



Consultation Paper:

DESIGNATION OF SINGAPORE TELECOMMUNICATIONS  
LIMITED'S LOCAL LEASED CIRCUITS AS MANDATORY  
WHOLESALE SERVICE

INFOCOMM DEVELOPMENT AUTHORITY OF SINGAPORE

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## Designation Of Singapore Telecommunications Limited’s Local Leased Circuits As Mandatory Wholesale Service

### 1 INTRODUCTION

- 1.1 Local Leased Circuits (“LLCs”) are important elements in the telecommunication market that are commonly used by telecommunication service providers to provide telecommunication services to wholesale and retail customers, and by business users to communicate with their local and international offices. Internet Access Service Providers (“IASPs”) also rely heavily on LLCs for connecting their customers to their central offices for provision of Internet access services.
- 1.2 In Singapore, the incumbent operator, Singapore Telecommunications Limited (“SingTel”), has the most extensive LLCs network in terms of geographical coverage. There are generally two groups of LLCs products that are offered by SingTel in the local market – “single-point to single-point” and “multi-point to single-point”. “Single-point to single-point” services are dedicated lines of equal bandwidth between 2 premises (see **Figure 1** for illustration). “Multi-point to single-point” services allow customers to collect traffic using smaller tail circuits<sup>1</sup> from different locations and aggregate the traffic using a bigger trunk circuit<sup>2</sup> to a central location (see **Figure 2** for illustration).

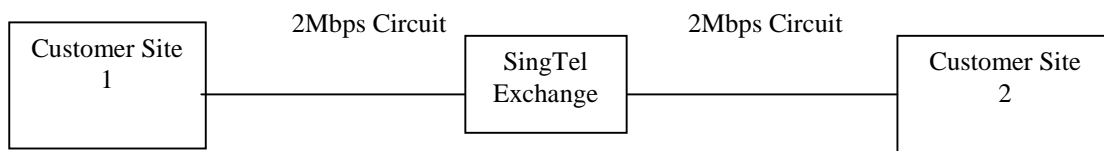


Figure 1: Example of Single-point to Single-point Connectivity

<sup>1</sup> Tail circuits are connections between the customer site and SingTel’s local exchange.

<sup>2</sup> Trunk circuits are for connections from SingTel’s local exchange to customers’ HQ sites or data centres.

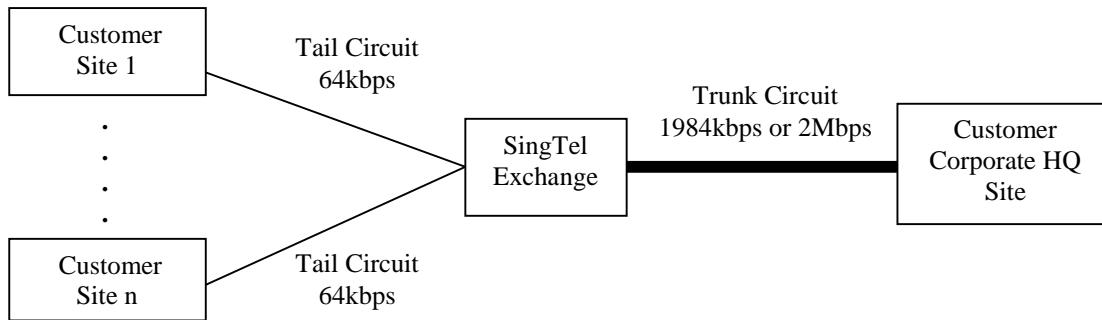


Figure 2: Example of Multi-point to Single-point Connectivity

- 1.3 Under the Code of Practice for Competition in the Provision of Telecommunication Services (the “Code”), SingTel has a duty to allow the resale of its retail products by other operators to end-users<sup>3</sup>. SingTel also has a duty to submit a tariff for its wholesale products for IDA’s approval prior to offering the wholesale products to other operators<sup>4</sup>. While the decision whether to offer a wholesale product is a commercial one, once SingTel chooses to offer the wholesale product, SingTel will have to ensure that its wholesale product is offered on a non-discriminatory basis.

## 2 RATIONALE FOR REVIEW

- 2.1 With the full liberalisation of the telecommunications market on 1 April 2000, the IDA has taken the policy approach of encouraging facilities-based competition to achieve sustainable and effective competition, and to ensure that Singapore maintains its position as an info-communications hub. The IDA believes that keener competition in the market would result in a wider choice and range of telecommunication services at lower prices, to the benefit of consumers and businesses in Singapore.
- 2.2 While market forces are generally far more effective than regulation in promoting consumer welfare, to the extent that markets or market segments are competitive, the IDA will place primary reliance on market forces. To the extent that a given market is uncompetitive, the IDA will seek to impose the necessary regulatory requirements to promote and maintain effective competition. When assessing the competitiveness of a market, the IDA will consider factors such as prices, ease of market entry and exit, presence of direct competitors or effective substitutes, type and extent of price competition, and the scope/nature/range of services offered.

<sup>3</sup> Section 5.8.1 of the Code.

<sup>4</sup> Section 5.8.3 of the Code.

- 2.3 In keeping with this policy approach, the IDA has in the past intervened to facilitate access to bottleneck infrastructure controlled by the dominant licensees to facilitate early market entry while new facilities-based operators (“FBOs”) deployed their networks. For example, the IDA required that SingTel’s Reference Interconnection Offer (“RIO”) provides for FBOs to obtain Unbundled Network Elements<sup>5</sup> (“UNEs”) and Essential Support Facilities<sup>6</sup> (“ESFs”) for the deployment of their telecommunication networks and services.
- 2.4 The IDA recognises that LLCs are key telecommunication products for businesses, and that effective competition within this sector can make a positive contribution to the competitiveness of the overall economy. The IDA has received feedback from several operators that after 3 years of full market liberalisation, competition in the LLCs market in Singapore remains limited. Today, while other FBOs also offer LLCs, with some having rolled out LLCs infrastructure of their own, most of these operators have limited network coverage and are reliant on SingTel’s LLCs for their own use or to serve their customers. While the IDA recognises that SingTel’s posted retail LLCs prices are generally competitive in specific bandwidths when compared with other countries, the IDA notes that because SingTel has not developed wholesale prices for most of its LLCs products, competing operators are acquiring LLCs from SingTel at or near retail prices and are unable to effectively compete with SingTel in the retail LLCs market.
- 2.5 In this respect, IDA sees a need to adopt additional regulatory measures to facilitate further competition in the LLCs market but at the same time not distort the economic incentive for FBOs to deploy their network infrastructure to their customers in the longer run. With increased competition in the LLCs sector, the IDA hopes to further lower business costs and ultimately enhance Singapore’s position as an info-communications and business hub.

Questions:

*The IDA welcomes views and comments on the state of competition in the local LLCs market. Is the local LLCs market competitive and if not, what are the factors contributing to this? All comments should be supported by relevant evidence and reasoning.*

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<sup>5</sup> Unbundled Network Elements include physical telecommunication plant and equipment and the associated service functionality that can be decoupled from the dominant licensee’s network and made available to a facilities-based requesting licensee for the provision of their telecommunication offerings.

<sup>6</sup> Essential Support Facilities are passive support structures, for which no practical or viable alternatives exist, that enable the deployment of telecommunication infrastructure.

### **3 IDA'S APPROACH TO REGULATING SINGTEL'S LLCs SERVICES**

3.1 To promote competition in the local LLCs market, the IDA is considering the following regulatory measures:

- (a) The IDA will designate SingTel's LLCs as a mandatory wholesale service under the Code. SingTel will offer the mandatory wholesale service under its RIO at the IDA mandated rates for a period of 2 – 3 years. There are different approaches for determining mandated rates, including a cost-based approach, a "retail-minus" approach, and a "retail minus avoidable cost" approach. Each approach is likely to result in different rates of price reductions, and could be implemented with different degrees of speediness. One possible option is to choose an approach that could be implemented fairly quickly while offering wholesale prices that are significantly below SingTel's posted retail prices, so that competition in the LLCs market could be enhanced in a timely fashion to benefit consumers. Based on information on discounts generally offered in the LLCs market, IDA's assessment is that a discount of around 40% off SingTel's published retail LLCs prices could be possible. After this 2 – 3 year period, the IDA will conduct a review of the designation of SingTel's wholesale LLCs service to determine if an alternative pricing approach would serve consumers' needs better; and
- (b) The IDA will require SingTel to allow FBOs to co-locate equipment at SingTel's exchanges so that they can directly connect their own trunk circuits (from their data hub or facilities to SingTel's exchanges) to SingTel's tail-circuit LLCs, instead of having to also purchase these trunk circuits from SingTel. The IDA notes that countries such as the United Kingdom, France and the Netherlands have required their operators with significant market power to offer LLCs at cost-oriented prices under their RIOs. The IDA also notes that SingTel's existing RIO does not provide for these, therefore should IDA proceed to place such requirements on SingTel, SingTel would be required to offer both wholesale LLCs services and co-location services for FBOs to access SingTel's tail-circuit LLCs under its RIO.

Questions:

Overall Regulatory Approach

*The IDA welcomes views and comments on the IDA's proposed regulatory measures to promote greater competition in the local LLCs market and those market sectors that may depend on LLCs. Are there additional issues that the IDA needs to consider in implementing these measures? Would these regulatory measures be effective in stimulating network rollout by competing operators in the longer term? Are there other more appropriate or effective regulatory measures that the IDA should consider rather than designating SingTel's LLCs as a mandatory wholesale service under the Code in the short-term?*

Scope of mandatory wholesale service

*The IDA welcomes views and comments on the technical definition or specification for the LLCs including the range of bandwidths (for example, 64kbps, 512 kbps, 2 Mbps) that the IDA should designate as mandatory wholesale service. Please provide detailed supporting reasons for each proposal and comment made.*

*The IDA welcomes views on other related issues that the IDA needs to address in designating SingTel's LLCs as a mandatory wholesale service. Comments should be supported by relevant evidence and reasoning.*

Pricing and Term Timeframe

*The IDA also seeks views and comments on the proposed pricing principle to be adopted in the designation of SingTel's LLCs as a mandatory wholesale service and its effectiveness in promoting competition in the local LLCs market. As set out in paragraph 3.1(a) in this consultation paper, the IDA welcomes views on the proposed pricing methodologies to be adopted, in particular the magnitude of discount for "retail-minus" and whether it should be a single discount or tiered based on quantity purchased.*

*The IDA welcomes views on the adequacy of the proposed 2-3 year timeframe for FBOs to build or develop the necessary infrastructure to compete in the local LLCs market in the longer term.*

*The IDA also welcomes any comments or alternative proposals on the pricing methodologies to be adopted. All comments should be supported by relevant evidence and reasoning.*

## **4 INVITATION FOR COMMENTS**

4.1 The IDA would like to seek the views and comments of the industry and members of the public on the issues and proposals raised in this consultation paper. This will allow the IDA to have a better understanding of the issues and the different needs and requirements of the various affected parties. The questions are summarised below:

- a) The IDA welcomes views and comments on competition in the local LLCs market. Is the local LLCs market competitive and if not, what are the factors contributing to this? All comments should be supported by relevant evidence and reasoning.
- b) The IDA welcomes views and comments on the IDA's proposed regulatory measures to promote greater competition in the local LLCs market and those market sectors that may depend on LLCs. Are there additional issues that the IDA needs to consider in implementing these measures? Would these regulatory measures be effective in stimulating network rollout by competing operators in the longer term? Are there other more appropriate or effective regulatory measures that the IDA should consider rather than designating SingTel's LLCs as a mandatory wholesale service under the Code in the short-term?
- c) The IDA welcomes views and comments on the technical definition or specification for the LLCs including the range of bandwidths (for example, 64kbps, 512 kbps, 2 Mbps) that the IDA should designate as mandatory wholesale service. Please provide detailed supporting reasons for each proposal and comment made.
- d) The IDA welcomes views on other related issues that the IDA needs to address in designating SingTel's LLCs as a mandatory wholesale service. Comments should be supported by relevant evidence and reasoning.
- e) The IDA also seeks views and comments on the proposed pricing principle to be adopted in the designation of SingTel's LLCs as a mandatory wholesale service and its effectiveness in promoting competition in the local LLCs market. As set out in paragraph 3.1(a) in this consultation paper, the IDA welcomes views on the proposed pricing methodologies to be adopted, in particular the magnitude of discount for "retail-minus" and whether it should be a single discount or tiered based on quantity purchased.
- f) The IDA welcomes views on the adequacy of the proposed 2-3 year timeframe for FBOs to build or develop the necessary infrastructure

to compete in the local LLCs market in the longer term. The IDA welcomes any comments or alternative proposals on the pricing methodologies to be adopted. All comments should be supported by relevant evidence and reasoning.

- 4.2 Respondents are also invited to comment on any other issues not covered in this consultation paper but which are considered to be relevant in this review.
- 4.3 The IDA will consider inputs submitted and make its policy decision thereafter. The IDA will target to announce its policy decision by the second half of 2003.
- 4.4 All views and comments should be submitted in writing and in both hard and soft copy (Microsoft Word format), and should reach the IDA by **12 pm, 30 June 2003**. Respondents are required to include their personal/company particulars as well as the correspondence address in their submissions to this Consultation Paper. Comments and views should be addressed to:

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- 4.5 The IDA reserves the right to make public all or parts of any written submissions made in response to this Consultation Paper and to disclose the identity of the source. Any part of the submission, which is considered by respondents to be commercially confidential, should be clearly marked and placed as an annex. The IDA will take this into account regarding disclosure of the information submitted.