licensees*", as required in Sub-section 2.5.1 of the Code. SingTel contends that services provided to customers that fall within this customer segment should no longer be subject to Dominant Licensee regulation, because the provision of telecommunication services to such customers is extremely competitive. SingTel further claims that such customers are typically telecommunication-savvy and sophisticated buyers, who purchase telecommunication services through competitive tender processes. SingTel also contends that the characteristics of this customer segment provide a strong incentive for infrastructure-based competitors to invest in infrastructure to provide services to business and government customers. SingTel's argument has three significant flaws.

(a) First, SingTel disregards the fact that many business and government customers (including those who have an annual telecommunication spend of at least S$250,000) have no alternative but to purchase LLCs from SingTel, especially in non-CBD areas. Based on IDA's interviews, virtually every customer that falls under SingTel's proposed Customer Segment Request requires LLCs – either to connect multiple sites within Singapore, to access Terrestrial IPLC, or to use as a "platform" for managed data services. As IDA has concluded, the LLC market is not competitive. Outside the CBD – where most government customers and many business customers are located – SingTel is typically the *only* provider of LLCs. Within the CBD, many customers have no competitive alternative to SingTel's LLCs. The fact that only a quarter of End User's total telecommunications spend may be on LLCs does not alter IDA's conclusion. If a customer does not have access to more than one LLC provider, it has no ability to constrain SingTel's market power in the market for LLCs and for services for which LLCs are a significant input.

(b) Second, the S$250,000 annual telecommunication threshold would include medium-sized enterprises that do not possess countervailing buying power that can check any anti-competitive conduct by SingTel.

IDA recognises that some of the largest business customers, such as the large MNCs with multi-million dollar telecommunication spend, may be able to obtain telecommunication services that are priced competitively through tenders. SingTel's Customer Segment Request, however, would not be limited to such large MNCs. Rather, the customer segment proposed by SingTel would include medium-sized enterprises, which may lack the expertise and buying power of the largest MNCs. Given the characteristics of such medium-sized enterprises, IDA concludes that continued application of Dominant Licensee regulation is necessary to protect these customers, and to promote and preserve effective competition among Licensees.

(c) Finally, grant of the Customer Segment Request would present significant administrative challenges. SingTel's request is based on a customer's total telecommunication spend for services purchased in Singapore – not the amount a customer spends on telecommunication services purchased only from SingTel. Thus, if IDA were to grant SingTel's request, IDA would need to develop a procedure to identify all customers that fall within the threshold of S$250,000 annual telecommunication spend. SingTel has suggested a number of means of calculating a customer's annual spend. Where the End User is a SingTel customer, SingTel proposed that the End User must have spent at least S$250,000 with SingTel. Where the End User is not an existing SingTel customer, the End User would need to demonstrate or declare that it has an annual spend of at least S$250,000 with another operator. SingTel offered to provide IDA, every six months, with a list of business or government customers that it considers as falling within the customer class to which the exemption applies. IDA has serious doubts on the practicality or feasibility of the above approach. First, relying on the customer to show proof or declare that it has an annual spend of at least S$250,000 is problematic. Some customers are reluctant to disclose the amounts of their telecommunication spend, and they would not have incentive to disclose such amounts accurately. Second, further complications could result from customers whose level of spending fluctuates from year-to-year. Policing this regime clearly would entail significant administrative resources.

142 In the Second Public Consultation, SingTel proposed limiting the class to which the exemption would apply to customers that purchase S$250,000 per year on telecommunication services from SingTel (rather than to customers that have total annual spend of S$250,000 for telecommunication services purchased from any operator in Singapore). SingTel's suggested approach would address, to a significant extent, the administrative difficulties previously identified by IDA. However, the suggested approach does not address the competition concerns that IDA has identified in the preceding paragraph. As virtually all customers that purchase at least S$250,000 worth of telecommunication services from SingTel annually rely on LLCs to access telecommunication services, and because the market for LLCs is not competitive, IDA declines to eliminate regulation of all telecommunication services that SingTel provides to such customers.

143 SingTel also submitted in the Third Public Consultation that "*there is significant scope for the removal of regulation in respect of the corporate and government customer segment, as the maintenance of LLC regulation in respect of this segment would address the IDA's stated concerns*".[48] In other words, in SingTel's view, IDA should remove regulation for all telecommunication services provided to business and government End Users who spend a minimum of S$250,000 per year on telecommunication services because IDA's regulation of LLCs is sufficient to enable competing operators to serve these customers by purchasing wholesale LLCs. IDA does not agree. As discussed previously, the evidence is clear that, as a result of SingTel's pricing structure for wholesale LLCs, competitive operators have not been able to provide significant competition in the corporate and government customer segment by using wholesale LLCs purchased from SingTel. SingTel has presented no evidence that demonstrates that competitors have made any greater use of wholesale LLCs to serve End Users who spend S$250,000 per year or more on telecommunication services than they have to serve smaller customers. Thus, the fact that IDA has chosen to retain the current level of LLC regulation does not provide a basis to exempt SingTel from the application of Dominant Licensee regulation when it provides services to End Users who spend a minimum of S$250,000 per year on telecommunication services. SingTel, of course, remains free to propose modifications to its wholesale pricing structure that would enable competitors to enter a range of downstream markets, using wholesale LLCs acquired from SingTel.

144 Finally, in the Third Public Consultation, SingTel suggested that, if IDA rejects its Customer Segment Request, IDA should provide its own deregulatory proposal. IDA recognises the need to continuously review its regulations and remove regulations that are no longer necessary. Nonetheless, under the Code, it is the Dominant Licensee – not IDA – that has the burden of demonstrating that continued application of a regulation is no longer necessary to protect End Users and promote competition. In the present case, SingTel has failed to demonstrate that application of Dominant Licensee regulation is no longer necessary to protect End Users with a telecommunication spend of S$250,000 per year. SingTel, of course, remains free to submit a further Customer Segment Request. Any such Request, however, must demonstrate that continued regulation of the customer class is no longer necessary, and must be administratively feasible.

PART VIII: IDA'S FINAL DECISION

145 Based on the findings explained above, IDA arrived at the following Final Decision.

Market-Based Request

146 IDA will grant SingTel's request to be exempted from the application of Sub-sections 4.2.1.1 to 4.2.1.3, 4.3, 4.4.1, 4.4.2.1, 4.5 and 4.6 of the Code to SingTel's provision of Backhaul and Terrestrial IPLC services, as well as Sub-

[48] SingTel's comments, Third Public Consultation, Paragraph 2.48c.

sections 4.2.2.1 to 4.2.2.3 of the Code to SingTel's provision of Terrestrial IPLC services.

147 There is no change to the exemption previously granted by IDA in the ICS Decision with respect to SingTel's provision of IMDS, i.e., exemption from the application of Sub-sections 4.2.1.1 to 4.2.1.3, 4.2.2.1 to 4.2.2.3, and 4.3 to 4.6 of the Code.

148 IDA will deny SingTel's request to be exempted from the application of Sub-sections 4.2.1.1 to 4.2.1.3, 4.2.2.1 to 4.2.2.3, 4.4.1, 4.4.2.1, 4.5 and 4.6 of the Code to SingTel's provision of BLTS, LLC and LMDS services.

149 IDA will deny SingTel's request to be exempted from the application of Sub-sections 8.2.1.1 to 8.2.1.3, 8.2.2.1 and 8.2.2.2 of the Code to SingTel's provision of BLTS, LLC, Backhaul, Terrestrial IPLC, IMDS and LMDS services.

Customer Segment Request

150 IDA will deny SingTel's Customer Segment Request for an exemption from the application of the Dominant Licensee obligations specified in Sub-sections 4.2.1.1 to 4.2.1.3, 4.2.2.1 to 4.2.2.3, 4.4.1, 4.4.2.1, 4.5 and 4.6, 8.2.1.1 to 8.2.1.3, 8.2.2.1 and 8.2.2.2 of the Code in its entirety.

151 Taken together, Table 2 summarises IDA's Final Decision.

Table 2: Summary of IDA's Final Decision

	Exemption from Dominant Licensee Obligations under the Code	
Market	**Section Four – Duty of Dominant Licensees**	**Section Eight – Abuse of Dominant Position**
BLTS	Deny	Deny
LLC	Deny	Deny
Backhaul	Grant	Deny
Terrestrial IPLC	Grant	Deny
IMDS	Previously Granted	Deny
LMDS	Deny	Deny
Customer Segment Request	Deny	Deny

Implementation Procedures of IDA's Final Decision

152 The Final Decision will become effective upon publication in the Gazette. IDA intends to publish the Gazette within 14 days from the date of its Final Decision.

153 The Final Decision will remain in effect permanently, unless IDA determines that re-imposition of any requirement is necessary to protect End Users or promote and preserve competition amongst Licensees.

154 The Final Decision will apply to any new telecommunication service or product offering that SingTel may, in future, offer that is in the same market for which IDA has granted an exemption. However, SingTel must obtain IDA's prior written approval that the new telecommunication service or product offering is within the same market for which IDA has granted the relevant exemption. To do so, SingTel must submit a detailed description of the new telecommunication service or product offering – including pricing, functionality and expected customer base. IDA will make the final determination as to whether the new telecommunication service or product offering falls within a market for which IDA has granted the relevant exemption. IDA will find that the new telecommunication service or product offering is in the same market if the evidence demonstrates that the new service or product offering is a reasonable substitute for any existing service or product offering in that market.

155 In the event IDA imposes any additional provisions applicable to Dominant Licensees, IDA will determine, at that time, whether SingTel should be exempted from the application of that provision to the telecommunication services or product offerings in the markets in which IDA has granted SingTel an exemption.

ANNEX A

GLOSSARY

The general descriptions below are provided as a reference and may not be exhaustive.

(a) Terrestrial International Private Leased Circuit (IPLC)	A Terrestrial IPLC is a point-to-point dedicated private line via submarine cable systems used by an organisation to communicate between offices that are geographically dispersed throughout the world. An IPLC can be used for Internet carriage, business data exchange, video conferencing and any other form of telecommunication.
(b) Local Leased Circuit (LLC)	A LLC is the domestic version of an IPLC. It is a point-to-point dedicated private line used to connect domestic offices to each other, and to a carrier's point of presence (POP) for international services. A LLC can be used for Internet carriage, business data exchange, video conferencing and any other form of telecommunication.
(c) Frame Relay	Frame Relay is a managed network connectivity service, using packet-switching technology, designed for cost-efficient data transmission for intermittent traffic between Local Area Networks ("**LAN**s"), and between many end-points in a Wide Area Network ("**WAN**"). Frame Relay complements and provides a mid-range service between ISDN (which offers bandwidth at 128 kbps) and Asynchronous Transfer Mode ("**ATM**") (which operates in somewhat similar fashion to Frame Relay but has higher speeds from 1 Mbps or 622 Mbps).
(d) Asynchronous Transfer Mode (ATM)	ATM is a managed network connectivity service, using packet-switching technology, which has high-speed transportation capability (1 Mbps and above), network manageability and network accountability. It is able to meet point-to-point, point to multipoint as well as multipoint-to-multipoint connectivity needs. ATM is suited to handle real-time traffic, as well as bursty applications. With the ability to define jitter, delay, cell/packet loss ceilings, bandwidth on an application, ATM technology is able to deliver quality of service by allocating resources to traffic that has the highest priority.
(e) Ethernet	Ethernet is a managed network connectivity service, based on the Ethernet standard used for LANs but covering a city or even an international footprint. It can be provided over different service delivery technologies, such as Multi Protocol Label Switching ("**MPLS**"), and provides benefits to End Users in terms of scalability and flexibility.

(f)	**Internet Protocol Virtual Private Network (IP-VPN)**	A Virtual Private Network ("**VPN**") via Internet Protocol ("**IP**") is a managed network connectivity service to provide remote offices or individual users with secure access to their organisation's network. It is used to meet enterprise networking requirements such as Intranet, business-to-business Extranet and remote access. A VPN can be contrasted with an expensive system of owned or leased lines that can only be used by one organisation. The goal of a VPN is to provide the organisation with the same capabilities, but at a much lower cost. A VPN works by using the shared public infrastructure while maintaining privacy through security procedures and tunnelling protocols. IP is the method or protocol by which data is sent from one computer to another on the Internet. IP-VPN is therefore an Internet Protocol based VPN, which harnesses the strength and reach of IP networks.
(g)	**Backhaul (of undersea capacity)**	High capacity circuits which enable carriers with capacities in submarine cable systems to "carry" these capacities from cable landing stations to their points of presence (gateway) usually within the same country.
(h)	**Direct Exchange Line (DEL)**	DEL service is traditional telephone service for businesses, consisting of individual phone lines to each handset, and direct dialing from the handset to any other number, within the same organisation or outside that organisation.
(i)	**Integrated Switched Digital Network (ISDN)**	ISDN is a circuit-switched telephone service, enabling digital transmission of both voice and data. Different configurations allow different numbers of channels, along with a signalling channel.
(j)	**Private Branch Exchange (PBX)**	A PBX is an exchange serving a private enterprise, enabling users within the enterprise to easily dial each other, while also accessing the public network for outside calls. Unlike DEL service, the PBX does not require a unique outside line for each handset, and indeed may use an ISDN service to connect to the public network.
(k)	**IP Telephony**	IP Telephony is a form of VoIP that requires telephone or E.164 numbers that allows a user to make and receive voice, data and video calls in any domestic or overseas location where broadband Internet access is available.

ANNEX B

LIST OF OPERATORS WHO PROVIDED DATA FOR MARKET SHARE ANALYSIS

1. AT&T Worldwide Telecommunication Service Singapore Pte Ltd
2. BT Singapore Pte Ltd
3. Cable & Wireless Global Pte Ltd
4. IBM Singapore Pte Ltd
5. Equant Pte Ltd/ France Telecom Long Distance (Singapore) Pte Ltd
6. Global Crossing Singapore Pte Ltd
7. KDDI Singapore Pte Ltd
8. LGA Telecom Pte Ltd
9. MediaRing Ltd/ MediaRing Communications Pte Ltd
10. NCS Pte Ltd/ NCS Communications Engineering Pte Ltd
11. NTT Singapore Pte Ltd
12. Pacnet Cable (Singapore) Pte Ltd
13. Pacnet Global (Singapore) Pte Ltd
14. Pacnet Internet (Singapore) Pte Ltd
15. PCCW Global (Singapore) Pte Ltd
16. Qala Singapore Pte Ltd
17. Reach International Telecom (Singapore) Pte Lt
18. Reliance Globalcom
19. Sprint International Communications Singapore Pte Ltd
20. Singapore Telecommunications Limited
21. StarHub Ltd
22. SuperInternet Access Pte Ltd
23. Tata Communications International Pte Ltd
24. Telecom Italia Sparkle Singapore Pte Ltd
25. Telstra Singapore Pte Ltd
26. T-Systems Singapore Pte Ltd
27. Vanco (Asia-Pacific) Pte Ltd
28. Verizon Communications Singapore Pte Ltd