

**REPUBLIC OF SINGAPORE  
INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY  
OF SINGAPORE**

**CODE OF PRACTICE  
FOR COMPETITION IN THE PROVISION OF  
TELECOMMUNICATION SERVICES**

15 September 2000

INTRODUCTION

1. THE FIRST PUBLIC CONSULTATION
2. THE SECOND PUBLIC CONSULTATION
3. SIGNIFICANT CHANGES TO THE REVISED PROPOSED CODE
4. SUMMARY OF THE CODE

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**INTRODUCTION**

The Info-communications Development Authority of Singapore (“IDA”), acting pursuant to its authority under Section 26(1) of the Telecommunications Act 1999 and Section 7(1) and Schedule 2 of the Info-communications Development Authority of Singapore Act 1999, has adopted a Code of Practice for Competition in the Provision of Telecommunication Services (“Code”). The Code will become effective on 29 September 2000. This document describes the process by which IDA developed the Code, highlights the changes IDA has made following the Second Public Consultation and provides a section-by-section description of the Code.

**1. THE FIRST PUBLIC CONSULTATION**

- 1.1 On 17 April 2000, IDA issued two consultation documents: a proposed Code of Practice for Competition in the Provision of Telecommunication Services (“Proposed Code”) and “Interconnection/Access in a Fully Liberalised and Convergent Environment.” Together, these documents were intended to provide a key part of the regulatory framework for the development of a fully competitive telecommunication market in Singapore.
- 1.2 On 15 May 2000, IDA conducted a Public Forum, which had 130 attendees, representing a wide range of interests. IDA presented an overview of the Proposed Code. Five industry representatives (Covad Communications Company, Callahan Associates International, Singapore Telecommunications Ltd, StarHub Pte Ltd and Telstra) also gave presentations on the proposed regulatory regime. The Public Forum ended with a clarification session.
- 1.3 IDA originally requested interested parties to submit comments on the two papers by 22 May 2000. In response to industry requests, however, IDA extended the deadline for comments to 5 June 2000. IDA also committed to a second round of consultation on the revised Proposed Code prior to its adoption.
- 1.4 Fourteen parties, representing a broad range of interests, filed comments during the First Public Consultation: (1) Ascent; (2) Callahan Associates International; (3) Covad Communications Company; (4) Data One-Telstra; (5) Enron International

Asia; (6) Global One Communications; (7) Global Crossing Ltd Asia; (8) MCI WorldCom Asia Pte Ltd; (9) MobileOne Asia Pte Ltd; (10) Reuters Asia Pte Ltd; (11) Singapore Telecommunications group of companies; (12) StarHub Pte Ltd; (13) SP Telecommunications Pte Ltd; and (14) Winstar Communications Singapore Pte Ltd.

- 1.4.1 The respondents expressed a wide range of views. Most supported the general approach proposed by IDA. Some respondents, however, claimed that IDA's proposed framework would impose excessive and discriminatory burdens on Licensees classified as dominant. Other respondents, by contrast, concluded that IDA had not gone far enough in assisting new operators to rapidly enter the Singapore telecommunication market. A number of respondents expressed concern about the suggestion that IDA might establish a pricing regime that distinguished between Facilities-based Licensees and Services-based Licensees. The respondents made a large number of constructive suggestions regarding specific provisions in the Proposed Code.
- 1.4.2 The comments focused almost exclusively on conventional telephone networks, such as those operated by Singapore Telecommunications Ltd and StarHub Pte Ltd, that primarily carry voice traffic. The parties provided almost no comments regarding the appropriate regulatory regime for broadband telecommunication networks, such as those operated by Singapore CableVision Ltd and 1-Net Singapore Pte Ltd.

## **2. THE SECOND PUBLIC CONSULTATION**

- 2.1 Following the close of the first comment period, IDA began an intensive review process. In the course of this process, IDA gave extensive consideration to the views and proposals contained in the comments. IDA also considered several additional issues on its own initiative. Based on this process, IDA issued a revised Proposed Code on 30 June 2000.
- 2.2. On 6 July 2000, IDA conducted a second Public Forum, which had approximately 200 attendees. IDA described the changes made during the First Public Consultation and responded to enquiries from the public.
- 2.3 On 14 July 2000, 13 parties submitted comments to IDA regarding the revised Proposed Code: (1) 1-Net Singapore Pte Ltd; (2) British Telecommunications plc; (3) Concert Global Networks (Singapore) Pte Ltd; (4) Covad Communications Company; (5) Data One-Telstra; (b) Equant; (7) MobileOne Asia Pte Ltd; (8) MCI

WorldCom Asia Pte Ltd; (9) Pacific Internet Limited; (10) Singapore CableVision Ltd; (11) Singapore Telecommunications Ltd; (12) StarHub Pte Ltd; and (13) Winstar Communications Singapore Pte Ltd.

- 2.4 The comments generally addressed changes between the initial and revised Proposed Codes. Amongst the most significant issues addressed by the respondents were: the test used to classify Licensees as dominant and its application to specific Licensees; the process for regulating a Dominant Licensee's End User charges; the differences between the interconnection rights of Facilities-based and Services-based Licensees; the status of interconnection agreements entered into prior to the effective date of the Code; compensation for calls that originate on a fixed network and terminate on a mobile network; the obligation of a Dominant Licensee to offer line sharing and to make dark fibre available; and the desirability of allowing IDA to issue "interim cease and desist orders" pending completion of an enforcement proceeding.

### **3. SIGNIFICANT CHANGES TO THE REVISED PROPOSED CODE**

- 3.1 Following the close of the second comment period, IDA undertook another intensive review process. IDA carefully evaluated the comments, reviewed the issues raised at the second Public Forum and considered additional issues on its own initiative.
- 3.2 Based on this process, IDA made a number of further changes before adopting the Code. The most significant changes are described below:
- 3.2.1 Section One has been re-organised. A chart, which describes the applicability of different Sections of the Code to different categories of Licensees, has been added. A provision governing the interpretation of the "Plain English" Code has also been added.
- 3.2.2 In Section Two, the definition of a Dominant Licensee has been clarified, but not fundamentally altered. Only Facilities-based Licensees will be eligible for dominant classification. The Code makes clear the type of information that a Dominant Licensee must provide to support a request to be re-classified as non-dominant or exempted from specific requirements applicable to Dominant Licensees. A separate public notice issued contemporaneously with the Code announced IDA's determination regarding the classification of current Facilities-based Licensees. Based on the submission of 1-Net Singapore Pte Ltd, IDA concluded that it does not meet the definition of a Dominant Licensee. Whilst IDA

classified Singapore CableVision Ltd as dominant, it granted Singapore CableVision Ltd a partial temporary exemption from certain of the obligations applicable to Dominant Licensees pending further review of the technical and policy issues related to network unbundling in the cable context.

- 3.2.3 Section Three has been revised to clarify that it applies to the relationship between Licensees and End Users, and does not govern the relationship between Licensees. Significant additional guidance regarding the tariff filing and approval procedures applicable to Dominant Licensees has been added.
- 3.2.4 Section Four has been re-organised to distinguish more clearly between Licensees' general obligations and those obligations that arise solely in the context of an Interconnection Agreement. Pending further review by IDA, a Dominant Licensee need not offer terminating compensation for fixed-to-mobile interconnections. A new provision has been added that clarifies the status of the agreements governing interconnection entered into before the effective date of the Code. Another new provision bars licensees from accepting discriminatory preferences from building owners regarding on-premise equipment location, where this poses an impediment to competition.
- 3.2.5 Section Five has been revised to clarify the options by which a Non-Dominant Licensee can seek to enter into an Interconnection Agreement with a Dominant Licensee. Further guidance regarding the form and contents of a Dominant Licensee's Reference Interconnection Offer ("RIO") has been provided. Finally, provisions have been added imposing an affirmative duty on Dominant Licensees to allow resale.
- 3.2.6 In Section Six, the terminology has been changed to refer to "infrastructure" rather than "facilities." This is not intended to alter the substance of the Section.
- 3.2.7 No significant changes have been made to Section Seven.
- 3.2.8 Section Eight has been modified to make clear that certain "vertical" agreements (*i.e.*, agreements between companies at different levels of the distribution chain) that unreasonably restrict competition contravene the Code, regardless of whether the Licensee that entered into the agreement is dominant or non-dominant.
- 3.2.9 Section Nine has been simplified. Whilst the detailed description of the methodology that IDA will use to assess the competitive impact of a proposed consolidation has been eliminated, IDA still intends to use economic analysis to make such assessments.

- 3.2.10 A new provision has been included in Section Ten allowing IDA to issue an interim direction during the course of an enforcement proceeding directing a licensee to cease an activity that appears to contravene the Code.
- 3.2.11 Finally, the two appendices have been substantially revised. Appendix One specifies the principles that IDA requires a Dominant Licensee to use to develop prices for Interconnection Related Services (“IRS”).
- 3.2.12 Appendix Two specifies the terms and conditions that IDA requires a Dominant Licensee to offer, in its RIO, to provide certain key IRS. The Appendix clarifies the differing interconnection rights of Facilities-based and Services-based Licensees. It preserves the requirement, first included in the revised Proposed Code, that a Dominant Licensee allow Facilities-based Requesting Licensees to lease dark fibre. However, the Dominant Licensee will be allowed to offer dark fibre at wholesale rates, rather than at prices based on forward looking economic cost (“FLEC”). IDA is requiring the Dominant Licensee to offer dark fibre to Facilities-based Requesting Licensees on a wholesale basis to reduce their difficulty of entering the Singapore market. IDA is directing the Dominant Licensee to offer dark fibre at non-FLEC prices to encourage Facilities-based Licensees to ultimately build their own network infrastructure. The Dominant Licensee must also allow Facilities-based Requesting Licensees to lease International Private Leased Circuits at wholesale prices. Appendix Two also re-instates the requirement, contained in the initial version of the Proposed Code, that a Dominant Licensee offers loop sharing and sub-loop unbundling.

#### **4. SUMMARY OF THE CODE**

- 4.1 The revised Proposed Code contains ten sections and two appendices.
- 4.2 Section One sets out the goals of the Code, explains the legal basis and effect of the Code, repeals the previous interconnection code, the Code of Practice (Interconnection, Access and Infrastructure), and specifies which categories of Licensees are subject to which provisions of the Code. Section One then sets forth IDA’s regulatory principles. These include:

maximum reliance on voluntary negotiations and market forces where effective competition exists;

clear and effective regulatory requirements to promote full competition where it does not yet exist;

use of regulation that is no more burdensome than necessary to achieve regulatory goals;

technological neutrality; and

open and reasoned decision-making.

This Section also includes provisions for reviewing and removing provisions that cease to be necessary as competition develops. For example, IDA is to conduct a review of the provisions of the Code not less than once every three years. Section One reserves IDA's authority to grant exemptions from, modify or suspend the Code. It also contains a "rule of construction" designed to assist with interpretation of the Code. Finally, Section One states that the Code will become effective 14 days after publication in the Government Gazette.

- 4.3 Section Two contains provisions for classifying Facilities-based Licensees as dominant or non-dominant. A Facilities-based Licensee will be classified as dominant if it controls facilities that provide a direct connection to end-users within Singapore and: (a) the facilities are sufficiently costly to replicate such that requiring new entrants to do so would create a significant barrier to rapid and successful entry by an efficient competitor or (b) the Licensee has the ability to restrict output or raise prices for telecommunication services provided to end-users over these facilities above the levels that would exist in a competitive market. A Dominant Licensee must comply with special requirements contained in Sections Three, Five and Seven of the Code. Finally, Section Two contains standards and procedures by which Dominant Licensee can seek reclassification or can request an exemption, on a service- or facilities-specific basis, from the special requirements applicable to Dominant Licensees.
- 4.4 Section Three specifies the duties that Licensees have towards End Users. Licensees must modify their service agreements with their End Users to incorporate certain basic requirements – such as the duty to comply with minimum quality standards, the duty to render timely and accurate bills, the duty to provide fair dispute resolution procedures and the duty to protect End User Service Information. In addition, Dominant Licensees are required to provide telecommunication service: on demand; on an unbundled basis; on prices, terms and conditions that are just, reasonable and non-discriminatory; and pursuant to filed tariffs. Section Three details the procedures that IDA will use to assess a Dominant Licensee's tariffs before allowing them to go into effect.

- 4.5 Section Four contains the Minimum Interconnection Duties of Facilities-based Licensees and Services-based Licensees that use switching or routing equipment to provide telecommunication service to the public. For example, Licensees must: interconnect, whether directly or indirectly; establish compensation arrangements for the origination, transit and termination of traffic; and provide billing information. IDA will allow Non-dominant Licensees to interconnect, without prior approval, on any mutually agreeable terms that satisfy the Minimum Interconnection Duties. Section Four also specifies additional obligations that Licensees must fulfil even in the absence of an Interconnection Agreement, such as disclosing network interfaces, complying with mandatory technical standards, facilitating number portability and refusing to accept certain discriminatory preferences.
- 4.6 Section Five contains the interconnection obligations of Dominant Licensees. A Requesting Licensee can choose any of three options in order to enter into an Interconnection Agreement. First, the Requesting Licensee can accept the provisions specified in the Dominant Licensee's RIO. Second, the Requesting Licensee can "opt-in" to an existing agreement between the Dominant Licensee and any similarly situated Licensee. Third, the Requesting Licensee can seek to negotiate an individualised Interconnection Agreement with the Dominant Licensee. Section Five contains detailed requirements regarding the terms that a Dominant Licensee must include in its RIO. Section Five also contains detailed procedures regarding the negotiation process. IDA will allow a Dominant Licensee to interconnect with Requesting Licensees on any mutually agreeable terms that satisfy the Minimum Interconnection Duties contained in Section Four and do not discriminate against other licensees. Negotiations must begin within seven days after the initial request; the Licensees should adopt a confidentiality agreement by the fifteenth day. If the Licensees are unable to reach agreement after 90 days, either party may request IDA to conduct a Dispute Resolution Procedure. To the extent Licensees raise issues addressed in the RIO, IDA will impose the terms of the RIO. To the extent Licensees raise other issues, IDA will impose whatever solution it deems appropriate (even if neither Licensee advocates that approach). Licensees that enter into an agreement pursuant to a RIO or pursuant to the Dispute Resolution Procedure must agree to refer any disputes regarding implementation of the agreement to IDA, which may impose a binding resolution on the Licensees.
- 4.7 Section Six contains special provisions by which a Licensee can request the right to share infrastructure controlled by another Licensee. The Licensees must first attempt to negotiate a voluntary Sharing Agreement. If they are unable to do so, the Licensee requesting sharing may ask IDA to make a determination as to whether the infrastructure must be shared – either because it constitutes Critical Support

Infrastructure, as that term is defined in the Code, or because IDA concludes that requiring sharing would serve the public interest. The Code designates certain infrastructure that Licensees must share at cost-based prices – such as masts, poles, and towers. Where the Licensees are unable to reach agreement, IDA will conduct a Dispute Resolution Procedure.

- 4.8 In Section Seven, IDA sets out rules that preclude Licensees from engaging in unilateral anti-competitive conduct. A Dominant Licensee may not abuse its market position. For example, the Licensee may not set prices at levels that are so low as to unreasonably restrict competition. Nor can a Dominant Licensee leverage its position in the market to impede competition in an adjacent, currently competitive market. In addition, Licensees are subject to a prohibition on engaging in unfair methods of competition – such as false advertising or unnecessarily degrading the quality of a competitor’s service.
- 4.9 Section Eight prohibits Licensees from entering into agreements that unreasonably restrict competition. This Section sets out a framework by which IDA will assess the permissibility of such agreements. Licensees are prohibited from entering into certain types of agreements, such as price fixing arrangements or group boycotts. The permissibility of a Licensee entering into other agreements, such as joint research or marketing ventures, will be assessed based on the agreements’ likely or actual impact on competition. IDA will take appropriate enforcement actions against Licensees that violate these restrictions.
- 4.10 Mergers and similar consolidations involving Licensees are addressed in Section Nine. Each Facilities-based Licence issued by IDA requires the Licensee to obtain IDA’s approval before assigning the licence or making changes in ownership, shareholding and management of the Licensee. This Section makes clear that IDA will not approve a request to assign a Facilities-based Licence or change the ownership, shareholding and management of a Facilities-based Licensee in connection with a proposed consolidation that is likely to unreasonably restrict competition. This Section establishes a procedure for notifying IDA of such proposed changes, and sets forth the procedures by which IDA will seek to determine whether a proposed change is likely to unreasonably restrict competition.
- 4.11 Finally, Section Ten specifies the procedures that IDA will use, in accordance with the Telecommunications Act 1999, to enforce the Code. This Section contains two enforcement mechanisms. First, IDA can initiate an enforcement action on its own initiative. Second, IDA can initiate an enforcement action in response to a Request for Enforcement filed by a private party. Such actions must be initiated within two years of the date on which the contravention occurred or, in certain cases, within

two years after the date of discovery. This Section also addresses the sanctions that IDA may impose on Licensees found to have contravened the Code. IDA can issue warnings, directions or orders to cease and desist. IDA may also impose financial penalties and suspend, shorten the duration of or terminate a Licensee's licence. Whilst IDA reserves the right to impose financial penalties of up to \$1 million, it will consider all relevant aggravating or mitigating factors in order to ensure that any financial penalty imposed is proportionate to the contravention.

- 4.12 Appendix One specifies the methodology that a Dominant Licensee must use to develop the prices at which it will offer, in its RIO, to provide IRS. In most cases, a Dominant Licensee must use FLEC, which must be determined based on Long Run Average Incremental Costs. Pending further review by IDA, a Dominant Licensee need not offer terminating compensation for fixed-to-mobile interconnections.
- 4.13 Appendix Two specifies the terms and conditions on which a Dominant Licensee must offer, in its RIO, the provision of IRS.
- 4.13.1 Appendix Two specifies five classes of IRS that a Dominant Licensee must offer to provide:
- Physical Interconnection ("PI") is the linking of two networks to enable the exchange of traffic and/or to provide access to Unbundled Network Elements or Essential Support Facilities.
  - Origination, Transit, and Termination ("O/T/T") services involve the switching, routing, and transmission of telecommunication traffic between network licensees. O/T/T services allow traffic originated on one network to terminate or transit through another network.
  - Essential Support Facilities ("ESFs") are those passive support structures, for which no practical or viable alternatives exist, that enable the deployment of telecommunication infrastructure.
  - Unbundled Network Elements ("UNEs") are physical network facilities and the associated services they support that may be de-coupled from the Dominant Licensee's network and connected to the Requesting Licensee's Network.
  - Unbundled Network Services ("UNSS") are peripheral services that are not economically feasible for a Licensee to replicate but which constitute significant barriers to effective competition.