

REPUBLIC OF SINGAPORE
INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY

CODE OF PRACTICE
FOR COMPETITION IN THE PROVISION OF
TELECOMMUNICATION SERVICES

1. INTRODUCTION
 - 1.1 Goals of the Code
 - 1.2 Scope of the Code
 - 1.3 Regulatory Principles
 - 1.3.1 Reliance on Market Forces
 - 1.3.2 Promotion of Competition
 - 1.3.3 Regulation Proportionate to the Extent of Market Failure
 - 1.3.4 Platform Neutrality
 - 1.3.5 Elimination or Modification of Unnecessary Code Provisions
 - 1.3.5.1 Regulatory Review
 - 1.3.5.2 Petitions for Elimination, Modification or Waiver of a Code Provision
 - 1.3.6 Open and Reasoned Decision Making
 - 1.3.7 Avoidance of Unnecessary Delay
 - 1.3.8 Non-discrimination
 - 1.3.9 Opportunity for Review
 - 1.4 Legal Effect of the Code
 - 1.5 Legal Authority to Promulgate the Code
 - 1.6 Reservations of Authority
 - 1.6.6 Right to Grant Exemptions
 - 1.6.7 Right to Modify
 - 1.6.8 Right to Take Emergency Measures
 - 1.7 Effective Date of the Code
 - 1.8 Short Title

2. CLASSIFICATION OF LICENSEES
 - 2.1 Over-view
 - 2.2 Categories of Licensees
 - 2.2.1 Non-Dominant Licensees
 - 2.2.2 Dominant Licensees
 - 2.2.3 Service-Specific Determinations
 - 2.3 Initial Designation of Dominant Licensees
 - 2.4 Procedure For Classification of Licensee
 - 2.4.1 Granting or Renewing of Licence
 - 2.4.2 Reclassification by IDA of Exiting Licensee
 - 2.4.3 Petitions for Reclassification
 - 2.5 Factor Relevant to Determining Classification as a Dominant Licensee
 - 2.5.1 Market Share

- 2.5.1.1 Identifying the Product Market
- 2.5.1.2 Identifying the Geographic Market
- 2.5.1.3 Calculating the Share
- 2.5.2 Determining Barriers to Entry
 - 2.5.2.1 Legal Barriers
 - 2.5.2.2 Operational Barriers
 - 2.5.2.3 Economic Barriers
 - 2.5.2.4 Control of Essential Facilities
- 2.5.3 Assessing the Likelihood of Timely and Sufficient Entry in Response to Price Increases (Supply Elasticities)
 - 2.5.3.1 Supply Substitutability
 - 2.5.3.2 New Entry
- 2.5.4 Assessing the Likelihood of Consumer Switching in Response to Price Increases (Demand Elasticities)

3. DUTY OF LICENSEES TO END-USERS

- 3.1 Over-view
- 3.2 Duties of all Licensees
 - 3.2.1 Duty to Comply with Minimum Quality of Service Requirements
 - 3.2.2 Duty to Provide Periodic, Accurate and Timely Statements of Charges
 - 3.2.2.1 Tariff or Contract to Disclose All Material Terms
 - 3.2.2.2 Billing Timeliness
 - 3.2.2.3 Billing Clarity
 - 3.2.2.4 Compliance with Tariff or Contract Rates
 - 3.2.2.5 No Charges for Unauthorised Services (“Cramming”)
 - 3.2.2.6 No Charges by Unauthorised Providers (“Slamming”)
 - 3.2.3 Duty to Provide Procedures to Contest Charges
 - 3.2.3.1 Initiation of Challenge
 - 3.2.3.2 Right to Withhold Payment
 - 3.2.3.3 Licensee Review
 - 3.2.3.4 Reporting Requirement
 - 3.2.3.5 Mediation
 - 3.2.3.6 Private Dispute Resolution
 - 3.2.4 Duty to Protect Customer System Use Information
 - 3.2.4.1 Definition
 - 3.2.4.2 Customer Authorisation
 - 3.2.4.3 Restrictions on Use
- 3.3 Special Duties of Dominant Licensees
 - 3.3.1 Duty to Provide Service on Demand
 - 3.3.2 Duty to Provide Service at Cost-oriented Rates
 - 3.3.2.1 Tariff Filing
 - 3.3.2.2 Review by IDA
 - 3.3.3 Duty to Provide Service on a Non-discriminatory Basis
 - 3.3.4 Duty to Provide Unbundled Service
 - 3.3.5 Prohibition on Excessive Early Termination Liabilities

4. REQUIRED COOPERATION AMONG FACILITIES-BASED LICENSEES TO PROMOTE COMPETITION

- 4.1 Over-view
- 4.2 Duty to Interconnect With and Provide Access to Other Licensees
- 4.3 Duty to Establish Compensation Agreements for the Origination, Transport and Termination of Telecommunication Traffic
- 4.4 Duty to Provide Non-discriminatory Interconnection Quality Standards
- 4.5 Duty to Prevent Technical Harm to the Network
- 4.6 Duty to Provide Billing Information
- 4.7 Duty to Preserve Confidential Information Provided by Other Licensees
- 4.8 Duty to Disclose Interfaces
- 4.9 Duty to Comply With Mandatory Technical Standards
- 4.10 Duty to Provide Number Portability
- 4.11 Duty to Provide Access to Poles, Towers, Ducts, and Rights-of-Way
- 4.12 Duty to Notify IDA of All Interconnection Agreements
- 4.13 Enforcement of Interconnection Agreements
 - 4.13.1 Duty to Co-operate
 - 4.13.2 IDA Mediation
 - 4.13.3 Private Enforcement
- 4.14 Modification, Suspension or Termination of Interconnection Agreements
 - 4.14.1 Notification
 - 4.14.2 Review by IDA

5. COOPERATIVE DUTIES OF DOMINANT LICENSEES

- 5.1 Over-view
- 5.2 Duty to Develop, Submit and Make Publicly Available a Reference Interconnection Offer
 - 5.2.1 Contents of the Offer
 - 5.2.2 IDA Review
- 5.3 Duty to Negotiate in Good Faith With Any Licensee Requesting Interconnection or Access
 - 5.3.1 Initiation of Negotiations
 - 5.3.1.1 Request for Negotiations
 - 5.3.1.2 Notification of IDA
 - 5.3.1.3 Confidentiality Agreement
 - 5.4 IDA Mediation
 - 5.5 Voluntary Agreements
 - 5.5.1 Terms of Agreement
 - 5.5.2 IDA Review
- 5.6 Agreements Arrived at Via the IDA Dispute Resolution Procedure
 - 5.6.1 Request for IDA Intervention
 - 5.6.2 Response to the Request
 - 5.6.3 IDA Request for Additional Information
 - 5.6.4 Binding Effect of Submissions
 - 5.6.5 Effect of Failure to Respond
- 5.7 Resolution by IDA

- 5.7.1 Scope of the Dispute Resolution Procedure
- 5.7.2 Timing of the Dispute Resolution Procedure
- 5.8 Minimum Terms to be Imposed
- 5.8.1 Non-discrimination
- 5.8.2 Interconnection at Any Technically Feasible Location
- 5.8.3 Provision of Unbundled Network Elements
- 5.8.3.1 Network Interface Device (“NID”)
- 5.8.3.2 Unbundled Local loop
- 5.8.3.2.1 Sub-loop Unbundling
- 5.8.3.2.2 Loop Spectrum Unbundling
- 5.8.3.2.3 Digital Conditioning
- 5.8.3.3 Switching
- 5.8.3.4 Inter-office Transport
- 5.8.3.5 Signalling
- 5.8.3.6 Operational Support Services
- 5.8.3.7 Directory Assistance and Operator Services
- 5.8.3.8 Public Emergency Call Services
- 5.8.3.9 Designation of Additional Elements Necessary to Provide Service
- 5.8.3.10 Obligation to Combine Elements Upon Request
- 5.8.3.11 Obligation to Offer Integrated Platform
- 5.8.4 Provision of Wholesale Service
- 5.8.5 Collocation
- 5.8.5.1 Physical Co-location Favoured, Where Feasible
- 5.8.5.2 Equipment That May be Co-located
- 5.8.5.3 Security Provisions
- 5.8.6 Compensation for Origination, Transport and Termination
- 5.8.7 Compensation for Significant Interface Changes
- 5.8.8 Pricing
- 5.8.8.1 General Principles
- 5.8.8.2 Interim Prices
- 5.8.9 Duration of Agreements
- 5.8.10 Governing Law
- 5.9 Implementation of Dispute Resolution Decision by Licensees
- 5.10 Publication of Interconnection Agreements
- 5.11 “Opt-in” Rights
- 5.12 Status of Agreements Entered Into Prior to the Effective Date of the Code

6. SPECIAL PROVISIONS GOVERNING THE SHARING OF ESSENTIAL FACILITIES

- 6.1 Over-view
- 6.2 Definition of Sharing
- 6.3 Procedures for Requesting Sharing of a Facility
- 6.3.1 Request to Licensee Controlling the Facility
- 6.3.2 Request to IDA
- 6.3.3 Response by Licensee
- 6.3.4 Timing of IDA Decision
- 6.4 Standards by Which IDA Will Determine Whether to Require Sharing

- 6.4.1 General Standard
- 6.4.2 Excess Capacity
- 6.4.3 Impact on Deployment of New or Upgraded Infrastructure
- 6.5 Implementation of IDA Decision
 - 6.5.1 Voluntary Negotiations
 - 6.5.2 IDA Dispute Resolution Procedures
 - 6.5.3 Compensation for Sharing

- 7.1 ABUSE OF POSITION BY A DOMINANT LICENSEE
 - 7.2 Over-view
 - 7.3 Pricing Abuses
 - 7.3.1 Predatory Prices
 - 7.3.2 Price Squeezes
 - 7.4 Attempts to Foreclose Competition in Adjacent Markets
 - 7.4.1 Cross-subsidisation
 - 7.4.2 Access Discrimination

- 8. AGREEMENTS INVOLVING LICENSEES THAT UNREASONABLY RESTRICT COMPETITION
 - 8.1 Over-view
 - 8.2 Determining the Existence of an Agreement
 - 8.3 Prohibited Agreements Between Competing Licensees
 - 8.3.1 Price Fixing/Output Restrictions
 - 8.3.2 Bid Rigging
 - 8.3.3 Geographic and Customer Divisions
 - 8.3.4 Group Boycotts
 - 8.3.5 Exception for Agreements Necessary for Legitimate Collaborative Ventures
 - 8.4 Agreements Between Competing Licensees That Will be Assessed Based on Competitive Effects
 - 8.4.1 Business Purpose of the Agreement
 - 8.4.2 Likelihood of Competitive Harm
 - 8.4.3 Efficiencies
 - 8.5 Agreements Between Licensees at different Levels in the Supply Chain
 - 8.5.1 Vertical Price Fixing
 - 8.5.2 Vertical Customer Allocation and Vertical Territorial Allocation
 - 8.5.3 Exclusive Dealing

- 9. CONSOLIDATIONS BY LICENSEES THAT ARE LIKELY TO RESTRICT COMPETITION
 - 9.1 Over-view
 - 9.2 Duty of All Licensees to Obtain IDA Approval
 - 9.2.1 Assignments of Licenses
 - 9.2.2 Transfer of Control of Licenses

9.3	Procedures
9.4	Methodology
9.4.1	Market Definition and Market Shares
9.4.2	Assessing the Level of Concentration
9.4.3	Assessing the Potential Anti-competitive Consequences
9.4.3.1	Determination as to Whether the Proposed Assignment or Transfer Would Facilitate Unilateral Anti-competitive Conduct
9.4.3.2	Determination as to Whether the Proposed Assignment or Transfer Would Facilitate Co-ordinated Interaction Between Competing Licensees
9.4.4	Likelihood of Timely and Sufficient Entry
9.4.5	Efficiencies
9.4.6	Failing Undertakings
9.5	Action by IDA
9.5.1	Grant of the Application
9.5.2	Denial of the Application
9.5.3	Grant of the Application, Subject to Conditions
9.5.3.1	Non-discrimination Requirements
9.5.3.2	Accounting Separation
9.5.3.3	Structural Separation
9.5.3.4	Partial Divestiture
9.5.3.5	Other Pro-competitive Conditions
10.	ENFORCEMENT OF THE COMPETITION CODE
10.1	Over-view
10.2	Specific Regulatory Principles
10.2.1	Timeliness
10.2.2	Open and Reasoned Decision Making
10.2.3	Standard of Proof
10.2.4	Proportionality
10.3	IDA Enforcement Actions
10.3.1	Procedures
10.3.1.1	Notification of Licensee
10.3.1.2	Opportunity to Respond
10.3.1.3	Request for Further Information
10.3.2	Remedies
10.3.2.1	Warnings
10.3.2.2	Orders to Cease and Desist
10.3.2.3	Monetary Sanctions
10.3.2.3.1	Base Penalties
10.3.2.3.2	Aggravating Factors
10.3.2.3.3	Mitigating Factors
10.3.2.4	Suspension or Revocation of License
10.4	Private Requests for Enforcement
10.4.1	Procedures
10.4.2	Remedies
10.5	Request for Advisory Guidance
10.5.1	Procedures
10.5.2	Legal Effect of Guidance

CODE OF PRACTICE FOR COMPETITION IN THE PROVISION OF TELECOMMUNICATION SERVICES

The Info-communications Development Authority of Singapore (“IDA”), after soliciting and considering the views of all interested parties, has adopted the following Code of Practice:

1. INTRODUCTION

1.1 Goals of the Code

This Code is intended to:

- (a) promote the efficiency and international competitiveness of the information and communications industry in Singapore;
- (b) ensure that telecommunication services are reasonably accessible to all people in Singapore, and are supplied as efficiently and economically as practicable and at performance standards that reasonably meet the social, industrial and commercial needs of Singapore;
- (c) promote and maintain fair and efficient market conduct and effective competition between persons engaged in commercial activities connected with telecommunication technology in Singapore;
- (d) promote the effective participation of all sectors of the Singapore information and communications industry in markets (whether in Singapore or elsewhere);
- (e) encourage, facilitate and promote industry self-regulation in information and communications industry in Singapore; and
- (f) encourage, promote and facilitate investment in and the establishment, development and expansion of the information and communications industry in Singapore.

1.2 Scope of the Code

This Code applies to facilities-based Licensees that operate telecommunication systems, as defined in the Telecommunication Act of 1999. This includes, but is not limited to, Licensees that operate: terrestrial telecommunication infrastructure used for the carriage of telecommunication or broadcast services including domestic telecommunication networks (including backbone and local access, regardless of the technology used), satellite international gateways, and submarine cables (including cable landing stations, backhaul, Indefeasible Rights of Use); public cellular mobile telephone services; public radio paging services; public mobile data services; public trunked radio services; public mobile broadband multimedia services; and public fixed

wireless broadband services. Sections 1-3, and 7-10 of this Code also apply to services-based Licensees. This includes, but is not limited to, entities that provide international simple resale, resale of leased circuit services, resale of virtual private network services, Internet access service, Internet exchange service, value-added services, services that use the public Internet as a transmission medium, resale of domestic public switched telephone network services, and call-back services.

1.3 Regulatory Principles

The following regulatory principles provide the foundation for this Code, and will guide IDA's implementation of its provisions:

1.3.1 Reliance on Market Forces

Market forces are generally far more effective than regulation in promoting consumer welfare. Competitive markets are most likely to provide consumers with a wide choice of services at reasonable prices. Therefore, to the extent markets or market segments are competitive, IDA will place primary reliance on private negotiations and industry self-regulation, subject to minimum requirements designed to prevent anti-competitive conduct.

1.3.2 Promotion of Competition

Because of the effectiveness of market forces in promoting consumer welfare, IDA will take resolute measures to foster and maintain competition. This will include measures to open those markets that, in the past, were protected from competition by special or exclusive government-granted rights.

1.3.3 Regulation Proportionate to the Extent of Market Failure

To the extent that a given market is not yet competitive, significant *ex ante* regulatory intervention is likely to remain necessary. When this is the case, IDA will seek to impose regulatory requirements that are carefully crafted to achieve clearly articulated results. Such requirements will be no broader than necessary to achieve IDA's stated goals.

1.3.4 Platform Neutrality

IDA's regulatory requirements will reflect the phenomenon of convergence, which is eroding historic differences between platforms such as wireline, cable, wireless, and satellite. Regulatory requirements will be based on sound economic principles and will be platform-neutral. Because the phenomenon of convergence is in its early stages, with different platforms subject to differing degrees of competition, the objective application of these principles may result initially in the imposition of different regulatory obligations on providers that use different platforms.

1.3.5 Elimination or Modification of Unnecessary Code Provisions

As competition develops, regulation becomes less necessary and, in many cases, can be counter-productive. Therefore, IDA will strive to eliminate or modify existing regulatory requirements to reflect the development of competition. To a significant extent, once competition takes root, vigorous *ex post* enforcement of the general prohibitions on anti-competitive conduct set forth in Sections 8 and 9 of this Code will be sufficient to prevent anti-competitive conduct.

1.3.5.1 Regulatory Review

IDA periodically will review existing provisions of the Code. IDA will eliminate or modify provisions that it determines, based on experience and the growth of competition, are no longer necessary.

1.3.5.2. Petitions for Elimination, Modification or Waiver of Code Provision

Individual Licensees, or groups of Licensees, may petition IDA to eliminate, modify or waive application of any Code provision. The Licensee shall provide a clear statement of the specific Code provisions for which it seeks elimination, modification or waiver, and the reasons why the Licensee believes that continued application of the current Code provision is no longer necessary. The Licensee may propose alternative approaches that would achieve IDA's regulatory objectives in a less burdensome manner.

1.3.6 Open and Reasoned Decision Making

IDA will adopt and apply provisions of this Code in a transparent manner. Where appropriate, IDA will solicit and consider comments from interested parties. Except to the extent that confidential, proprietary or commercially sensitive information is submitted, submissions will be available to the public. In arriving at its decisions, IDA will give full consideration to the comments received. IDA will make available to the public its decisions and directions, which will clearly explain the basis for the Authority's action. Where feasible, IDA will make relevant decisions and directions available through its Website (www.ida.gov.sg). Similarly, where IDA requires a Licensee to make information publicly available, the Licensee may satisfy this obligation by posting the information on its Website.

1.3.7 Avoidance of Unnecessary Delay

Recognising the need for Licensees to move quickly in response to changing market forces, IDA will strive to make all decisions within specified time frames and, in any case, as quickly as reasonably possible.

1.3.8 Non-discrimination

IDA's decisions will be non-discriminatory. IDA will treat similarly situated Licensees in the same manner. Where appropriate, IDA's decisions and

directions will reflect relevant difference between Licensees or categories of Licensees.

1.3.9 Opportunity for Review

Subject to Section 1.6.8 of this Code, any Licensee that is adversely affected by a decision rendered or direction issued by IDA will have the opportunity to express any objections or make any representations prior to the date on which the decision or direction becomes effective. IDA will consider those objections or representations and, where appropriate, will modify its decision or direction. Any party that is aggrieved by the decision or direction of IDA may, within 14 days of the date on which the decision or direction becomes effective, appeal to the Minister of Communication and Information and Technology under Sections Section 27(4) and 69 of the Telecommunications Act of 1999. Unless IDA orders otherwise, the Licensee shall comply with its decision or a direction until such time, if any, as the Minister reverses or modifies the direction or decision.

1.4 Legal Effect of the Code

Every entity to which IDA has granted, or in the future may grant, a licence to provide telecommunication services is required, pursuant to Section 26(4) of the Telecommunications Act of 1999 as well as its licence condition, to comply with this Code. To the extent that any provision of this Code is inconsistent with the terms of the Telecommunications Act of 1999, other statutes, regulations or the terms of any licence awarded by IDA, the provisions of those statutes, regulations or licences shall prevail.

1.5 Legal Authority to Promulgate the Code

IDA, in the exercise of its functions under Section 6 of the Info-communications Development Authority of Singapore Act of 1999 (“IDA Act”), issues this Code pursuant to its authority under Section 26 of the Telecommunications Act of 1999 and Section 7(1) of the IDA Act.

1.6 Reservations of Authority

IDA reserves, *inter alia*, the following rights:

1.6.6 Right to Grant Exemptions

Where good cause is shown, IDA may grant exemptions from the Code. Such exemptions may be applied to individual Licensees or to specified categories of Licensees. An exemption may be on a one-time basis, for a fixed period, effective until the occurrence of a condition subsequent or permanent. Where appropriate, IDA may grant exemptions subject to compliance with specified conditions. IDA will provide a reasoned statement explaining the basis for any exemption.

1.6.7 Right to Modify

IDA reserves the right to modify this Code. Before making material changes, IDA will seek public comment and will provide a reasoned statement explaining the basis for the modification.

1.6.8 Right to Take Emergency Measures

IDA reserves the right to take actions, without complying with the requirements of this Code, in any situation in which such action is necessary in the public interest, including but without limitation to the foregoing: preventing physical injury, preventing injury to property and preserving public order.

1.7 Effective Date of the Code

This Code will come into effect 14 days after publication.

1.8 Short Title

This Code may be referred to as the Telecom Competition Code.

2. CLASSIFICATION OF LICENSEES

2.1 Over-view

This Code distinguishes between Licensees that are subject to competitive market forces and Licensees whose conduct is not constrained by competitive market forces. Where a Licensee is subject to competitive market forces, IDA will impose minimum regulatory “rules of the road,” coupled with the enforcement of general prohibitions on anti-competitive conduct. By contrast, where a Licensee’s conduct is not constrained by competitive market forces, IDA will require it to comply with more comprehensive regulatory requirements. The Code sets out a classification system to distinguish the two types of Licensees by applying economic analysis to factual data regarding market conditions.

2.2 Categories of Licensees

IDA will classify every Licensee as either a:

- (a) Non-dominant Licensee; or
- (b) Dominant Licensee.

2.2.1 Non-dominant Licensees

Non-dominant Licensees are subject to competitive market forces. In the absence of information to the contrary, IDA will presume that all Licensees (except those designated in Section 2.3 of this Code) are non-dominant.

2.2.2 Dominant Licensees

Those Licensees whose conduct is not likely to be constrained adequately by competitive market forces will be classified as dominant. Typically, a Dominant Licensee could profitably reduce output and raise prices above competitive market levels.

2.2.3 Service-Specific Determinations

The classification process will be applied on a service-specific basis. As a result, some Licensees may be classified as dominant for certain services and non-dominant for other services. As discussed further in Section 7 of this Code, IDA will apply appropriate requirements to prevent Dominant Licensees from using their economic position in non-competitive markets to harm competition in currently competitive adjacent markets.

2.3 Initial Designation of Dominant Licensees

The following Licensees hereby are classified as dominant: Singapore Telecommunication Ltd (but only in the provision of domestic exchange line, xDSL, domestic leased circuits and international leased circuits); Singapore CableVision Ltd (but only in the provision of cable modem service); and 1-Net Singapore Pte Ltd (but only in the provision of ATM backbone network service).

2.4 Procedures For Classification of Licensee

IDA will conduct an on-going effort to ensure that all Licensees are classified appropriately. Such classification can occur in any of the following three ways:

2.4.1 Granting or Renewing of the Licence

At the time IDA issues or renews a Licensee's licence, IDA will make an assessment as to the proper classification of the Licensee. IDA will indicate the classification as part of its grant or renewal of the Licence. In most cases, IDA will presume that the applicant is non-dominant. In any case in which IDA believes that an applicant may be dominant, it will require the applicant to provide information, using the analytic framework set forth in Section 2.5, that will assist IDA in determining the classification.

2.4.2 Reclassification by IDA of Existing Licensee

Where appropriate, IDA may initiate a proceeding to reclassify a Licensee. In such cases, IDA will request the Licensee to provide information, using the analytic framework set forth in Section 2.5, that will assist IDA in determining the correct classification. IDA may also solicit the views of competitors and customers of the Licensee.

2.4.3 Petitions for Reclassification

A Dominant Licensee may petition IDA to be reclassified as non-dominant. A Licensee seeking reclassification must use the analytic approach set forth in Section 2.5 of this Code, and must support its arguments with detailed market information. Before acting on a petition for reclassification, IDA may solicit the views of competitors and customers of the Licensee.

2.5 Factor Relevant to Classification of a Licensee

Whilst IDA generally will presume that a Licensee is non-dominant, in those cases where IDA needs to conduct a detailed assessment to classify a Licensee, IDA will consider the following factors:

2.5.1 Market Share

The starting point for IDA's analysis will be to determine the Licensee's share of the relevant market. To do so, IDA will determine the relevant product and geographic markets, and will then estimate the market share.

2.5.1.1 Identifying the Product Market

The relevant product market for a specific service provided by a Licensee consists of both the specific services provided by the Licensee and any additional services that buyers regard as interchangeable with, or substitutes for, the Licensee's service. To determine which services are in the same product market as the Licensee's service, IDA will seek to determine to which products buyers would switch if the Licensee (and any other Licensees that provide the identical service) increased the price of the service by a small but significant, non-transitory amount – typically 5 to 10 percent — for a 6 to 12 months period.

2.5.1.2 Identifying the Geographic Market

The relevant geographic market for a specific service provided by a Licensee consists of the geographic area in which the Licensee (and other entities that provide substitutable services) provides service and any additional geographic locations from which buyers would obtain those services in the event of a small but significant, non-transitory price increase. To determine which locations are in the same geographic market as the Licensee's service, IDA will seek to determine which additional locations, if any, buyers would seek to obtain service from if the Licensee (and any other entities in the same location that provides a substitutable product) increased the price of the service by 5 to 10 percent for a 6 to 12 months period.

2.5.1.3 Calculating the Share

Once IDA has determined the relevant product and geographic markets, it will compile a list of all those entities that currently participate in that market. IDA will then seek to assess the Licensee's share of the market. Typically,

market shares will be based on the percentage of customers in a location that the Licensee currently serves. In appropriate cases, however, IDA may consider other measures of market share – such as annual turnover or capacity. All things being equal, a Licensee with a larger market share will have a greater ability to act anti-competitively than a Licensee with a smaller market share. IDA will presume that a Licensee with a market share in excess of 50 percent should be classified as a Dominant Licensee. In appropriate cases, however, a Licensee with less than a 50 percent market share may be classified as dominant, whilst a Licensee with more than a 50 percent share may be classified as a non-dominant.

2.5.2 Determining Barriers to Entry

The ability of a Licensee to act anti-competitively will be increased if significant barriers would prevent new firms from entering the market. Where significant entry barriers exist, IDA may classify a Licensee with less than a 50 percent market share as a dominant. Similarly where barriers to entry are low, IDA may classify a Licensee with more than a 50 percent market share as non-dominant. Such barriers can take several forms:

2.5.2.1 Legal Barriers

IDA will consider whether legal restrictions on entry, licensing procedures or other regulatory requirements make it difficult for new entities to enter the relevant market.

2.5.2.2 Operational Barriers

IDA also will consider whether new entrants would have difficulty entering the market because of significant technical or operational difficulties. This includes difficulties that new entrants would experience in co-operating with incumbent Licensees.

2.5.2.3 Economic Barriers

IDA also will consider whether new entrants have difficulty entering the market because the cost of entry is high.

2.5.2.4 Control of Essential Facilities

New entry may be virtually impossible if an incumbent Licensee controls an essential facility. An essential facility is a facility that is required to provide service, but which an efficient new entrant would not be able to replicate at a price that would allow profitable market entry. (The obligation of Licensees to “share” essential facilities is addressed in Section 6 of this Code.) IDA will classify any Licensee that controls an essential facility as dominant in any market that is dependent on that facility.

2.5.3 Assessing the Likelihood of Timely and Sufficient Entry in Response to Price Increases (Supply Elasticities)

Even in the absence of clear barriers to entry, a Licensee will be able to act anti-competitively if there are no entities that would respond to such conduct by *actually* entering the market or increasing output. Therefore, IDA will next consider whether, if the Licensee were to restrict output and impose a small but significant, non-transitory price increase, other entities would compensate by entering the market or increasing output, thereby thwarting the Licensee's efforts. In order to support classification as a non-dominant carrier, such entry or increase in output would have to be likely, timely (typically within 6 to 12 months) and of a sufficient size to offset any restriction of output by the Licensee. In conducting this analysis, IDA will attempt to identify specific entities that would be likely to enter the market or expand output. IDA will consider the following categories of entities:

2.5.3.1 Supply Substitutability

IDA will first identify those entities, if any, that currently hold licences to provide services that directly compete against the service provided by the Licensee. IDA will seek to determine whether those Licensees would be likely to try to increase output and, if so, whether they have, or easily could obtain, the capacity and other resources to increase output to a level necessary to compensate for any restriction in output by the Licensee under review.

2.5.3.2 New Entry

IDA will next identify other entities, if any, that do not currently hold licences to provide services that directly compete against the service provided by the Licensee, but which would likely try to enter the market in response to a small but significant non-transitory price increase by the Licensee. IDA will seek to determine whether those Licensees could easily obtain the necessary regulatory approvals and, if so, whether they have the resources to increase output to a level necessary to compensate for any restriction in output by the Licensee.

2.5.4 Assessing the Likelihood of Consumer Switching in Response to Price Increases (Demand Elasticities)

Finally, IDA will consider whether, if the Licensee were to impose a small but significant non-transitory price increase, its current customers would be likely to switch to a service provided by a competing Licensee. In making this determination, IDA will consider market patterns, the difficulty (technically and economically) of switching, and the existence of long-term contracts or high early-termination liability that would tend to "lock-in" the licensee's current customers.

3. DUTY OF LICENSEES TO END-USERS

3.1. Over view

The growth of competition will provide business and residential users with increased choice among service providers. All Licensees have a duty to provide service to end-users on just and reasonable terms and conditions. In competitive markets, market forces – augmented by the minimal requirements and prohibitions contained in this Section – generally will be sufficient to ensure that this occurs. Where competition has not yet taken root, however, IDA will require Licensees to comply with more comprehensive requirements designed to replicate the operation of a competitive market.

3.2 Duties of all Licensees

Each Licensee shall include in its agreements with its end-users provisions that implement the following requirements.*

3.2.1 Duty to Comply with Minimum Quality of Service Requirements

All Licensees must comply with the minimum quality of service standards promulgated by IDA. Licensees shall make publicly available, not less than once each year, in a format that can be understood easily by consumers, a statement of the extent to which the Licensee has met IDA's quality standards. In appropriate cases, a Licensee and customer may agree to a lower quality of service standard. Typically, this will occur where the Licensee is providing a new service or offering a price discount. In such cases, the Licensee must inform the customer, in writing, of the service level that it intends to provide and of the fact that it does not comply with IDA's minimum quality standards.

3.2.2 Duty to Provide Periodic, Accurate and Timely Statements of Charges

All Licensees must provide customers with periodic, accurate and timely statements of charges. In particular, Licensees must comply with the following requirements:

3.2.2.1 Tariff or Contract to Disclose All Material Terms

Licensees must disclose, in advance, all material price and non-price terms governing the provision of telecommunication services. For those Licensees that are required to file public tariffs, this information must be disclosed in the tariff. Other Licensees must disclose this information in a contract signed by the Licensee and the customer.

* Licensees shall amend their existing agreements with their end-users to comply with the requirements not later than 90 days after the effective date of the Code.

3.2.2.2 Billing Timeliness

Licensees must provide statements of charges in a timely manner. Unless otherwise agreed to in writing by the Licensee and the customer, invoices shall be sent monthly.

3.2.2.3 Billing Clarity

All statements of charges must be clear and concise. In particular, the statements must list, in easy-to-understand terms, the charges for each separate service provided.

3.2.2.4 Compliance with Tariff or Contract Rates

The statement of charges must reflect the prices, terms and conditions contained in the tariff filed by the Licensee or the contract between the Licensee and the end-user. If the Licensee has filed a tariff, but subsequently enters into a contract with a customer that contains terms that are different from those contained in the tariff, the terms of the tariff shall govern.

3.2.2.5 No Charges for Unauthorised Services (“Cramming”)

Licensees shall charge a customer only for the specific services that the customer has ordered. In addition to any sanctions that IDA may impose, the customer shall have no liability to pay for any services for which he or she has not ordered, provided the customer notifies the Licensee in writing within 30 days of receiving the statement of charges.

3.2.2.6 No Charges by Unauthorised Providers (“Slamming”)

No Licensee may switch a customer from another provider’s service to its service without the prior written consent of the customer. In addition to any sanctions that IDA may impose, the customer shall have no liability to pay for any services provided by a Licensee from which he or she has not requested services, provided the customer notifies the Licensee within 30 days of receiving the statement of charges. The Licensee also shall assume any cost necessary to switch the customer back to his or her original service provider.

3.2.3 Duty to Provide Procedures to Contest Charges

All Licensees must provide procedures that will allow a customer to dispute any charge that the customer believes, in good faith, to be incorrect. Unless otherwise agreed to in writing by the Licensee and the customer, these procedures shall, at a minimum, include the following:

3.2.3.1 Initiation of Challenge

The customer must inform the Licensee of any disputed charge within 30 days of receiving a statement of charges.

3.2.3.2 Right to Without Payment

The customer shall not be required to pay any reasonably disputed amounts pending the resolution of the dispute. Should the customer ultimately be found liable for the payment, the customer will be required to pay the amount due, compensation for the Licensee's reasonable arbitration, litigation and collection expenses, plus interest. The rate of interest shall be set at a commercially reasonable amount, which will be specified in the Licensee's tariff or contract.

3.2.3.3 Licensee Review

The Licensee shall conduct a complete and objective review of the customer's complaint, and shall provide a written response, within 30 days of receiving the complaint.

3.2.3.4 Reporting Requirement

Not less than once in each three-month period, each Licensee shall submit to IDA, and make publicly available, a report summarising the complaints and compliments that it has received from its end-users during the reporting period.

3.2.3.5 Mediation

Licensees and end-users may request the assistance of IDA in mediating any billing or similar dispute.

3.2.3.6 Private Dispute Resolution

If the parties are unable to resolve the dispute, they shall refer the matter to the Small Claims Tribunal, if the matter is within that body's jurisdiction. Otherwise, the parties shall submit the dispute for resolution to any court of competent jurisdiction or to arbitration, as the parties may agree.

3.2.4 Duty to Protect Customer Service Use Information

Licensees have a duty to protect Customer Service Use Information ("CSUI").

3.2.4.1 Definition

CSUI consists of all the information that a Licensee obtains as a result of a customer's use of the Licensee's telecommunication service. This includes, but is not limited to, information regarding the customer's calling patterns (including number of calls, times of calls, duration of calls and parties called), the services ordered by a customer, the customer's network configuration and the customer's credit history.

3.2.4.2 Customer Authorisation

Customers will be presumed to have authorised the Licensee to use CSIU for any lawful purpose. At the time they enter into a service contract (or, for those Licensees that currently provide service, within 180 days of the effective date of this Code), Licensees shall provide each customer with a form that will enable the customer to withhold consent from the Licensee to use the customer's CSUI.

3.2.4.3 Restrictions on Use

Where a customer has withheld authorisation as provided for in Section 3.2.4.2 above, the Licensee may use CSIU only for the purpose of providing the specific telecommunication service from which the information was derived, for the prevention of fraud or to provide assistance to law enforcement or security agencies. Licensees shall adopt appropriate procedures to ensure that this information is not used for the development or marketing of other goods or services.

3.3 Special Duties of Dominant Licensees

Because they are not subject to competitive market forces, Dominant Licensees must comply with the following additional requirements designed to protect the interests of business and residential customers:

3.3.1 Duty to Provide Service on Demand

Dominant Licensees shall provide service to any customer upon reasonable request.

3.3.2 Duty to Provide Service at Cost-oriented Rates

Dominant Licensees shall charge rates for telecommunication services that are oriented towards cost.

3.3.2.1 Tariff Filing

Prior to offering a service, Dominant Licensees must file a tariff with IDA. The tariff must contain a clear statement of the prices, terms and conditions on which the service will be offered. The tariff must be self-contained and must not include charges for any goods or services not subject to tariff regulation.

3.3.2.2 Review by IDA

IDA will review the tariff filing to determine whether the rates are competitive with those in "basket" of jurisdiction, including neighbouring countries, newly industrialised countries, and major financial markets. Within 7 days, IDA will either accept the tariff (either by affirmatively granting approval or by taking no action) or reject the tariff. (This period is shortened to 5 days for joint promotional offerings or 3 days for stand-alone promotions.) If IDA

rejects the tariff, it will provide a statement of the basis for its rejection within 60 days. Once a tariff has gone into effect, IDA will review it periodically to determine whether the charges remain appropriate. In addition, any party that believes that a Dominant Licensee's rates are excessive may petition IDA to review the appropriateness of an existing rate. Such petitions must provide a basis for the petitioning party's belief that current rates are excessive.

3.3.3 Duty to Provide Service on a Non-discriminatory Basis

Dominant Licensees must provide service on prices, terms and conditions that are not unreasonably discriminatory. This requires that, except where otherwise required by IDA, any variations in the prices charged to different customers must be based on objective differences, such as variations in the cost of service, or on the need to meet a *bona fide* offer by a competing Licensee.

3.3.4 Duty to Provide Unbundled Service

A Dominant Licensee must provide telecommunication services on an unbundled basis. Such Licensees may not require a customer that wants to purchase a telecommunication service that is not subject to effective competition to purchase any other product or service as a condition for purchasing the non-competitive service. For example, a Dominant Licensee cannot require a customer that wants to buy exchange line service to purchase the Licensee's Internet access service or terminal equipment. A Licensee, however, may allow a customer to purchase a package of services containing telecommunication services that are not subject to effective competition and goods and services that are subject to effective competition at a price that is lower than the separate prices of each of the component products, provided that the Licensee offers the customer the option of purchasing the non-competitive telecommunication service on a stand-alone basis, and does not use revenues from the provision of the telecommunication service to cross-subsidise the cost of the other components in the package.

3.3.5 Prohibition on Excessive Early Termination Liabilities

Licensees may enter into agreements under which they provide customers with significant discounts in return for the customer's agreement to commit to a minimum service duration period and/or a minimum revenue commitment. Such agreements may contain lawful provisions providing for financial liability in the event that the customer ends the agreement prior to the agreed upon termination date. The size of any early termination liability, however, must be reasonably related to extent of the discount that the carrier has provided and the duration of the period during which the customer took service.

4. REQUIRED COOPERATION AMONG ALL FACILITIES-BASED LICENSEES TO PROMOTE COMPETITION

4.1 Over-view

In order to ensure the development of an integrated “network of networks,” which allows for seamless any-to-any communications throughout Singapore, all facilities-based Licensees must comply with the conditions set forth in this section.

4.2 Duty to Interconnect With and Provide Access to Other Licensees

Each facilities-based Licensee has a duty to interconnect with and/or provide access to other Licensees.* Such interconnection may be either direct or indirect. Where both Licensees are non-dominant, they may agree to interconnect on any mutually agreeable terms, provided they comply with the minimum requirements contained in this Section. IDA generally will not involve itself in negotiations between two Non-Dominant Licensees.

4.3 Duty to Establish Compensation Agreements for the Origination, Transport and Termination of Telecommunication Traffic

Each facilities-based Licensee has the duty to enter into agreements to compensate other Licensees that originate, transport or terminate the Licensee’s traffic. Where both Licensees are non-dominant, the parties may enter into any mutually acceptable compensation arrangements (including bill-and-keep agreements).

4.4 Duty to Provide Non-discriminatory Interconnection Quality Standards

Each facilities-based Licensee that provides direct interconnection and/or access to other Licensees shall provide interconnection and/or access that is of at least equal quality to the quality that the Licensee provides comparable services to itself, its affiliates or to other Licensees.

4.5 Duty to Prevent Technical Harm to the Network

Any facilities-based Licensee that interconnects to the facilities of another Licensee shall take reasonable measures to ensure that the interconnection does not cause physical or technical harm to the second Licensee’s network.

4.6 Duty to Provide Billing Information

A facilities-based Licensee has a duty to provide Licensees with which it interconnects and/or provides access information necessary to allow such Licensees to bill for services that they provide to end-users.

* Those Licensees that provide value added services may request interconnection or access pursuant to the provisions of Sections 4 and 5 of this Code. Alternatively, they may continue to purchase transmission services in the same manner as non-licensed end-users.

4.7 Duty to Preserve Confidential Information Provided by Other Licensees

Each Licensee has a duty to protect from disclosure any confidential or proprietary information provided by another Licensee in the course of negotiating or carrying-out an interconnection agreement.

4.8 Duty to Disclose Interfaces

Each facilities-based Licensee has the duty to make publicly available, in sufficient detail, the physical and logical interfaces of its network necessary to allow the development and deployment of telecommunication services, value added services and terminal equipment that can interconnect to, and interoperate with, the Licensee's network. Licensees also must make publicly available, sufficiently in advance, changes in logical or physical interfaces that could significantly impair existing interconnection arrangements. Dominant Licensees may not disclose this information to any affiliated entity (whether licensed or not) prior to the time that the Licensee makes this information available to the public.

4.9 Duty to Comply With Mandatory Technical Standards

Each facilities-based Licensee shall comply with any mandatory technical standards promulgated by IDA or, in the absence of such standards, with the standards adopted by the International Telecommunication Union.

4.10 Duty to Provide Number Portability

Each facilities-based Licensee shall take such actions as may be necessary to allow an existing customer that chooses to obtain service from a different Licensee to retain the same telephone number.

4.11 Duty to Provide Access to Poles, Towers, Ducts, and Rights-of-Way

A Licensee that controls access to poles, towers, ducts and public rights-of-way shall provide requesting Licensees with access to these facilities at cost-based prices, on non-discriminatory terms and conditions.

4.12 Duty to Notify IDA of All Interconnection Agreements

Each facilities-based Licensee shall submit to IDA a copy of any interconnection agreement into which it has entered. If both Licensees are non-dominant, such agreements will be effective, unless IDA informs the parties to the contrary, in writing, within 30 days. IDA shall not reject any interconnection agreement between non-dominant Licensees that complies with this Section 4.

4.13 Enforcement of Interconnection Agreements

Once an interconnection agreement becomes effective, IDA does not intend to involve itself in the day-to-day implementation of the agreement.

4.13.1 Duty to Co-operate

Licensees have a duty to co-operate, in good faith, in carrying out the terms of their interconnection agreements and avoiding unnecessary disputes.

4.13.2 IDA Mediation

Where Licensees are unable to resolve disputes regarding the implementation of an interconnection agreement, they may request IDA to provide mediation. IDA will seek to accommodate such requests, subject to resource constraints. IDA's role in any mediation will be to assist the Licensees to reach a mutually acceptable solution, rather than advocating any specific position.

4.13.3 Private Enforcement

Interconnection agreements are private contracts between the Licensees. If the Licensees are unable to resolve any dispute regarding the carrying-out of their interconnection agreement, they may seek relief from a court of competent jurisdiction. Licensees may also seek advisory guidance from IDA, but may not use the request for enforcement procedures contained in Section 10 of this Code.

4.14 Modification, Suspension or Termination of Interconnection Agreements

IDA anticipates that interconnection agreements will remain effective throughout their specified term. The Authority recognises, however, that there may be situations in which the parties will seek to modify, suspend or terminate agreements. The following provisions govern those situations:

4.14.1 Notification

Except where imminent threats to life or property or compliance with other legal obligations requires immediate action, and subject to Section 4.14.2 below, prior to modifying, suspending, or terminating an interconnection agreement, Licensees shall inform IDA, in writing, of the actions they propose to take and the reasons why they believe the action is appropriate.

4.14.2 Review by IDA

Where both Licensees agree to modify the agreement, the parties may implement the change within 30 days after they have notified IDA, unless IDA informs the Licensees that the agreement, as modified, no longer complies with the minimum requirements specified in this Section 4. Where both Licensees agree to suspend or terminate the agreement, they may do so within 45 days after they have notified IDA, unless IDA determines that such suspension or termination would result in significant service disruptions to end-users or significant harm to other Licensees. In that case, IDA may

require the Licensees to develop a plan for the orderly dissolution of their agreement which, in appropriate cases, may include compensation to adversely affected third parties.

5. COOPERATIVE DUTIES OF DOMINANT LICENSEES

5.1 Over-view

IDA seeks to promote new entry into the Singapore telecommunication market. In order to enter the telecommunication market, new Licensees will need to access and interconnect with the networks of incumbent Licensees that use a variety of transmission media (wireline, wireless, cable, etc.) to transport telecommunication traffic. However, Dominant Licensees typically lack the economic incentives to enter into voluntary agreements with competing Licensees. Consequently, IDA cannot rely on market forces to ensure that these Licensees enter into mutually acceptable voluntary agreements. IDA, therefore, will take a more active role in overseeing negotiations involving Dominant Licensees. Notwithstanding the above, however, IDA encourages Dominant Licensees to enter into mutually acceptable voluntary agreements with other Licensees that request interconnection.

5.2 Duty to Develop, Submit and Make Publicly Available a Reference Interconnection Offer

Within 60 days of the effective date of this Code, every Dominant Licensee shall prepare, submit to IDA for approval and, after approval, make publicly available a Reference Interconnection Offer (“RIO”).

5.2.1 Contents of the Offer

The RIO shall contain the minimum terms on which the Licensee is willing to interconnect with and/or provide access to other Licensees. The RIO shall provide the terms for: the physical linking of networks; the leasing of unbundled network elements; the provision of telecommunication services at wholesale rates; compensation for the origination, transport and termination of traffic; equipment co-location; and, other relevant terms. The RIO shall also specify the prices at which the Licensee is prepared to make these offerings available.

5.2.2 IDA Review

IDA will review the RIO to determine whether it satisfies the duties specified in Section 4 of this Code, and whether it is consistent with the minimum terms specified in Section 5.8 of this Code. If IDA does not act within 60 days, the RIO will be deemed approved unless, prior to the 60th day, IDA request an additional 30 days for its review. If IDA rejects any portion of the RIO, it will provide the Licensee with a written explanation of the basis for the rejection and the modifications required to bring the RIO into compliance with IDA’s

requirements. Before approving a proposed RIO, IDA may seek public comments. Licensees shall notify IDA of any proposed changes in their RIO.

5.3 Duty to Negotiate in Good Faith With Any Licensee Requesting Interconnection

Dominant Licensees have a duty to negotiate, in good faith, with any Licensee requesting interconnection and/or access.

5.3.1 Initiation of Negotiations

A Licensee that requests interconnection and/or access (“Requesting Licensee”) to the telecommunication system of a Dominant Licensee shall comply with the following procedures:

5.3.1.1 Request for Negotiations

The Requesting Licensee shall submit a written request to the Licensee. The request will specify the requested forms of interconnection and/or access requested, designate a contact person and propose a time for initial negotiations.

5.3.1.2 Notification of IDA

At the time it presents the request, the Requesting Licensee shall submit a copy of the request to IDA.

5.3.1.3 Confidentiality Agreement

The two Licensees shall negotiate a confidentiality agreement within 15 days of the receipt of the request. IDA may prescribe a standard confidentiality agreement to be used, at the request of either party, if the two Licensees fail to enter into a confidentiality agreement after a reasonable period.

5.4 IDA Mediation

Should both parties so request, IDA may provide a representative to assist the Licensees in reaching a voluntary interconnection and/or access agreement.

5.5 Voluntary Agreements

IDA favours the adoption of voluntary interconnection and/or access agreements derived through inter-party negotiations between the parties.

5.5.1 Terms of Agreement

In general, Dominant Licensees are free enter into interconnection and/or access agreements on any mutually agreeable terms, provided that they satisfy the minimum duties set forth in Section 4 of this Code and do not discriminate against any other Licensee.

5.5.2 IDA Review

Licensees who have entered into voluntary interconnection and/or access agreements with Dominant Licensees shall submit the proposed agreement to IDA. If IDA takes no action within 30 days, the agreement shall be deemed approved. IDA will only reject or modify a voluntary agreement if IDA is of the view that the agreement does not meet the minimum duties set forth in Section 4 of this Code or discriminates against any other Licensee.

5.6 Agreements Arrived at Via the IDA Dispute Resolution Procedure

IDA recognises that, in many cases, Dominant Licensees will not voluntarily enter into negotiated interconnection and/or access agreements. The following provisions address that situation:

5.6.1 Request for IDA Intervention

If the Licensees have not reached a mutually acceptable voluntary interconnection and/or access agreement within 90 days of the date on which the Requesting Licensee submitted its initial request, the Requesting Licensee may (but is not required to) file a request for dispute resolution with IDA. The Requesting Licensee shall at the same time submit a report to IDA setting out a list of each point on which the Licensees have reached agreement and each point on which the Licensees have not reached agreement. For those points on which the Licensees disagree, the Requesting Licensee shall provide a clear statement of its position. The Requesting Licensee shall provide a copy of the dispute resolution request (including its report referred to herein) to the Licensee from which it has sought interconnection.

5.6.2 Response to the Request

The Licensee from which interconnection and/or access has been sought shall have 15 days to submit to IDA (with a copy to the Requesting Licensee) a written response to the request for dispute resolution. For each point in the request for dispute resolution on which the Requesting Licensee claims that the parties are in agreement, the response shall indicate whether the Licensee concurs or disagrees. If the Licensee disagrees, it shall provide a statement of its position. For each point in the request for dispute resolution on which the Requesting Licensee claims that the parties disagree, the Licensee from whom interconnection was sought shall provide a clear statement of the way in which its position differs from that of the Requesting Licensee.

5.6.3 IDA Request for Additional Information

IDA may request either or both Licensees to submit additional information at any time during the course of the dispute resolution procedure. Any submission by one Licensee shall be made available to the other Licensee at the time it is submitted to IDA.

5.6.4 Binding Effect of Submissions

The positions taken by a Licensee in its dispute resolution procedure submissions made under this Section shall be binding against that Licensee.

5.6.5 Effect of Failure to Respond

If either Licensee fails to submit information required by this Code, or requested by IDA, IDA will base its decision on the information provided by the other Licensee or, if the other Licensee has not submitted relevant information, on the best publicly available information.

5.7 Resolution by IDA

IDA will use the following procedures to conduct interconnection dispute resolution procedures:

5.7.1 Scope of the Dispute Resolution Procedure

Provided they are consistent with the requirements of Section 4 this Code, and do not discriminate against any other Licensee, IDA will not re-open any issues on which the Licensees have reached agreement. Rather, the dispute resolution will be limited to those issues on which the two Licensees are unable to reach agreement.

5.7.2 Timing of the Dispute Resolution Procedure

IDA will seek to complete the dispute resolution procedure within 90 days from the day on which it receives the request for dispute resolution.

5.8 Minimum Terms to be Imposed

To the extent that the Licensees have not reached agreement, IDA will impose the following minimum terms:

5.8.1 Non-discrimination

Unless the parties agree otherwise, a Dominant Licensee must provide interconnection and/or access on non-discriminatory terms. In particular, the Licensee must provide interconnection and/or access to a Requesting Licensee on terms and conditions that are no less favourable than the terms and conditions on which it provides comparable services to itself, its affiliates or other Licensees.

5.8.2 Interconnection at Any Technically Feasible Location

Unless the parties agree otherwise, a Dominant Licensee must allow the physical linking of networks at any technically feasible point. Where Licensees are interconnecting for the exchange of telecommunication traffic, IDA will require interconnection at telecommunication gateways, such as

international gateways, trunk exchanges, tandem exchanges, local exchange, and dedicated interconnection gateways. Where Licensees are interconnecting for the purpose of allowing the local origination or termination of traffic (access), IDA will require interconnection at the exchange Main Distribution Frame (“MDF”), the building MDF, a roadside cabinet or other technically feasible points. Licensees must provide adequate capacity to ensure efficient traffic flow. Each Licensee will be responsible for the portion of the link from its system to the point of interconnection or access.

5.8.3 Provision of Unbundled Network Elements

Unless the parties agree otherwise, a Dominant Licensee must allow the Requesting Licensee to lease, on an unbundled basis, each element of its network that is necessary to provide a competing telecommunication service offering. The Requesting Licensee can combine leased elements with its own facilities to provide a telecommunication service. IDA will consider an element necessary if it is technically or operationally required to provide the competing service and cannot be replicated, or obtained from any sources other than the Licensee, at commercially reasonable rates. IDA will presume that this standard has been satisfied with regard to the following elements (or, depending on the transmission platform, their equivalent).

5.8.3.1 Network Interface Device (“NID”)

The NID is the physical connection located at the end-user’s premises, which allows connection of the subscriber’s inside wiring to the Licensee’s network.

5.8.3.2 Unbundled Local loop

The local loop is the physical “last mile” connection from the end user’s premises to the Licensee’s exchange. IDA may require a Dominant Licensee that controls local loop facilities to unbundle the local loop in the following manner:

5.8.3.2.1 Sub-loop Unbundling

To the extent technically feasible, the Licensee must unbundle the local loop into its physical sub-elements, such as the feeder, distribution cable and the feeder/distribution interface.

5.8.3.2.2 Loop Spectrum Unbundling

To the extent technically feasible, the Licensee must “horizontally” unbundle the loop, by allowing Requesting Licensees to lease the use of only that portion of the loop spectrum suitable for digital communications (such as communications using xDSL technology).

5.8.3.2.3 Digital Conditioning

Upon request, the Licensee must take reasonable measures to “condition” local loops so that they can be used to provide digital telecommunication services, such as xDSL. This typically will involve removal of impediments to xDSL traffic, such as bridged taps and load coils.

5.8.3.3 Switching

The switching element consists of the facilities necessary to route traffic from the point of origin to the point of destination. Where necessary, the switching element may include circuit switches, packet switches or comparable facilities.

5.8.3.4 Inter-office Transport

The inter-office transport element consists of high-capacity facilities used to carry telecommunication traffic between switching stations (or equivalent facilities) within a Licensee’s network, or between one Licensee’s network and the point-of-presence of another Licensee’s network. IDA may require these facilities to be offered on a dedicated or a shared basis.

5.8.3.5 Signalling

The signalling element consists of software-based network functionality, such as Signalling System 7, used to route traffic within the network.

5.8.3.6 Operational Support Services (“OSS”)

The OSS element consists of network functionality used to order, monitor and diagnose problems with telecommunication services provided over the network.

5.8.3.7 Directory Assistance and Operator Services

The directory assistance and operator service element consists of those services that provide end-users with access to telephone numbers and the ability to complete calls.

5.8.3.8 Public Emergency Call Services

The Public Emergency Call Service Element provides direct connectivity to the Police, Singapore Civil Defence Force or similar government agencies that IDA may hereafter designate.

5.8.3.9 Designation of Additional Elements Necessary to Provide Service

IDA may require Dominant Licensees to unbundle any other element of any telecommunication network that meets the standards specified in Section 5.8.3 of this Code.

5.8.3.10 Obligation to Combine Elements Upon Request

Upon request, a Dominant Licensee must combine the elements requested by the Requesting Licensee in the most technically efficient manner.

5.8.3.11 Obligation to Offer Integrated Platform

Upon request, a Dominant Licensee must allow a Requesting Licensee to lease all of the designated network elements, in a manner that enables it to provide an end-to-end service.

5.8.4 Provision of Wholesale Services

Unless the parties agree otherwise, a Dominant Licensee must allow Requesting Licensees to purchase, at wholesale rates, any telecommunication service that the Licensee provides to end-users at retail rates.

5.8.5 Collocation

Unless the parties agree otherwise, a Dominant Licensee must allow the Requesting Licensee to co-locate equipment at any technically feasible location within the Licensee's network pursuant to the following provisions:

5.8.5.1 Physical Co-location Favoured, Where Feasible

To the extent feasible, the Dominant Licensee must allow the Requesting Licensee to physically place its equipment at locations (such as the exchange or remote terminals) within, or adjacent to, the Dominant Licensee's network. Subject to Section 5.8.5.3 of this Code, the Requesting Licensee shall retain the right to have unrestricted access to, and physical control over, the equipment. If physical co-location is not feasible, due to actual space constraints or technical considerations, the Dominant Licensee must allow "virtual co-location," in which the Dominant Licensee places within its network equipment that is designated by the Requesting Licensee, but which is owned and operated by the Dominant Licensee.

5.8.5.2 Equipment That May be Co-located

A Dominant Licensee must allow the co-location of equipment necessary to interconnect and/or to access network elements. A Requesting Licensee may co-locate "multi-functional" equipment that is used for both interconnection and/or access to network elements and other purposes (such as switching or the provision of value-added services) so long as the equipment is actually used for interconnection and/or access to network elements, where this is most efficient.

5.8.5.3 Security Provisions

A Dominant Licensee that offers physical co-location has the right to take reasonable and non-discriminatory measures to protect the security of its

network. Such measures, however, must be no more restrictive than necessary to protect the security of its network. In general, Dominant Licensees will not be allowed to require the use of “cages” or similar structures to physically segregate co-located equipment.

5.8.6 Compensation for Origination, Transport and Termination

Unless the parties agree otherwise, each Licensee shall compensate the other Licensee for the origination, transport and termination of telecommunication traffic.

5.8.7 Compensation for Significant Interface Changes

Unless the parties agree otherwise, a Dominant Licensee must compensate any Licensee with which it interconnects for significant and unanticipated costs that result from significant changes in interfaces adopted by the Dominant Licensee.

5.8.8 Pricing

Unless the parties agree otherwise, the following provisions govern the prices that Dominant Licensees may charge for interconnection, access, the provision of network elements, origination, transport and termination of traffic and co-location:

5.8.8.1 General Principles

The pricing regime is intended to create the correct economic incentives for market participants. Prices will be established using a methodology based on incremental forward-looking economic cost (“FLEC”). This standard seeks to replicate market forces by determining what it would cost a Licensee to accommodate the needs of a new entrant using the most efficient technology and practices available. In applying this methodology, IDA will seek to provide incentives for facilities-based entry, whilst not deterring services-based entry. The pricing methodology to be used is described in greater detail in Appendix I*.

5.8.8.2 Interim Prices

Recognising the need to ensure the prompt implementation of competition, IDA has developed interim prices for interconnection and access. Unless the parties agree otherwise, these prices are to apply to interconnection and/or access agreements between a Dominant Licensee awarded a licence prior to 5 May 1998 and any other Licensee that seeks to provide basic

* The said Appendices are not included in the proposed Code. These are stated in the proposed Code to reflect their existence when the final Code is issued. They are also being currently reviewed. The methodology is the subject of a separate but related consultation paper on Interconnection/Access; and the interim prices are also under review. They will be refined after the consultation process.

telecommunication services. These prices will remain in effect until 31 March 2003. The charges are detailed in Appendix II*.

5.8.9 Duration of Agreements

Unless the parties agree otherwise, all interconnection and access agreements will have an initial term of three years and, unless renegotiated by the parties, will automatically renew on a year-to-year basis.

5.8.10 Governing Law

All interconnection and access agreement will be governed by the laws of the Republic of Singapore.

5.9 Implementation of Dispute Resolution Decision by Licensees

Unless either party seeks review from the Minister in accordance with Section 1.3.9 of this Code, within 14 days of the adoption of a dispute resolution direction, the Licensees shall submit an interconnection agreement that complies with the terms of the direction. If either party seeks review, pending the decision of the Minister, IDA can direct the Licensees to interconnect on an interim basis.

5.10 Publication of Interconnection Agreements

All interconnection agreements involving Dominant Licensees, whether arrived at voluntarily or through negotiation, shall be published by IDA. However, IDA – on its own motion or at the request of either of the Licensees – may withhold from publication any portion of an agreement that IDA determines contains proprietary or commercially sensitive information.

5.11 “Opt-in” Rights

A Dominant Licensee that has entered into an interconnection agreement with another Licensee must provide interconnection on substantially similar terms to any other Requesting Licensee.

5.12 Status of Agreements Entered Into Prior to the Effective Date of the Code

Any interconnection agreement entered into and approved by IDA prior to the effective date of this Code shall remain in force notwithstanding the provisions of this Code.

* The said Appendices are not included in the proposed Code. These are stated in the proposed Code to reflect their existence when the final Code is issued. They are also being currently reviewed. The methodology is the subject of a separate but related consultation paper on Interconnection/Access; and the interim prices are also under review. They will be refined after the consultation process.

6. SPECIAL PROVISIONS GOVERNING THE SHARING OF ESSENTIAL FACILITIES

6.1 Over-view

In general, a Licensee is not required to “share” the use of its infrastructure with its competitors. Rather, each facilities-based Licensee is expected to build or lease the use of the telecommunication infrastructure that it requires. However, where access to a specific portion of the telecommunication infrastructure is essential for competitive entry, and where it is not feasible for a competing Licensee to purchase or lease the use of that infrastructure, pursuant to Section 22 of the Telecommunications Act of 1999, IDA may mandate that the Licensee that controls the infrastructure share it with requesting Licensees.

6.2 Definition of Sharing

Infrastructure sharing refers to an arrangement under which a Licensee that controls a specific portion of the telecommunication infrastructure that has been designated as an “essential facility” is obligated to allow other Licensees to jointly use the same facility, at cost-based prices and on non-discriminatory terms. For example, if one Licensee owns or controls a particular cable, and if IDA determines that the cable is an essential facility, the Licensee would be required to allow other Licensees to jointly send traffic over that cable.

6.3 Procedures for Requesting Sharing of a Facility

The following procedures will govern all requests to share telecommunication infrastructure controlled by a Licensee:

6.3.1 Request to Licensee Controlling the Facility

A Licensee that wants to share the telecommunication infrastructure that is owned or controlled by another Licensee must first seek to negotiate an agreement with the Licensee that controls the infrastructure. The Licensees may jointly seek the assistance of IDA. IDA will act as a mediator, but will not seek to impose any specific solution on the parties.

6.3.2 Request to IDA

If the Licensees are unable to reach agreement regarding the sharing of the telecommunication infrastructure within 30 days after the initiation of negotiations, the Requesting Licensee may (but is not required to) submit a written request to IDA. The Requesting Licensee shall provide a clear explanation of the specific infrastructure that it seeks to share, the means by which it proposes to share it, and the reasons why the Requesting Licensee believes the infrastructure constitutes as an “essential facility,” as that term is defined in Section 6.4 of this Code. The Requesting Licensee shall provide the Licensee that controls the infrastructure with a copy of the request at the same time that the Requesting Licensee provides the request to IDA.

6.3.3 Response by Licensee

Unless IDA dismisses the request on its own motion, the Licensee that controls or owns the telecommunication infrastructure shall have 15 days from the date on which the request is filed to reply to the request. The Licensee shall respond to all points made by the Requesting Licensee, and shall provide a full explanation as to the reasons why it does not believe that the requested infrastructure constitutes an essential facility or, if the Licensee acknowledges that the requested infrastructure constitute an essential facility, a full explanation as to the reasons why it has been unable to negotiate a mutually acceptable sharing arrangement.

6.3.4 Timing of IDA Decision

IDA shall have the right to request either Licensee to submit additional information, subject to suitable protections for proprietary or commercially sensitive information. IDA may also seek public comments. Within 30 days of receiving all necessary information, IDA shall issue a decision as to whether the Licensee that controls the telecommunication infrastructure is required to share it with the Requesting Licensee.

6.4 Standards by Which IDA Will Determine Whether to Require Sharing

IDA will use the following standards to determine whether telecommunication infrastructure is an essential facility that must be shared:

6.4.1 General Standard

A Licensee requesting the right to share telecommunication infrastructure owned or controlled by another Licensee must demonstrate more than that allowing it to share the facility would reduce its costs, or increase the speed with which it could deploy service. Rather, IDA will only deem the infrastructure to constitute an essential facility if a Licensee demonstrates that: the infrastructure is required to provide a specific telecommunication service; an efficient new entrant would not be able to replicate the infrastructure within the foreseeable future at a price that would allow profitable market entry; the Licensee that operates the infrastructure has sufficient capacity to share with the requesting Licensee; the Licensee that controls the infrastructure has no legitimate business justification for refusing to share the infrastructure with other Licensees on reasonable and non-discriminatory terms; and that failure to share the infrastructure is limiting competition, to the detriment of consumers.

6.4.2 Excess Capacity

A Licensee whose telecommunication infrastructure constitutes an essential facility cannot avoid imposition of sharing requirements by asserting that excess capacity has been “reserved” for future use. Rather, the Licensee must provide data demonstrating the expected use of the infrastructure, by year, for

the next five years. To the extent that the Licensee demonstrates that it will need to use a portion of currently unused capacity of the infrastructure in order to achieve reasonably projected rates of growth, the Licensee will not be required to share.

6.4.3 Impact on Deployment of New or Upgraded Infrastructure

IDA will not require sharing where the Licensee provides evidence demonstrating that, if sharing is required, the Licensee will lack reasonable economic incentives (given the cost of capital, risk, and alternatives investment opportunities) to deploy new, or upgrade existing, infrastructure.

6.5 Implementation of IDA Decision

The following procedures shall be used to implement IDA's decision:

6.5.1 Voluntary Negotiations

If IDA determines that the requested infrastructure constitutes an essential facility, it will direct the Licensees to negotiate an infrastructure sharing agreement. The parties must negotiate in good faith.

6.5.2 IDA Dispute Resolution Procedures

If the Licensees are unable to negotiate a mutually acceptable infrastructure sharing agreement within 30 days from the date of IDA's direction referred to in Section 6.5.1 of this Code, the Requesting Licensee may request IDA to resolve the dispute in accordance with the procedures specified in Section 5.6 of this Code. Pending resolution of the dispute, IDA may direct sharing on an interim basis.

6.5.3 Compensation for Sharing

Where the Licensees are not able to reach agreement regarding compensation for sharing of any essential facility, IDA will establish rates using the costing methodology applicable to interconnection and access arrangements, which is described in Appendix I.

7. ABUSE OF POSITION BY A DOMINANT LICENSEE

7.1 Over-view

Once it has complied with the specific provisions described above, IDA will not intervene in a Licensee's day-to-day operations. However, Dominant Licensees must not use their economic position to act in a manner that can impede competition. Where this occurs, IDA (either on its own motion or at the request of a private party) may initiate an enforcement action, pursuant to the procedures set forth in Section 10 of this Code. This Section describes impermissible anti-competitive conduct by a Dominant Licensee.

7.2 Pricing Abuses

In general, once a Dominant Licensee complies with the pricing requirements contained in Sections 3 and 5 of this Code, IDA will not review the prices that the Licensee charges. Dominant Licensees, however, are subject to certain general restrictions on their pricing.

7.2.1 Predatory Prices

Vigorous price competition is the hallmark of a competitive market. Whilst such competition may harm specific (often less efficient) competitors, it generally provides a direct and immediate benefit to consumers. IDA, therefore, will be reluctant to interfere with a Licensee's decision to reduce its prices. A Dominant Licensee, however, may not engage in anti-competitive *"predatory" price-cutting. IDA will find that a price cut is predatory if three factors are met. First, the Licensee is selling its service at a price that is less than the marginal cost to produce it. Second, there is a likelihood that such price cutting will drive efficient rivals from the market (or deter future efficient rivals from entering the market). Finally, entry barriers are so significant that, after driving rivals from the market (or deterring entry), the Licensee could impose a sustained increase in prices high enough to recoup the full amount of the loss that it incurred during the period of price-cutting.

7.2.2 Price Squeezes

A Dominant Licensee that provides an input used by "down-stream" Licensees, including an affiliate of the Licensee,* may not sell the input to non-affiliated down-stream Licensees at a price that is so high that the Licensee's down-stream affiliate could not profitably sell its product if it were required to incur the same cost to obtain the input as do its non-affiliated competitors. For example, a Dominant Licensee that provides both xDSL service and Internet access services could not price its xDSL service at a level so high that if it were required to pass the full cost on to its customers, the Licensee's affiliated Internet access service provider could not profitably compete against non-affiliated Internet access service providers.

7.3 Attempts to Foreclose Competition in Adjacent Markets

A Dominant Licensee may not use its market position in order to obtain an anti-competitive advantage in an adjacent market.

7.3.1 Cross-subsidisation

A Dominant Licensee must not use revenues from the provision of services to cross-subsidise the price of goods or services provided by an affiliate that is

* For purposes of this Section, an affiliate is an entity that is owned or controlled by a Licensee or has a special or exclusive preferential business relationship with the Licensee.

subject to effective competition. To prevent such abuse, Dominant Licensees must comply with separate regulations that will be issued by IDA requiring accounting separation, the correct allocation of costs between competitive and non-competitive operations, and the use of arm's length transactions between competitive and non-competitive affiliates.

7.3.2 Access discrimination

A Dominant Licensee may not provide its down-stream affiliates with access to facilities, services, or information on prices, terms or conditions that are more favourable than the prices, terms and conditions on which the Licensee provides those facilities, services or information to non-affiliated competitors of its "down-stream" affiliate.

8. AGREEMENTS INVOLVING LICENSEES THAT UNREASONABLY RESTRICT COMPETITION

8.1 Over-view

IDA will not routinely review contractual agreements entered into by Licensees (other than interconnection, access and sharing agreements). However, pursuant to the procedures in Section 10 of this Code, IDA may take enforcement action (on its own motion or pursuant to a private request) against any Licensee that enters into an agreement with one or more other Licensees that has the effect of unreasonably restricting competition in the telecommunication sector. Certain types of agreements are so clearly anti-competitive that a Licensee may not enter into them under any circumstances. IDA will assess the permissibility of other agreements based on their likely competitive effects. IDA's role is limited to determining whether a Licensee has entered into an agreement that contravenes the restrictions set forth in this Code. Contravention of these restrictions can result in the imposition of monetary sanctions or other enforcement measures, as provided for in the Telecommunications Act of 1999.

8.2 Determining the Existence of an Agreement

For the purposes of this Section 8, an agreement between or amongst Licensees can be established in any of three ways. First, an agreement can be established through direct evidence of an express agreement, such as a signed document. Second, an agreement can be established using circumstantial evidence that demonstrates the existence of an express agreement. Finally, an agreement may be tacit. That is, even in the absence of an actual agreement, Licensees may co-ordinate their production and pricing decisions in order to reduce aggregate out-put and raise market prices. IDA will not find a tacit agreement where Licensees have done nothing more than make similar production and pricing decisions – which could reflect a rational response to changing market conditions. Rather, IDA will only find that there has been a tacit agreement if the Licensees have employed "signalling devices," such as

the sharing of price and output information, that facilitate co-ordinated behaviour.

8.3 Prohibited Agreements Between Competing Licensees

Licensees are prohibited absolutely from entering into certain types of agreements because they are almost always likely to have an adverse effect on competition.

8.3.1 Price Fixing/Output Restrictions

Licensees may not enter into agreements to fix prices or restrict output, regardless of the levels to which the Licensees agree.

8.3.2 Bid Rigging

Licensees may not enter into agreements to co-ordinate bidding for any licence auctioned by IDA, or for any input into the Licensee's service or for the provision by the Licensee of any service, regardless of the levels to which the Licensees agree.

8.3.3 Geographic and Customer Divisions

Licensees may not enter into agreements not to compete to provide service to specific customers or not to compete in specific geographic areas, regardless of the terms on which the Licensees agree.

8.3.4 Group Boycotts

Licensees may not agree to refuse to do business with a specific supplier, competitor or customer.

8.3.5 Exception for Agreements Necessary for Legitimate Collaborative Ventures

Nothing in Sections 8.3.1 through 8.3.4 of this Code prohibits agreements amongst Licensees that enter into an efficiency-enhancing integration of economic activity, where such agreement is no broader than necessary to achieve the pro-competitive benefit. For example, if competing Licensees establish a joint venture, which is designed to increase total output and lower prices, the two parties could agree regarding the prices to be charged by the joint venture. Similarly, if competing Licensees were to establish a market for trading bandwidth, the Licensees could exclude competitors that did not agree to certain standardised terms, if these terms are necessary to allow for the efficient operation of the market.

8.4 Agreements Between Competing Licensees That Will be Assessed Based on Competitive Effects

With the exception of the types of agreements described in Section 8.3 of this Code, IDA will assess the permissibility of most agreements between or among competing Licensees based on their actual (or likely) effect on competition. Such agreements include joint agreements to produce inputs used by multiple Licenses, to produce services sold to end-users, to jointly market services, to jointly purchase inputs or to engage in joint research and development activities. Where there is evidence that the agreements have caused actual anti-competitive harm, IDA will find them to be in contravention of this Code. Where there is no evidence of actual market effects because the agreement is relatively recent, IDA will determine the permissibility of the agreement by seeking to assess its likely effect on the market. In conducting this assessment, IDA will consider the following factors:

8.4.1 Business Purpose of the Agreement

In reviewing an agreement, IDA will make a preliminary assessment of its likely competitive impact. That is, IDA will attempt to determine whether the agreement is likely to lead to reductions in output and increased prices. If the agreement is between or amongst a small number of Non-Dominant Licensees, which collectively account for no more than 25 percent of the relevant market (as that term is defined in Section 2.5.1 of this Code), and the business purpose of the agreement appears to be to increase output and reduce prices, IDA generally will conclude, without conducting any further analysis, that the agreement does not contravene this Code.

8.4.2 Likelihood of Competitive Harm

Where an agreement involves a more significant number of Non-Dominant Licensees, which collectively account for more than 25 percent of the relevant market (as that term is defined in Section 2.5.1 of this Code), or a Dominant Licensee, or where the agreement has the potential to result in higher prices or reductions in output, IDA will conduct a more detailed assessment. In particular, IDA will consider the following factors: whether (and, if so, to what extent) the Licensees retain the ability to act independently of the agreed-upon venture; the duration of the agreement; whether, in the event the Licensees acted anti-competitively, new entry into the market would be likely, sufficient and timely enough to deter or counter-act any competitive harm; and any other factors that help predict the likely competitive effect of the agreement. If, after assessing these factors, IDA concludes that the agreement poses no risk of competitive harm, IDA will conclude that the agreement does not contravene this Code.

8.4.3 Efficiencies

If IDA's review demonstrates that the agreement has the potential to result in a restriction of output or an increase in prices, IDA will consider whether the agreement is necessary to achieve efficiencies. Such efficiencies could include reductions in the cost of developing, producing, marketing, and delivering services. If such efficiencies offset the potential anti-competitive

effect, and could not reasonably be achieved through measures that reduce competition to a lesser extent, IDA will conclude that the agreement does not contravene this Code. If such efficiencies do not offset the potential anti-competitive effects, or could reasonably be achieved through measures that reduce competition to a lesser extent, IDA will conclude that the agreement contravenes this Code.

8.5 Agreements Between Licensees at Different Levels in the Supply Chain

Licensees shall not enter into agreements with other Licensees in the supply chain – such as a down-stream reseller of a facilities-based Licensee’s service – that have the effect of limiting competition.

8.5.1 Vertical Price Fixing

A facilities-based and a services-based Licensee may not agree as to the price that the services-based Licensee can charge end-users to which it resells the facilities-based Licensee’s service.

8.5.2 Vertical Customer Allocation and Vertical Territorial Allocation

A facilities-based Dominant Licensee may not assign specific customers to, or allocate specific geographic markets amongst, Licensees that resell its services.

8.5.3 Exclusive Dealing

A Dominant Licensee shall not enter into an agreement in which it agrees to package service that it provides exclusively with the service of another Licensee. For example, a Licensee that is dominant in the provision of exchange line service could not agree to package its services exclusively with the services of a single provider of international direct dial service.

9. CONSOLIDATIONS BY LICENSEES THAT ARE LIKELY TO RESTRICT COMPETITION

9.1 Over-view

In competitive markets, enterprises often seek to merge with or acquire others enterprises. In many cases, such combinations can have pro-competitive effects, such as creating economies of scale and scope. In other cases, however, such consolidations may harm competition. For example, such transactions could create an entity that is not subject to competitive market forces or could facilitate unlawful collusion amongst competing entities. All licences granted by IDA require that the Licensee obtain prior approval from IDA before assigning or transferring control of the License. In reviewing requests to assign or transfer control of a Licence in connection with a merger or acquisition (“consolidation”), IDA will seek to allow Licensees to have the maximum freedom to enter into such transaction, provided they do not harm

the competitive process. Where IDA believes that a transaction risks harming the competitive process, however, IDA will reject the request to assign or transfer control over the licence, or will impose appropriate conditions on the assignment or transfer of control of the licence.

9.2 Duty of All Licensees to Obtain IDA Approval

In order to prevent anti-competitive concentrations, each Licensee, in accordance with the requirement of its licence, must obtain the prior approval of IDA before engaging in either of the following transactions:

9.2.1 Assignments of Licences

A Licensee must receive the approval of IDA before assigning its licence to a new entity. For example, if Company A holds a licence, and its to be acquired by Company B, Company A must obtain IDA's approval before it is acquired by (and assigns its licence to) Company B.

9.2.2 Transfer of Control of Licences

A Licensee must receive the approval of IDA before effective control over the licence is transferred to another entity as a result of change in ownership (whether direct or indirect), stockholding or management of the Licensee, even if the licence continues to be held by the same entity.

9.3 Procedures

Any Licensee that enters into an agreement that will result in the assignment of a licence or the transfer of control of a Licensee must submit a copy of the proposed agreement to IDA, along with a statement explaining the nature and purpose of the transaction and demonstrating that the proposed transaction will not adversely affect competition in the relevant markets. Where appropriate, IDA will request additional information, and will seek comments from interest persons. (Parties may request confidential treatment of information submitted to IDA.) IDA will attempt to issue a decision indicating whether it approves, rejects or approves subject to conditions the request to assign or transfer control of the Licence within 90 days. IDA may take any of the actions specified in Section 9.5 of this Code.

9.4 Methodology

IDA will use the following methodology to assess whether to approve a request to assign or transfer control of a licence in connection with a proposed consolidation between Licensees:

9.4.1 Market Definition and Market Share

IDA will define the relevant market, the market participants, and the respective market shares using the procedures specified in Section 2.5.1 of this Code.

9.4.2 Assessing the Level of Concentration

IDA will assess whether the pre-consolidation market is concentrated and the extent to which the proposed consolidation, if permitted, would increase that consolidation. All things being equal, in a highly consolidated market, a single Licensee is more likely to be able to engage in unilateral anti-competitive conduct, and a group of Licensees are more likely to be able to enter into, and enforce, anti-competitive agreements. Therefore, IDA will be less likely to approve an application to assign or transfer control of a licence in connection with a proposed consolidation in a market that is highly concentrated – or which would become highly concentrated as a result of the proposed consolidation. One tool for measuring consolidation, which IDA may choose to use, is the Herfindahl-Hirschman Index (“HHI”). The HHI is the sum of the squares of the market shares of each of the market participants. A market with an HHI in excess of 1,800 is considered highly concentrated. In general, IDA will not approve an application to assign or transfer a licence in connection with a proposed consolidation that would create a highly concentrated market, or that would result in further concentration within such a market.

9.4.3 Assessing the Potential Anti-competitive Consequences

The market concentration analysis is not intended to be dispositive. IDA will consider market-specific factors that could increase or decrease the ability of the post-consolidation Licensee to act anti-competitively. IDA may approve an application to assign or transfer control over a licence in connection with a consolidation that might be denied based solely on market concentration analysis where these factors indicate a low risk of post-consolidation anti-competitive conduct. Conversely, IDA may deny an application to assign or transfer control over a licence in connection with a proposed consolidation that might be approved based solely on market concentration analysis where these factors indicate an unusually high risk of post-consolidation anti-competitive conduct.

9.4.3.1 Determination as to Whether the Proposed Assignment or Transfer Would Facilitate Unilateral Anti-competitive Conduct

IDA will consider the extent to which the structure of the relevant market creates a heightened risk that, if the application is granted, the post-consolidation Licensee will have the ability to unilaterally restrict output and raise prices. Amongst the factors that make such conduct more likely are: the two Licensees offer services that consumers view as close substitutes for each other; the cost of evaluating the services offered by rival firms is high; and the cost for rival firms to increase capacity is high.

9.4.3.2 Determination as to Whether the Proposed Assignment or Transfer Would Facilitate Co-ordinated Interaction Between Competing Licensees

IDA will consider the extent to which the structure of the relevant market creates a heightened risk that, if the proposed consolidation is permitted, competing Licensees will be likely to enter into, and maintain, anti-competitive agreements. Amongst the factors that make such conduct more likely are: the public availability of information regarding individual Licensee's price and production decisions; the existence of a low degree of product differentiation; the existence of market-wide marketing or pricing practices; the absence of "maverick" Licensees that tend to deviate from industry norms.

9.4.4 Likelihood of Timely and Sufficient Entry

IDA will next assess the likelihood that, were post-consolidation anti-competitive conduct to occur, existing Licensees would increase output, and new entities would enter the market, in a timely manner, in sufficient quantities to offset the anti-competitive conduct. In conducting this analysis, IDA will use the procedures set forth in Section 2.5.3 of this Code. IDA may approve an application for assignment or transfer of control of a licence in connection with a proposed consolidation that would otherwise be denied where timely and sufficient entry is likely.

9.4.5 Efficiencies

In a close case, in which a proposed consolidation may have some anti-competitive effect, IDA will approve an application for assignment or transfer of control of a licence in connection with a proposed consolidation if IDA concludes that the transaction will result in significant efficiencies, which could not have been achieved absent the consolidation.

9.4.6 Failing Undertakings

Finally, IDA will approve an application for assignment or transfer of control in connection with a proposed consolidation that would otherwise be found to be anti-competitive where one of the Licensees is a "failing undertaking" that, absent the merger, would be almost certain to exit the market (rather than consolidating with, or selling its assets to, another Licensee) within a short period of time.

9.5 Action by IDA

At the conclusion of its review, IDA will take one of the following actions:

9.5.1 Grant of the Application

IDA may grant the application in full. Where significant opposition to the application has been submitted to IDA, IDA will provide a written statement of the reasons why it did not find the opposing arguments to be persuasive.

9.5.2 Denial of the Application

IDA may deny the application. In this circumstance, IDA will provide a written statement of the reasons for its denial.

9.5.3 Grant of the Application, Subject to Conditions

IDA may grant the application, subject to conditions designed to reduce any anti-competitive harm from the consolidation. Where IDA imposes conditions, the Licensee filing the application will have 14 days to notify IDA as to whether it accepts the conditions or wishes to withdraw its application. Conditions that IDA may impose include:

9.5.3.1 Non-discrimination Requirements

As a condition of approval of an application to assign or transfer control of a licence, IDA may require the Licensee to provide access to facilities, information or services to other Licensees, other entities or end-users on a non-discriminatory basis. IDA may require the Licensee to contract for independent audits to confirm compliance or periodically to certify its compliance.

9.5.3.2 Accounting Separation

As a condition of approval of an application to assign or transfer control of a licence, IDA may require the Licensee to account separately for revenues from operations that are subject to effective competition and operations that are not subject to effective competition, and to comply with rules governing allocation of joint costs and transactions between affiliates, in order to deter cross-subsidisation. IDA may also require the Licensee to contract for independent audits to confirm compliance or periodically to certify its compliance.

9.5.3.3 Structural Separation

As a condition of approval of the application to assign or transfer control of the licence, IDA may require the Licensee to establish structurally separate affiliates – which may be required to have separate books of account, separate facilities, separate officers, separate personnel, separate credit lines, and/or other appropriate forms of separation.

9.5.3.4 Partial Divestiture

As a condition of approval of the application to assign or transfer control of the licence, IDA may require the Licensee to divest certain assets to a third party, in an arm's length transaction.

9.5.3.5 Other Pro-competitive Conditions

IDA may impose other conditions for approval of the application that are designed to increase competition. This includes conditions designed to increase entry into markets that are not yet fully competitive.

10. ENFORCEMENT OF THE COMPETITION CODE

10.1 Over-view

Whilst IDA intends to place maximum reliance on competitive market forces and industry self-regulation, IDA recognises the need for strong enforcement procedures that will detect and deter contravention of this Code. Enforcement actions can be brought by the IDA, either on its own motion or at the request of a private party.

10.2 Specific Regulatory Principles

In addition to the general principles set forth in Section 1 of this Code, IDA's enforcement procedures will be subject to the following specific regulatory principles:

10.2.1 Timeliness

Any enforcement action must be timely. IDA will not bring any enforcement action more than one year after the date of occurrence of the action that constitutes the alleged contravention of this Code. If the contravention cannot reasonably be perceived at the time it is committed, however, IDA will bring the action within one year of the date on which IDA knew that the conduct occurred.

10.2.2 Open and Reasoned Decision Making

IDA's obligation to conduct its administrative practices transparently is especially great when it acts in an adjudicatory capacity. IDA will provide adequate notice to any Licensee against whom an enforcement action is brought, and will provide the Licensee with a full and fair opportunity to respond to any adverse claims. All decisions will be based solely on controlling legal authority, the submissions of the parties and other publicly available information. Licensees will have an opportunity to seek review. IDA will publicly disclose any enforcement action taken against a Licensee.

10.2.3 Standard of Proof

IDA will not impose any sanction unless it has determined, based on the preponderance of the evidence, that the Licensee has failed to act in accordance with the requirements of this Code.

10.2.4 Proportionality

Whilst the enforcement process is designed to provide a significant deterrent to impermissible conduct, any sanction imposed by IDA will be proportionate to the severity of the contravention.

10.3 IDA Enforcement Actions

Where appropriate, IDA will initiate enforcement procedures against a Licensee that it believes has contravened this Code.

10.3.1 Procedures

IDA will use the following procedures:

10.3.1.1 Notification of Licensee

IDA will provide written notification to the Licensee. The notification will clearly indicate the specific provisions of this Code that IDA believes the Licensee has contravened, and will describe in reasonable detail the basis for the IDA's belief.

10.3.1.2 Opportunity to Respond

A Licensee will have 30 days to respond, in writing, to IDA's notification. The Licensee's response should provide a clear statement, supported by documents, affidavits, or other relevant material, providing the basis on which the Licensee disputes IDA's claim.

10.3.1.3 Request for Further Information

After reviewing the material submitted by the Licensee, IDA may request the Licensee to provide additional information. Such requests shall be limited to information necessary to resolve those issues that remain in dispute. IDA shall seek to issue a decision within 60 days of receiving all necessary confirmation.

10.3.2 Remedies

Pursuant to Section 8 of the Telecommunications Act of 1999, in the event that IDA concludes that the Licensee has acted impermissibly, the Authority may impose any of the following remedies:

10.3.2.1 Warnings

IDA can issue a warning to the Licensee. The warning will contain a statement of IDA's basis for concluding that the Licensee has acted in contravention of the Code, but will impose no further sanction. This remedy may be appropriate where a Licensee has no prior contravention, the

contravention was inadvertent, and/or the contravention had no serious adverse consequences.

10.3.2.2 Orders to Cease and Desist

Where appropriate, IDA will impose an order directing the Licensee to cease engaging in conduct that is, or if continued will, constitute a contravention of this Code.

10.3.2.3 Monetary Sanctions

IDA may impose monetary sanctions on any Licensee that contravenes the provisions of this Code. IDA reserves the right to impose penalties up to the statutory maximum of \$1,000,000 per contravention. Typically, however, IDA will attempt to carefully calibrate the amount of the penalty to reflect the severity of the offence. IDA will do so using the following procedures:

10.3.2.3.1 Base Penalties

The base penalty for any contravention of this Code is \$100,000. This amount will provide the starting point for IDA's calculation of any penalty.

10.3.2.3.2 Aggravating Factors

IDA next will consider any aggravating factors that justify imposition of a penalty in excess of the base penalty. IDA will consider the following factors: the severity of the contravention; the duration of the contravention; whether the contravention resulted in injury to persons and property; whether the Licensee acted knowingly, recklessly, or in a grossly negligent manner; whether the Licensee has a previous history of contraventions; whether the Licensee made any effort to conceal the contravention; and any other appropriate factors.

10.3.2.3.3 Mitigating Factors

IDA also will consider any mitigating factors that justify imposition of a penalty less than the base penalty. IDA will consider the following factors: whether the contravention was minor or technical; whether the Licensee took prompt action to correct the contravention; whether the contravention was accidental; whether this is the Licensee's first contravention; whether the Licensee is a small or medium-sized enterprise; and whether the Licensee voluntarily disclosed the contravention to IDA; and any other appropriate factors.

10.3.2.4 Suspension or Revocation of License

In extreme cases, IDA may temporarily suspend, unilaterally modify or permanently revoke a Licensee's licence.

10.4 Private Requests for Enforcement

Licensees or end-user that have been injured as a direct result of the contravention of any provision of this Code by a Licensee may file a request asking IDA to take enforcement actions.

10.4.1 Procedures

Any party that requests IDA to take enforcement action shall submit a written Request for Enforcement. The Request must cite the specific provisions of this Code that the Requesting Party alleges the Licensee has contravened and must provide factual allegations that, if proven to be true, would demonstrate a contravention. Each claim and each supporting factual allegation must be contained in a separate paragraph. Whenever possible, the Requesting Party should attach to the request copies of all relevant documents necessary to prove the factual allegations contained in the request. Where this is not possible, the Requesting Party shall provide a statement explaining why it could not provide the supporting documentation. The request will contain a sworn statement attesting to the fact that: the Requesting Party has used reasonable diligence in collecting the facts; the facts alleged are true to the best of the Requesting Party knowledge; and the Requesting Party has a good faith belief that, if proven, the factual allegations would constitute a contravention of the provisions of this Code cited in the request. The Requesting Party also shall state the specific enforcement action sought and the basis on which the Requesting Party believes that the extent of the proposed enforcement action is appropriate.

10.4.2 Remedies

If IDA concludes that the Licensee has contravened this Code, IDA will take enforcement action pursuant to Section 10.3.2 of this Code.

10.5 Request for Advisory Guidance

Any interested person may submit a request to IDA, in writing, asking for advisory guidance regarding any matter within the scope of this Code. Such guidance could include, for example, whether the taking (or the failure to take) a particular action would constitute a contravention of this Code.

10.5.1 Procedures

Persons seeking advisory guidance should provide a complete description of all relevant facts and a clear statement of the issues about which they request guidance. IDA will either provide a written response answering the question or a written notification that it declines to do so. Unless the party submitting the request specifically requests confidential treatment, IDA will treat all communications in connection with a request for advisory guidance as public documents.

10.5.2 Legal Effect of Guidance

If IDA chooses to provide guidance, it will make its best effort to provide concrete advice, based on the information provided, regarding the application of this Code in a particular situation. IDA's guidance, however, does not restrict the IDA's ability subsequently to take enforcement action against either the party that submitted the request or against other parties under comparable circumstances.