INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY OF SINGAPORE

TELECOMMUNICATION ACT

(CHAPTER 323)

ADVISORY GUIDELINES GOVERNING ABUSE OF DOMINANT POSITION, UNFAIR METHODS OF COMPETITION AND AGREEMENTS INVOLVING LICENSEES THAT UNREASONABLY RESTRICT COMPETITION

UNDER SECTIONS 8 AND 9 OF THE CODE OF PRACTICE FOR COMPETITION IN THE PROVISION OF TELECOMMUNICATION SERVICES 2012

DATE OF ISSUE: [.]

ADVISORY GUIDELINES GOVERNING ABUSE OF DOMINANT POSITION,

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The Info-communications Development Authority of Singapore ("**IDA**"), pursuant to Section 28 of the Telecommunication Act (Cap. 323) ("**Act**"), hereby issues these Advisory Guidelines Governing Abuse of Dominant Position, Unfair Methods of Competition and Agreements Involving Licensees that Unreasonably Restrict Competition under Sections 8 and 9 of the Code of Practice for Competition in the Provision of Telecommunication Services 2012 ("**Code**").

1. INTRODUCTION

1.1 Scope of These Guidelines

(a) These Guidelines set out the framework that IDA will use to determine whether a Licensee has contravened any of the prohibitions contained in Sections 8 and 9 of the Code.

(b) Sections 8 and 9 of the Code prohibit:

(i) a Dominant Licensee from abusing its dominant position (Sub-section 8.2 of the Code);

(ii) a Licensee from accepting anti-competitive preferences (Sub-section 8.3 of the Code);

(iii) a Licensee from engaging in unfair methods of competition (Sub-section 8.4 of the Code); and

(iv) a Licensee from entering into agreements that unreasonably restrict, or are likely to unreasonably restrict, competition (Section 9 of the Code).

1.2 Guidelines are Advisory

The provisions in these Guidelines are advisory. They do not impose any binding legal obligation on IDA. Neither do they seek to provide definitive answers as to whether any particular conduct may fall within the prohibitions contained in Sections 8 and 9 of the Code. Rather, these Guidelines are intended to describe the procedures that IDA will generally use, and the standards that IDA will generally apply, in implementing those provisions. While these Guidelines are not legally binding, IDA will not depart from them

without good cause. In order to provide a single document addressing all issues relevant to the implementation of these provisions, certain sections of the Code have been summarised or repeated in these Guidelines. In the event of any conflict between the Code and these Guidelines, the provisions of the Code will prevail.

1.3 Rule of Construction

Capitalised terms used in these Guidelines have the same meaning as in the Code.

1.4 Effective Date of these Guidelines

These Guidelines will take effect on the date of issue of these Guidelines.

1.5 Short Title

These Guidelines may be referred to as the "Telecom Competition Guidelines".

2. OVERVIEW

2.1 Relationship of Competition Rules to *Ex Ante* Regulation

While Sections 3 through 7 of the Code impose *ex ante* regulatory obligations on Licensees, Sections 8 and 9 of the Code provide a basis for IDA to take enforcement action if a Licensee has engaged in conduct that unreasonably restricts, or is likely to unreasonably restrict, competition (*ex post* enforcement). As competition develops, IDA anticipates that it will be able to reduce the level of *ex ante* regulation, and place greater reliance on *ex post* enforcement.

2.2 Flexible Implementation

In order to determine whether any particular conduct contravenes these prohibitions, IDA will consider the specific facts of each case. In making such a determination, IDA will implement Sections 8 and 9 of the Code flexibly, especially when it addresses complex and novel issues. In all cases, IDA will seek to ensure that Licensees do not engage in conduct that unreasonably restricts, or is likely to unreasonably restrict, competition. At the same time, however, IDA will strive to ensure that it applies these provisions in a manner that does not deter the vigorous competition that the Code is intended to foster – even if such competition may sometimes have an adverse impact on an individual Licensee.

2.3 Burden and Standard of Proof

In any enforcement action taken under Section 11 of the Code for alleged contraventions of Sections 8 and 9 of the Code, IDA will apply the "balance of probabilities" standard. Thus, in order for IDA to find that a contravention of Section 8 or 9 has occurred and to take enforcement measures, IDA must conclude, based on the totality of the evidence, that it is more likely than not that the Licensee has engaged in conduct that constitutes a contravention of Sections 8 and 9 of the Code.

2.4 Relevance of Practices by Competition Authorities and Other Sectoral Regulators

Sections 8 and 9 of the Code are grounded in well-established principles of competition law, and are consistent with "best practices" in other jurisdictions. Therefore, in applying these provisions, where IDA considers appropriate, IDA may have regard to practices in other jurisdictions, as well as practices of the Competition Commission of Singapore. However, IDA may adopt standards or methodologies that are designed to address any local or unique conditions of Singapore's telecommunication market.

2.5 The "Unreasonably Restricts Competition" Standard

Sections 8 and 9 of the Code prohibit Licensees from engaging in conduct that unreasonably restricts, or is likely to unreasonably restrict, competition in any telecommunication market in Singapore.

(a) There is no single "test" for assessing whether a Licensee has engaged in conduct that has, or is likely to, unreasonably restrict competition. Rather, the specific approaches that IDA will use to apply the "unreasonably restricts competition" standard to different types of conduct are described in Paragraphs 3 and 4 of these Guidelines. Generally, however, IDA will conduct a fact-specific assessment of the Licensee's conduct and the structure of the relevant market.

(b) Not every action that restricts competition constitutes an unreasonable restriction. For example, conduct that has a minimal or insignificant impact on competition generally does not contravene the Code. Similarly, conduct which may be objectively justified; and agreements that have the potential to restrict competition in a market but from which the resulting efficiencies outweigh the anti-competitive effects, will not be prohibited. For example, an agreement between a manufacturer and two of its distributors, which allocates geographical territory between the distributors, may limit "intra-brand" competition, but may benefit End Users by facilitating "inter-brand" competition between the Licensee's service and the service provided by a

competing Licensee. Similarly, in assessing cases of alleged abuse of dominance, IDA may consider if the Licensee with Significant Market Power is able to objectively justify its conduct. For example, a refusal to supply a service may be justified by poor creditworthiness of the Customer. IDA may also consider if the Licensee is able to demonstrate any benefits arising from its conduct. However, the Licensee must show that it has behaved in a proportionate manner in defending its legitimate commercial interest.

(c) IDA does not need to wait until a Licensee's conduct has caused actual competitive injury. Rather, IDA can take enforcement action if it determines that a Licensee has engaged in conduct that is likely to unreasonably restrict competition.

(d) In seeking to determine whether a Licensee's conduct contravenes Sections 8 or 9 of the Code, IDA generally will focus on the actual or likely competitive effects of a Licensee's actions, rather than the Licensee's subjective intent (i.e., what the Licensee hoped to accomplish). Most market participants want to increase their market share at the expense of their rivals. So long as a Licensee seeks to do so by meeting End Users' needs more efficiently and effectively than its rivals, its subjective intent does not contravene the Code. IDA will only consider evidence regarding a Licensee's subjective intent to the extent that it assists IDA in assessing the likely effect of the Licensee's conduct. For example, if the evidence indicates that a Licensee undertook an action in order to force a competing Licensee from the market, IDA might consider this evidence as relevant to its assessment of the likely competitive effect of the Licensee's action. However, the mere fact that the Licensee intended to force the competing Licensee from the market would not, in itself, provide a basis on which to find that the Licensee had contravened the Code.

(e) The "unreasonably restricts competition" standard differs from the standard used in Section 10 of the Code, which provides that IDA will only reject a Consolidation Application if IDA concludes that it is "likely to substantially lessen competition." IDA believes that it generally should have to satisfy a "higher" standard before rejecting a Consolidation Application. In assessing the likely competitive impact of a proposed Consolidation, IDA necessarily will have to make a predictive judgment. Because most Consolidations are either competitively neutral or pro-competitive, IDA will not reject a Consolidation Application unless the evidence demonstrates that it is likely to substantially lessen competition.

3. UNILATERAL CONDUCT: ABUSE OF DOMINANT POSITION, RECEIPT OF ANTI-COMPETITIVE PREFERENCES AND UNFAIR METHODS OF COMPETITION (SECTION 8 OF THE CODE)

3.1 Introduction

Generally, once a Licensee has complied with the obligations contained in its licence and in the Code, it is free to act independently. However, Section 8 of the Code prohibits a Licensee from acting in a manner that impedes competition and sets out examples of unilateral conduct (i.e., conduct that the Licensee engages in independently) that would generally be considered to contravene the Code:

(a) action by a Licensee that has Significant Market Power in any telecommunication market in Singapore that unreasonably restricts, or is likely to unreasonably restrict, competition (Sub-section 8.2 of the Code);

(b) the receipt of an anti-competitive preference by a Licensee that is affiliated with an entity that has Significant Market Power (Sub-section 8.3 of the Code); and

(c) action by a Licensee that constitutes an unfair method of competition (Sub-section 8.4 of the Code).

3.2 Abuse of Dominant Position in the Singapore Market (Sub-section 8.2 of the Code)

(a) A Licensee that has Significant Market Power in any telecommunication market in Singapore must not engage in unilateral conduct that unreasonably restricts, or is likely to unreasonably restrict, competition. Such conduct is referred to as an abuse of dominant position in any telecommunication market in Singapore.

(b) Specifically, Sub-section 8.2 of the Code contains a general prohibition against the abuse of a dominant position by a Licensee that has Significant Market Power in any telecommunication market in Singapore. Thus, Sub-section 8.2 provides a basis for IDA to undertake enforcement action in any case in which it determines that a Licensee that has Significant Market Power has engaged in a type of conduct – including the specific practices addressed in Sub-sections 8.2.1 through 8.2.2 of the Code – that constitutes an abuse of dominant position.

(c) In assessing whether a Licensee has Significant Market Power in a telecommunication market in Singapore, IDA will generally first determine the relevant service, geographic and functional markets (i.e.,

relevant market(s)) within which the Licensee provides its service or equipment. Thereafter IDA will conduct a competitiveness assessment, including assessing the level of existing competition, the extent of barriers to entry, the existence of supply substitutability and countervailing buyer power. See paragraphs 2.4.1 and 2.4.2 of IDA's Reclassification and Exemption Guidelines.

(d) IDA will find that a Licensee that has Significant Market Power has contravened the general prohibition against abusing its dominant position where IDA determines that:

(i) the Licensee has Significant Market Power in the telecommunication market in which the alleged abuse occurred; and

(ii) the Licensee has unilaterally used its Significant Market Power in a manner that has unreasonably restricted, or is likely to unreasonably restrict, competition in any telecommunication market in Singapore.

(e) IDA will presume that a Licensee that has been classified as a Dominant Licensee under Section 2 of the Code has Significant Market Power in every telecommunication market in which it provides telecommunication service pursuant to its licence subject to the exceptions set out in (f) below.

(f) The Dominant Licensee may rebut this presumption for a specific telecommunication market by:

(i) showing that, prior to the time at which the alleged abuse occurred, IDA had granted it an exemption from all Dominant Licensee obligations prescribed in Section 4 of the Code in the market in which the alleged abuse occurred; or

(ii) demonstrating – using the methodology and principles specified in Paragraphs 2.4.1 and 2.4.2 of IDA's Reclassification and Exemption Guidelines – that, at the time the alleged abuse occurred, it no longer had Significant Market Power in the market in which the alleged abuse occurred.

The Dominant Licensee bears the burden of demonstrating that it did not have Significant Market Power in the telecommunication market in which the alleged abuse occurred.

(g) In relation to the specific telecommunication market(s) where a Licensee has previously been exempted from all Dominant Licensee obligations prescribed in Section 4 of the Code, the Licensee will still

be subject to Sub-section 8.2 of the Code should it be found to have Significant Market Power in that market(s) subsequently. In such a case, the IDA may re-classify the Licensee as a Dominant Licensee pursuant to Section 2 of the Code following an enforcement action under Sub-section 8.2.

(h) If, after IDA initiates an enforcement proceeding alleging that a Licensee with Significant Market Power has abused its dominant position in a telecommunication market, the Licensee provides credible evidence that it did not have Significant Market Power in that market at the time of the alleged abuse, IDA may:

(i) dismiss the enforcement proceeding, if it finds the Licensee has conclusively demonstrated that it did not have Significant Market Power in that market;

(ii) seek additional relevant information from the Licensee and/or other market participants; and/or

(iii) conduct a public consultation, particularly in instances where complex and novel issues are raised.(i) IDA will find that a Licensee's unilateral use of its Significant Market Power has unreasonably restricted competition, or is likely to unreasonably restrict competition, in a Singapore telecommunication market where the Licensee has engaged in conduct that has, or is likely to:

(i) significantly restrict output below the competitive level, increase prices above cost, reduce quality below the level that End Users seek, reduce End Users' choice or deter innovation; or

(ii) preserve or enhance its dominant position by engaging in conduct that deters or restricts efficient companies from participating in the market by means unrelated to competitive merits.

3.2.1 Pricing Abuses (Sub-section 8.2.1 of the Code)

Sub-section 8.2.1 of the Code discusses three types of pricing abuses as examples – predatory pricing, price squeezes and cross-subsidisation – that constitute abuses of a dominant position. IDA will assess allegations that a Licensee with Significant Market Power has engaged in any of such practices using the specific standards described below.

It should be noted that, even if IDA has allowed a tariff to go into effect under Sub-section 4.4 of the Code, IDA may subsequently determine that the Dominant Licensee has priced its services in a manner that constitutes an abuse of its dominant position.

3.2.1.1 Predatory Pricing (Sub-section 8.2.1.1 of the Code)

(a) Licensees – including Licensees with Significant Market Power – are expected to engage in vigorous price competition. Such competition plainly benefits End Users. There are many potentially pro-competitive and efficiency-enhancing motivations for lowering prices. For example, a Licensee may reduce price as a result of excess supply, decreased demand, increased competition, or as part of a short-term promotion designed to increase its market share. In some cases, this may drive less efficient participants from the market. However, a Licensee with Significant Market Power must not sell its services or equipment below its cost for a sustained period in order to drive efficient rivals from the market, so that it can charge prices that are well above its cost following the exit of one or more of its rivals. Such conduct, which is often referred to as predatory pricing, does not benefit End Users in the long-term. While IDA will seek to ensure that it does not inadvertently deny End Users the benefit of low prices that result from vigorous price competition, IDA will not permit a Licensee with Significant Market Power to engage in predatory pricing.

(b) IDA will find that a Licensee with Significant Market Power has engaged in predatory pricing and, therefore, has unreasonably restricted competition, or is likely to unreasonably restrict competition, in the Singapore telecommunication market by abusing its dominant position, if the evidence demonstrates that:

(i) the Licensee is selling a service or equipment at a price that is less than the average incremental cost of the service or equipment;

(ii) the Licensee's sales at prices below average incremental cost have driven, or are likely to drive, efficient rivals from the market or deter future efficient rivals from entering the market; and

(ii) entry barriers are so significant that, after driving rivals from the market or deterring entry, the Licensee could impose an increase in prices sufficient (in amount and duration) to enable the Licensee to recoup the full amount of the loss that it incurred during the period of price cutting.

(c) In seeking to determine whether a Licensee with Significant Market Power is selling its service or equipment at less than average incremental cost, IDA will determine the average cost that the Licensee with Significant Market Power would have avoided if it had not produced the allegedly predatory increment of sales over the period during which the sales occurred. For the purpose of identifying

predatory pricing, the relevant increment is defined as the additional volume of service or equipment produced by that Licensee over the period during which it is alleged to have engaged in predatory pricing. For example, if predatory pricing is alleged to have occurred over a 6-month period, then the average incremental cost is the cost incurred by the Licensee with Significant Market Power in producing the incremental level of service or equipment over that 6-month period divided by the volume of service or equipment. The average incremental cost standard (which is also referred to as the avoidable cost standard) is a short-run measure, and differs from two other standards that are sometimes used in other jurisdictions: Average Variable Cost ("**AVC**") and Long Run Incremental Cost ("**LRIC**").

(i) Under the AVC standard, the Licensee's "cost" includes only those costs that vary with output. Because telecommunication operators typically have significant common costs, which are fixed over a large range and volume of services or equipment, IDA believes that AVC sets too low a cost "floor," thereby allowing anti-competitive price cutting in certain cases.

(ii) Under the LRIC standard, the Licensee's "costs" include the long run forward looking cost of the Licensee's networks assets. IDA believes that the use of the LRIC standard would be too restrictive and, therefore, could deter efficient price cutting in certain cases. There are a number of situations in which pricing below LRIC can be efficient. For example, when a Licensee is seeking to enter a new market, or has significant excess network capacity, sales below LRIC (but above average incremental cost) are appropriate in order to stimulate demand.

IDA believes that use of the average incremental cost standard will ensure that IDA's implementation of the predatory pricing prohibition will prohibit anti-competitive conduct, while allowing competitive price cutting.

(d) In seeking to determine whether the pricing of a Licensee with Significant Market Power is likely to drive efficient rivals out of the market or deter future efficient rivals from entering the market, IDA will consider all relevant factors, including:

(i) the duration of the sales of the Licensee with Significant Market Power at prices below its average incremental cost;

(ii) the ability of other Licensees to provide service or equipment at an average incremental cost that is comparable to that of the Licensee with Significant Market Power; and

(iii) the effect of any comparable prior price cutting in the market.

(e) In seeking to determine whether entry barriers are significant, IDA will consider the history of entry into the relevant market and the extent to which market conditions are likely to impede the entry (or re-entry) of competitors. IDA will have regard to all relevant factors including:

(i) technical barriers (such as the need to use specialised or proprietary technology);

(ii) access barriers (such as the need to obtain access to another entity's infrastructure in order to provide service or equipment, and any difficulty in doing so, or significant economies of scale and scope);

(iii) financial barriers (such as the need to incur significant "sunk costs" in order to enter the market);

(iv) commercial barriers (such as high advertising and retail distribution costs or high consumer switching costs); and

(v) regulatory barriers (such as limitations on the number of licences or on the entities eligible to provide a service or equipment).

A further discussion of IDA's assessment of barriers to entry is set forth in Appendix 1.

3.2.1.2 Price Squeezes (Sub-section 8.2.1.2 of the Code)

(a) A Licensee with Significant Market Power will often control facilities, and provide services or equipment, that are required inputs into "downstream" services or products that it (or its Affiliate) provides to End Users. In many cases, other Licensees have no practical alternative to accessing the facilities, services or equipment of the Licensee with Significant Market Power in order to provide a competing downstream service or product to their End Users. If a Licensee has Significant Market Power in the market for the input service, equipment or facility, it could unreasonably restrict competition by charging a price well in excess of its cost for the input such that competing downstream Licensees that are equally efficient would not be able to make a commercially reasonable profit, thereby impeding the downstream Licensees' ability to compete.

(b) IDA will find that a Licensee with Significant Market Power has engaged in a price squeeze and, therefore, has unreasonably

restricted competition in the Singapore telecommunication market by abusing its dominant position, if the evidence demonstrates that:

(i) the Licensee has Significant Market Power in providing a service, equipment or facility that is required for a downstream Licensee to provide a service or product; and

(ii) the price that the Licensee with Significant Market Power charges for the service, equipment or facility is so high that its downstream business or Affiliate could not profitably sell its service or product if it were required to recover the full purchase price of the input through its charges to its Customers.

(c) IDA will find that a service, equipment or facility is required to provide a downstream service when, as a practical matter, Licensees could not participate in a downstream telecommunication market without access to the service, equipment or facility and cannot obtain access to a service, equipment or facility that is a reasonable substitute for the services, equipment or facilities of the Licensee with Significant Market Power. In making this determination, IDA will consider the ability of Licensees to:

(i) self-provision comparable services, equipment or facilities at a cost that would enable an efficient Licensee to provide a competitive service or equipment; or

(ii) obtain comparable services, equipment or facilities from providers other than the Licensee with Significant Market Power on prices, terms and conditions that would enable it to provide a competitive service or equipment.

(d) IDA will conclude that a service, equipment or facility performs the same (or comparable) function, regardless of the technology used, as the service, equipment or facility of a Licensee with Significant Market Power if a Customer would view the service, equipment or facility as a reasonable substitute, given both price and non-price factors.

(e) IDA generally will assess whether the input price imposed by a Licensee with Significant Market Power is so high that its downstream business or Affiliate could not profitably sell its service or product by using one of the following methodologies:

(i) IDA may impute to the downstream business of the Licensee with Significant Market Power or Affiliate the price that the Licensee with Significant Market Power charges downstream competitors for the input, to determine if such downstream business or Affiliate is able to make a commercially reasonable

profit if it were required to recover the full purchase price of the input through its charges to its Customers; or

(ii) IDA may assess whether the price that the Licensee with Significant Market Power charges downstream competitors for the input allows an equally efficient non-affiliated service provider in the downstream market to obtain a commercially reasonable profit for such activity.

(f) IDA will not find that a price squeeze has occurred based solely on evidence that the downstream business or Affiliate of a Licensee with Significant Market Power has sold a service or product at a price that results in it realising a profit that is below competitive levels, provided that the price is not predatory. So long as the price that the Licensee with Significant Market Power charges for the input product is not significantly above cost, the Licensee and its Affiliates, like all Licensees, are free to accept a low rate of profit in the retail market.

3.2.1.3 Cross-subsidisation (Sub-section 8.2.1.3 of the Code)

(a) A Licensee with Significant Market Power can use the profit that it receives from facilities, services or equipment that it provides in markets in which it has Significant Market Power to reduce the prices of facilities, services or equipment that it provides in markets that are subject to a greater degree of competition. Such conduct, which is referred to as cross-subsidisation, can have several distinct effects:

(i) cross-subsidisation plainly harms End Users who purchase the facility, service or equipment that is not subject to effective competition because they are required to pay higher prices to enable cross-subsidisation by the Licensee with Significant Market Power;

(ii) cross-subsidisation also harms Licensees that compete against the Licensee with Significant Market Power in the market for the facility, service or equipment that is subject to greater competition because they often cannot profitably reduce prices to the level charged by the same Licensee; and

(iii) where the pricing of the Licensee with Significant Market Power in the market that is subject to greater competition constitutes predatory pricing, cross-subsidisation also unreasonably restricts competition in the market for the facility, service or equipment that is subject to greater competition.

(b) IDA will find that a Licensee with Significant Market Power has engaged in cross-subsidisation and, therefore, has abused its dominant position, where the evidence demonstrates that it:

(i) has used revenues from the provision of a facilities, service or equipment that is not subject to effective competition to cross-subsidise the price of any facility, service or equipment that is subject to a greater degree of competition; and

(ii) its conduct has unreasonably restricted, or is likely to unreasonably restrict, competition in any telecommunication market in Singapore.

(c) IDA may conduct cost allocation studies in order to determine whether cross-subsidisation has occurred. IDA will find that cross-subsidisation has occurred where:

(i) the Licensee with Significant Market Power offers multiple facilities, services or equipment, some of which are not subject to effective competition, that use common facilities or have other common costs; and

(ii) it has improperly allocated costs to, or used revenues from, those facilities, services or equipment that are not subject to effective competition.

(d) IDA will find that the conduct of a Licensee with Significant Market Power has unreasonably restricted, or is likely to unreasonably restrict, competition where:

(i) it is selling the facility, service or equipment that is subject to competition at a price that is less than the average incremental cost of the service;

(ii) its sales of the facility, service or equipment at prices below average incremental cost are likely to drive efficient rivals from the market or deter future efficient rivals from entering the market; and

(iii) entry barriers are so significant that, after driving rivals from the market or deterring entry, it could impose an increase in the price of the facility, service or equipment sufficient (in amount and duration) to enable the recoupment of the full amount of the loss that it incurred during the period of price cutting.

3.2.2 Other Abuses (Sub-section 8.2.2 of the Code)

Sub-section 8.2.2 of the Code specifically addresses two other types of unilateral conduct by a Licensee with Significant Market Power that can unreasonably restrict competition in the Singapore telecommunication market and, therefore, constitute an abuse of a dominant position. IDA will assess allegations that a Licensee with Significant Market Power engaged in any of such practices using the specific standards described below.

3.2.2.1 Discrimination (Sub-section 8.2.2.1 of the Code)

(a) A Licensee with Significant Market Power may control inputs that, as a practical matter, other Licensees must use in order to provide "downstream" services or equipment. These inputs include infrastructure, systems, services, equipment or information. A Licensee with Significant Market Power can unreasonably restrict competition in the downstream market by providing access to these inputs to its downstream Affiliate on discriminatory prices, terms and conditions.

(b) IDA will find that a Licensee with Significant Market Power has engaged in discrimination that has unreasonably restricted competition, or is likely to unreasonably restrict competition, in the Singapore telecommunication market by abusing its dominant position, if the evidence demonstrates that:

(i) it has provided its Affiliate with access to infrastructure, systems, services, equipment or information;

(ii) access to the its infrastructure, systems, services, equipment or information is necessary to enable a non-affiliated Licensee to provide telecommunication services; and

(iii) it provided its Affiliate with access to the infrastructure, systems, services, equipment or information, on prices, terms or conditions that are more favourable than the prices, terms and conditions provided to Licensees that are not Affiliates without any objective justification, such as a verifiable difference in the cost of providing access, variations in the quantity or quality of service or equipment provided or variations in the duration of the service or product agreement period,

which will or is likely to restrict or impede other Licensees' ability to compete.

(c) In determining whether access to infrastructure, systems, services, equipment or information is necessary, IDA will consider the ability of an efficient Licensee to:

(i) self-provision comparable infrastructure, systems, services, equipment or information at a cost that would enable it to provide a competitive telecommunication service; and

(ii) obtain comparable infrastructure, systems, services, equipment or information from providers other than the Licensee with Significant Market Power on prices, terms and conditions that would enable it to provide a competitive telecommunication service.

(d) The refusal by a Licensee with Significant Market Power to provide a non-affiliated Licensee with access to infrastructure, systems, services, equipment or information that is necessary to enable the non-affiliated Licensee to provide services or equipment on any terms, when the Licensee with Significant Market Power provides access to such infrastructure, systems, services, equipment or information to any Affiliate, but has no objective and reasonable justification for refusing to do so, also constitutes discrimination.

3.2.2.2 Predatory Network Alteration (Sub-section 8.2.2.2 of the Code)

(a) Licensees will often need to physically and logically interconnect their networks with the network of a Licensee with Significant Market Power. While a Licensee with Significant Market Power may often have a legitimate reason for altering its network interfaces, it could unreasonably restrict competition by altering its network interface in a manner which has the primary effect of imposing costs on other Licensees and/or impeding other Licensees' ability to interconnect and interoperate. This is commonly referred to as predatory network alteration.

(b) IDA will find that a Licensee with Significant Market Power has engaged in predatory network alteration and, therefore, has unreasonably restricted competition, or is likely to unreasonably restrict competition, in the Singapore telecommunication market, by abusing its dominant position, if the evidence demonstrates that it:

(i) has altered the physical or logical interfaces of its network in a manner that imposes significant costs on any interconnected Licensee; and

(ii) has no legitimate business, operational or technical justification for doing so.

(c) IDA will find that a Licensee with Significant Market Power has no legitimate business, operational or technical reason for altering its network interface when:

(i) the alteration was not a commercially reasonable means for it to reduce its costs, offer a new service, improve service quality or otherwise benefit its End Users; and

(ii) the adverse impact of its actions on interconnected Licensees was grossly disproportionate to the benefit to itself and its End Users.

3.2.3 Other Types of Conduct That May Constitute an Abuse of Dominant Position

Additional unilateral actions by a Licensee with Significant Market Power, not specifically listed in Section 8 of the Code, that may raise competitive or policy concerns include:

(a) *Refusal to supply*. A Licensee generally is not required to deal with its competitors. Indeed, allowing a Licensee to decline to offer a service or equipment to a competitor may often be necessary to provide it with incentives to offer new services or equipment.

However, in some circumstances, the refusal to supply a service or equipment by a Licensee with Significant Market Power to a competing Licensee may constitute an abuse of dominant position. This may occur, for example, where a Dominant Licensee controls an input that is required to provide a competing service or equipment and the competing Licensees have no feasible alternatives (for example, where duplication is impossible or extremely difficult owing to physical, geographic, economic or legal constraints) to obtaining the service from the Dominant Licensee. A refusal to supply in this case will constitute an abuse of dominant position if there is evidence of (likely) substantial harm to competition and there is no objective justification for the behaviour of the Licensee with Significant Market Power.

The Code, also, contains provisions that require a Dominant Licensee to provide its competitors with access to telecommunication facilities, services or equipment in certain circumstances. Specifically, under Sub-sections 6.3.2(a) and 6.3.2(c) of the Code, a Dominant Licensee must provide specific Interconnection Related Services, pursuant to its Reference Interconnection Offer and Mandatory Wholesale Services designated by IDA.

(b) *Anti-competitive discounts*. Discounts are a legitimate form of price competition and are generally encouraged. In many cases, discounts reflect objective cost savings resulting from lower input costs, greater efficiencies or other savings arising from the size or duration of a Customer’s commitment.

In some circumstances, a discount by a Licensee with Significant Market Power may constitute an abuse of a dominant position. Typically, this will occur where it offers a significant discount, not justified by any objective factor, which has the effect of foreclosing competing Licensees from a significant portion of the market. Certain types of discounts offered by a Licensee with Significant Market Power that may raise competitive concerns include:

(i) loyalty discounts, in which it offers a discount on the condition that the Customer not purchase services or equipment from competing Licensees;

(ii) volume discounts that are based on a Customer's total expenditure, but that are applied only to charges for services or equipment that are subject to effective competition; and

(iii) discounts that are available only to Customers that have the greatest ability to switch to alternate suppliers.

The permissibility of any discount will depend on the specific facts, especially the extent to which they result in significant market foreclosure.

In addition, Section 4 of the Code contains several provisions, including the prohibition on discrimination,that a Dominant Licensee will have to comply with in providing discounts.

(c) *Tying*. Licensees may provide Customers with the option of purchasing separate services and equipment in a single package. Such packages, which may be offered at a reasonable discount, often benefit Customers.

However, a Licensee with Significant Market Power may abuse its dominant position where it requires a Customer that purchases a service (usually one that is not subject to effective competition) to purchase other services or equipment, especially if those services or equipment are subject to a greater degree of competition. Such requirements, even if offered as an option, may foreclose competition in a significant portion of an otherwise competitive market.

In addition, sub-section 4.2.1.3 of the Code provides that a Dominant Licensee must not require a Customer to purchase any other service or equipment as a condition for purchasing a specific service or equipment.

3.3 Anti-competitive Preferences (Sub-section 8.3 of the Code)

A Licensee may have Significant Market Power in a non-telecommunication market. A Licensee may also have an Affiliate that has Significant Market Power (whether in the provision of a telecommunication service or equipment or a non-telecommunication service). For example, a Licensee may be owned by a foreign parent company that enjoys monopoly rights in its home market. The Affiliate may seek to assist the Licensee by using its market position to provide the Licensee with an anti-competitive preference that enables the Licensee to unreasonably restrict competition in a telecommunication market in Singapore. For example, an Affiliate with Significant Market Power in Country X may charge the Licensee a lower rate for terminating international traffic in Country X, thereby preventing other Licensees from providing a competitively priced telecommunication service on the route between Singapore and Country X.

3.3.1 General Prohibition (Sub-section 8.3(a) of the Code)

(a) Sub-section 8.3(a) of the Code contains a general prohibition against a Licensee using the Significant Market Power of an Affiliate, or its Significant Market Power in a non-telecommunication market, to unreasonably restrict competition in the Singapore telecommunication market. Thus, Sub-section 8.3(a) provides a basis for IDA to undertake enforcement action in any case in which it determines that a Licensee has engaged in a type of conduct – other than the specific practices addressed in Sub-section 8.3(b) of the Code – that constitutes receipt of an anti-competitive preference.

(b) IDA will find that a Licensee has contravened the general prohibition against using the Significant Market Power of an Affiliate, or of itself in a non-telecommunication market, to unreasonably restrict competition in the Singapore telecommunication market if the evidence demonstrates that:

(i) the Licensee has an Affiliate that has Significant Market Power in any telecommunication or a non-telecommunication market; or

(ii) the Licensee has Significant Market Power in a non-telecommunication market; and

(iii) the Licensee has accepted an anti-competitive preference from the Affiliate, or has used its market position in the non-telecommunication market in a manner that has enabled, or is likely to enable, the Licensee to unreasonably restrict competition in any telecommunication market in Singapore.

(c) Entities with Significant Market Power may include:

(i) Licensees;

(ii) Non-licensed entities within Singapore; and

(iii) Non-licensed entities located outside Singapore.

(d) IDA will use the following approach to determine if an entity has Significant Market Power:

(i) if the entity is a Licensee, IDA will use the methodology specified in Paragraphs 2.4.1 and 2.4.2 of IDA's Reclassification and Exemption Guidelines; or

(ii) if the entity is not a Licensee, IDA will use the best available information. In appropriate cases, IDA may rely on the determination by a competition authority or another sectoral regulator that the entity has Significant Market Power.

(e) IDA will find that a Licensee has accepted an anti-competitive preference that has unreasonably restricted, or is likely to unreasonably restrict, competition in any Singapore telecommunication market if the Licensee has benefited from any action by an Affiliate, or by its non-telecommunication business to:

(i) significantly restrict output below the competitive level, increase prices above cost, reduce quality below the level that End Users seek, reduce End Users' choice or deter innovation; or

(ii) deter or restrict efficient companies from participating in the market by means unrelated to competitive merits.

3.3.2 Specific Practices (Sub-section 8.3(b) of the Code)

Sub-section 8.3(b) of the Code prohibits a Licensee from accepting specific types of discriminatory preferences from an Affiliate that has Significant Market Power. IDA will assess allegations that a Licensee has accepted such a preference using the specific standards described below.

3.3.3 Price Squeeze (Sub-section 8.3(b)(i) of the Code)

(a) A Licensee that has an Affiliate with Significant Market Power must not benefit from conduct by the Affiliate that constitutes a price squeeze.

(b) IDA will find that a Licensee has contravened the Code by benefiting from a price squeeze when the evidence demonstrates that:

(i) the Licensee has an Affiliate that has Significant Market Power in the market for an input that is required for Licensees to provide a service or equipment;

(ii) the Licensee used the input to provide its service or equipment; and

(iii) the Licensee obtained the input from the Affiliate at a price that is so high that equally efficient competing non–affiliated Licensees could not profitably sell their end–product or service if they were required to purchase the input at the same price as the Licensee.

(c) IDA will determine whether an input is required using the methodology specified in Paragraphs 3.2.1.2(c) and (d) of these Guidelines.

(d) IDA will determine whether the price of the input is so high that equally efficient competing non–affiliated Licensees could not profitably sell their end–product or service if they were required to purchase the input at the same price as the Licensee using one of the following methodologies:

(i) IDA may impute to the Licensee the price that the Affiliate charges downstream competitors for the input, to determine if the Licensee is able to make a commercially reasonable profit if it were required to recover the full purchase price of the input through its charges to its Customers; or

(ii) IDA may assess whether the price that the Affiliate charges downstream competitors for the input allows an equally efficient non-affiliated service provider in the downstream market to obtain a commercially reasonable profit for such activity.

(e) IDA will not find that a price squeeze has occurred based solely on evidence that the Licensee has sold a service or equipment at a price that results in it realising a profit that is below competitive levels, provided that the price is not predatory. So long as the price that the Affiliate charges for the input service or product is not significantly above cost, the Licensee is free to accept a low rate of profit in the retail market.

3.3.4 Cross-subsidisation (Sub-section 8.3(b)(ii) of the Code)

(a) A Licensee that has an Affiliate that has Significant Market Power must not benefit from conduct by the Affiliate that constitutes anti-competitive cross-subsidisation.

(b) IDA will find that a Licensee has contravened the Code by benefiting from anti-competitive cross-subsidisation when the evidence demonstrates that:

(i) the Licensee has an Affiliate that has Significant Market Power in any market;

(ii) the Licensee accepted a subsidy from the Affiliate; and

(iii) the subsidy enabled the Licensee to provide a service or equipment at a price that has unreasonably restricted, or is likely to unreasonably restrict, competition in any telecommunication market in Singapore.

(c) The following is a non-exhaustive list where IDA will conclude that a Licensee has accepted a subsidy whereby the Licensee:

(i) received revenue from the Affiliate;

(ii) accepted any products or services from the Affiliate at less than market value; or

(iii) did not assume a reasonable share of any common cost incurred by the Affiliate and the Licensee.

(d) IDA will find that the Licensee's receipt of a cross-subsidy has unreasonably restricted, or is likely to unreasonably restrict, competition in any telecommunication market in Singapore where:

(i) the Licensee is selling the service or equipment at a price that is less than the average incremental cost of the service;

(ii) the Licensee's sales of the service or equipment at prices below average incremental cost are likely to drive efficient rivals from the market or deter future efficient rivals from entering the market; and

(iii) entry barriers are so significant that, after driving rivals from the market or deterring entry, the Licensee could impose an increase in the price of the service or equipment sufficient (in amount and duration) to enable the Licensee to recoup the full amount of the loss that it incurred during the period of price cutting.

3.3.5 Discrimination (Sub-section 8.3(b)(iii) of the Code)

(a) A Licensee that has an Affiliate that has Significant Market Power must not benefit from conduct by the Affiliate that constitutes discrimination.

(b) IDA will find that a Licensee has contravened the Code by benefiting from discrimination when the evidence demonstrates that:

(i) the Licensee has an Affiliate that has Significant Market Power in any market for infrastructure, systems, services, equipment or information that is necessary to provide services or equipment; and

(ii) the Licensee accepted access to the infrastructure, systems, services, equipment or information on prices, terms or conditions that are more favourable than the prices, terms and conditions on which the Affiliate provides those infrastructure, systems, services, equipment or information to non-affiliated Licensees.

(c) IDA will determine whether infrastructure, systems, services, equipment or information is necessary to provide services or equipment using the methodology specified in Paragraph 3.2.2.1(c) of these Guidelines.

(d) A Licensee's acceptance from its Affiliate of access to infrastructure, systems, services, equipment or information that is necessary to provide services or equipment, when the Affiliate refuses to provide access to such infrastructure, systems, services, equipment or information to non-Affiliated Licensees on any terms, also constitutes discrimination.

3.4 Unfair Methods of Competition (Sub-section 8.4 of the Code)

The Code prohibits Licensees from engaging in unilateral conduct that constitutes an unfair method of competition.

3.4.1 General Prohibition (Sub-section 8.4.1 of the Code)

Sub-section 8.4.1 of the Code contains a general prohibition against a Licensee engaging in an unfair method of competition. This provision is applicable to allegations that a Licensee engaged in unilateral conduct – other than the specific practices addressed in Sub-sections 8.4.2.1 through 8.4.2.3 of the Code – that constitutes an unfair method of competition. IDA will find that a Licensee has engaged in an unfair method of competition if the evidence demonstrates that the Licensee has engaged in an improper practice by which that Licensee seeks to obtain a competitive advantage for itself or an Affiliate in the telecommunication market in Singapore, for reasons unrelated to the availability, price or quality of the service or equipment that the Licensee or its Affiliate offers.

3.4.2 Specific Prohibited Practices (Sub-section 8.4.2 of the Code)

The following practices constitute unfair methods of competition and are specifically prohibited:

(a) A Licensee must not take any action, or induce any other party to take any action, that has the effect of degrading the availability or quality of another Licensee's service or equipment, or raising the other Licensee's costs, without a legitimate business, operational or technical justification. IDA will find that a Licensee has no legitimate business, operational or technical reasons for taking an action when:

(i) the action was not a commercially reasonable means for the Licensee to reduce its costs, offer a new service or equipment, improve service or equipment quality or otherwise benefit its End Users; and

(ii) the adverse impact of the Licensee's actions on other Licensees was grossly disproportionate to the benefit to the Licensee and its End Users.

(b) A Licensee must not provide information to other Licensees that is false or misleading. IDA will find that a person has provided false or misleading information where (i) the person making the statement or providing the information recklessly makes any statement or does not care whether the statement or information provided is true or false; (ii) where the person providing the information knows or ought reasonably to have known that the statement or information is false or misleading in a material particular; or (iii) where a person dishonestly conceals material facts.

(c) A Licensee that receives information from another Licensee about the other Licensee's Customers in order to fulfill any duty under this Code must not use that information for any purpose other than the purpose for which it was provided. In particular, the Licensee must not use the information that it receives to market services or equipment to the other Licensee's Customers or otherwise interfere in the other Licensee's existing relationship with its Customers.

4. AGREEMENTS INVOLVING LICENSEES THAT UNREASONABLY RESTRICT COMPETITION (SECTION 9 OF THE CODE)

4.1 Introduction

(a) In competitive markets, concerted conduct generally raises more significant competitive concerns than unilateral conduct. Therefore, in assessing a claim that a Licensee has acted anti-competitively, IDA will first determine whether a Licensee has entered into an agreement.

(b) In those cases in which IDA concludes that a Licensee has engaged in concerted conduct, IDA will next seek to determine whether the conduct involved an agreement with:

(i) any other Licensee that provides competing services or equipment ("**horizontal agreement**"); or

(ii) any other entity that does not provide a competing service or equipment ("**non-horizontal agreement**").

(c) In general, agreements between two Licensees that are (or potentially are) providing competing services or equipment ("**Competing Licensees**") are far more likely to unreasonably restrict competition than agreements between Non-Competing Licensees. For example, an agreement between two Competing Licensees in which one Licensee agrees to offer its service only in one geographical area, and the other Licensee agrees to offer its service only in another area, would reduce the competitive choices open to End Users in both areas. By contrast, an agreement in which a Licensee grants one reseller the exclusive right to sell the Licensee's service to End Users in one geographical area, and grants another reseller the right to resell the Licensee's service to End Users in another geographical area, may promote competition by giving each reseller an increased incentive to try to sell the Licensee's service to End Users in its respective service area.

(d) The Code prohibits Licensees from entering into any agreement that unreasonably restricts, or is likely to unreasonably restrict, competition. If IDA determines that a Licensee has entered into an agreement that contravenes the Code, IDA may:

(i) direct the Licensee to revise the agreement to eliminate the contravening terms or terminate the agreement; and/or

(ii) take appropriate enforcement action as prescribed under the Code.

4.2 Determining the Existence of an Agreement (Sub-section 9.2 of the Code)

(a) The prohibitions contained in Section 9 of the Code apply only to "agreements" involving Licensees.

(b) The concept of an "agreement," as used in Section 9 of the Code, differs from the concept of a "contract," as used in commercial law. In commercial law, a contract is a legally binding agreement between two separate legal entities. By contrast, for purposes of Section 9 of the Code, an agreement is an arrangement by which two or more independent economic entities coordinate their market conduct, rather than act independently. In some cases, arrangements that do not constitute legally binding contracts may be found to be agreements for purposes of Section 9 of the Code.

(c) In implementing Section 9 of the Code, IDA will find that a Licensee has entered into an agreement where the Licensee has coordinated its activities with another entity that would otherwise act as an independent economic entity. Such agreements may be express or tacit. An express agreement is one in which the parties expressly agree to engage in certain activities. A tacit agreement, by contrast, is one in which the parties intentionally coordinate their conduct, without expressly agreeing to do so.

(d) Arrangements between a Licensee and an Affiliate over which it can exercise Effective Control (i.e., the ability to cause the Affiliate to take, or prevent the Affiliate from taking, decisions regarding the Affiliate's management and major operating decisions) do not constitute agreements for purposes of Section 9. In such cases, the Licensee and the Affiliate do not constitute independent economic entities. The Licensee's actions should not be subject to heightened scrutiny simply because it has chosen to separate its operations into more than one legal entity.

(e) In seeking to determine whether a Licensee has entered into an agreement, IDA will consider the following:

(i) IDA will consider whether there is direct evidence that the Licensee has entered into an express agreement. This could include documents setting forth the terms of the agreement or a statement by a party to the agreement;

(ii) IDA will consider circumstantial evidence that provides a reasonable basis to infer that the Licensee has entered into an express agreement. For example, IDA may consider evidence

that, following a meeting, two Licensees stopped competing in certain geographical areas. This circumstantial evidence may provide a reasonable basis for IDA to conclude that, at the meeting, the Licensees expressly entered into an agreement not to compete; and

(iv) IDA will consider whether the Licensee has entered into a tacit agreement. A tacit agreement does not involve an actual agreement between Licensees. Rather, a tacit agreement occurs when a Licensee coordinates its conduct with other Licensees, even in the absence of an agreement to do so. IDA will not find that a Licensee has entered into a tacit agreement based solely on the fact that the Licensee is making the same (or similar) output and pricing decisions as another Licensee. Such conduct could reflect each Licensee's unilateral response to changing market conditions. For example, if the price of an input used by Competing Licensees increases, each Licensee is likely to increase its prices. Rather, IDA will only find that a Licensee has entered into a tacit agreement where Licensees have taken actions, such as sharing price or supply information, that could facilitate concerted conduct.

4.3 Agreements Between Licensees Providing Competing Services and Equipment (Horizontal Agreements) (Sub-section 9.3 of the Code)

(a) As noted above, horizontal agreements can raise significant competitive concerns. In some cases, however, agreements between competitors – such as voluntary standards-setting agreements – may promote competition. Therefore, the Code does not prohibit Competing Licensees from entering into all horizontal agreements. Rather, under the general prohibition specified in Sub-section 9.3.1 of the Code, Competing Licensees are only prohibited from entering into horizontal agreements that unreasonably restrict, or are likely to unreasonably restrict, competition.

(b) However, there are certain horizontal agreements that IDA recognises that are so likely to cause anti-competitive harm, and/or are so devoid of legitimate business, operational or technical justification, that these agreements should be presumed to unreasonably restrict competition without the need for an individualised determination of their actual or likely competitive effects ("per se" prohibitions). For example, IDA will find that agreements between Competing Licensees to fix prices contravene the Code without any assessment of the actual or likely competitive effect of such agreements. In all other cases, however, IDA will make an individualised assessment of the actual or likely

competitive effect of the horizontal agreement. This approach provides business certainty, while conserving administrative resources.

4.3.1 Specific Prohibited Agreements (Sub-section 9.3.2 of the Code)

(a) The Code identifies four categories of agreements between and amongst Competing Licensees that are always presumed to unreasonably restrict competition in the Singapore telecommunication market and therefore are specifically prohibited, even in the absence of evidence of likely or actual anti-competitive effect:

(i) agreements to fix prices or restrict output ("price fixing agreements");

(ii) agreements to co-ordinate separate bids ("bid rigging agreements");

(iii) agreements to allocate Customers or geographic markets ("Customer allocation agreements"); and

(iv) agreements not to do business with a specific supplier, Licensee or Customer ("group boycott agreements").

(b) IDA will find that a Licensee has contravened the Code if the evidence demonstrates that the Licensee has entered into any horizontal agreement that falls within one of these categories. IDA will not undertake any assessment of the actual or likely competitive effect of such an agreement.

4.3.1.1 Price Fixing/Output Restrictions (Sub-section 9.3.2.1 of the Code)

(a) Price fixing agreements are one of the most serious forms of anti-competitive conduct. Such agreements provide no competitive benefits, while potentially leading to artificial reductions in supply and artificial increases in price.

(b) IDA will find that a Licensee has contravened the Code where the evidence demonstrates that the Licensee has participated in discussions relating to price-fixing/output restrictions and has failed to explicitly distance itself from such discussions, agreement or arrangement and/or entered into an agreement with one or more Competing Licensees to:

(i) set the price that one or more Licensees will charge for any service or equipment; and/or

(ii) restrict the quantity of services or equipment that one or more Licensees will offer.

(c) Besides directly fixing the end price imposed on Customers, price fixing agreements can also include other ways of fixing prices indirectly. For example,:

(i) agreeing on or agreeing to recover certain cost components in prices charged;

(ii) exchanging or sharing of commercially-sensitive or strategic information between competitors, e.g. circulating lists of current and future pricing;

(iii) agreeing on the service or equipment or elements thereof to be charged;

(iv) agreeing on the service or equipment or elements thereof to be included in product offerings;

(v) setting percentage or monetary surcharges, pricing targets, margins of profit, price increases;

(vi) agreeing to increase prevailing prices and/or the timing thereof;

(vii) setting minimum prices, setting maximum prices or agreeing on a price range;

(viii) agreeing the amount of or incidence of discounts, rebates or the value and character of promotional benefits and/or the timing thereof;

(ix) regulating the distribution channels for particular service offerings or the mode and extent of product marketing; and

(x) fixing of credit terms.

(d) IDA will find that such agreements contravene the Code regardless of the price level or output level to which the Licensee agrees.

4.3.1.2 Bid Rigging (Sub-section 9.3.2.2 of the Code)

(a) Competitive bidding is an efficient, objective and transparent means to allocate resources. Bid rigging agreements provide no competitive benefits, but have the potential to distort the market by artificially increasing or reducing the price at which services or equipment are bought and sold.

(b) IDA will find that a Licensee has contravened the Code by entering into a bid rigging agreement where the evidence demonstrates that:

(i) the Licensee has entered into an agreement with one or more Competing Licensees to co-ordinate separate bids for:

(1) assets, resources or rights auctioned by IDA;

(2) any input into the Licensees' services or equipment; or

(3) the provision by the Licensee of any telecommunication service or equipment; and

(ii) the Licensee has agreed not to bid, to bid at specific prices or on specific terms, or to bid within a specific price range.

(c) IDA will find that such agreements contravene the Code regardless of the price level to which the Licensee agrees.

(d) Notwithstanding the above, a Licensee is not always prohibited from submitting a joint bid with one or more other Licensees, if the Licensees disclose the fact that they are bidding jointly. The permissibility of such joint purchasing arrangements will be assessed pursuant to the methodology described in Paragraph 4.4 of these Guidelines.

4.3.1.3 Market and Customer Divisions (Sub-section 9.3.2.3 of the Code)

(a) Customer allocation agreements provide no competitive benefits, but have the potential to deprive Customers of the benefits of being able to choose among different service or equipment providers.

(b) IDA will find that a Licensee has contravened the Code by entering into a Customer allocation agreement where the evidence demonstrates that the Licensee has entered into an agreement with one or more Competing Licensees not to compete to provide telecommunication services or equipment:

(i) to specific Customers;

(ii) to any class of Customers; or

(iii) to Customers in specific geographical areas.

(c) IDA will find that such agreements contravene the Code regardless of the terms and conditions to which the Licensees agree.

(d) IDA will generally not consider arrangements that involve licensees sharing facilities because of, for example, economic efficiency considerations or to address technical constraints or a shortage of facilities, to contravene the Code.

(e) Sub-section 9.3.2.3 of the Code will not apply to arrangements in which IDA mandates that a Licensee shares the use of infrastructure with other Licensees pursuant to section 7 of the Code.

4.3.1.4 Group Boycotts (Sub-section 9.3.2.4 of the Code)

(a) Group boycott agreements provide no competitive benefits, but have the potential to artificially exclude specific buyers and sellers from the market, thereby reducing competition.

(b) IDA will find that a Licensee has contravened the Code by entering into a group boycott agreement where, for example, the evidence demonstrates that the Licensee has entered into an agreement with one or more Competing Licensees:

(i) not to provide services or equipment to a specific supplier, Licensee or Customer; or

(ii) not to obtain an input from a specific supplier, Licensee or Customer.

(c) IDA will find that such agreements contravene the Code regardless of the justification for the boycott.

(d) Notwithstanding the above, except where required to provide services or equipment, Licensees may make individual decisions not to do business with a specific supplier, Licensee or Customer.

4.3.2 Agreements Necessary for Legitimate Collaborative Ventures (Sub-section 9.3.3 of the Code)

IDA will not apply the per se prohibitions contained in Sub-sections 9.3.2.1 through 9.3.2.4 of the Code to agreements among Licensees that are ancillary to efficiency-enhancing integration of economic activity. Such integration of economic activity typically goes beyond simply co-ordinating actions; it involves combining capital, technology or other assets. Such arrangements may, but need not, take the form of a joint venture. For example, Licensees may agree to undertake joint marketing, purchasing or research. As part of the agreement, the Licensees may agree to certain “ancillary restrictions” on competition that are necessary to facilitate the collaboration. For example, Licensees could agree to establish a joint venture to develop and provide a service that none of the Licensees could offer on its own. As part of the agreement, the Licensees might establish the price at which each Licensee will offer the service. In such cases, IDA will not classify the ancillary restriction as an agreement to engage in price fixing, bid rigging, Customer allocation or a group boycott because doing so would not accurately reflect the actual or likely competitive effect of the practice and might result in the

prohibition of conduct that could promote competition and benefit Customers. Rather, in such cases, IDA will determine the permissibility of the ancillary restrictions based on an individualised assessment of the entire agreement's actual or likely effect on competition, using the standards specified in Sub-section 9.4 of the Code. Where IDA determines that such ancillary restrictions do not unreasonably restrict competition, IDA will permit the Licensees to impose the restrictions.

4.4 Agreements Between Competing Licensees That Will be Assessed Based on Their Actual or Likely Competitive Effects (Sub-section 9.4 of the Code)

(a) With the exception of the agreements specified in Paragraphs 4.3.1 through 4.3.1.4 of these Guidelines, IDA will assess all agreements between Competing Licensees based on their actual or likely effect on competition.

(b) Where there is evidence that the agreement actually has unreasonably restricted competition, IDA will find it to be in contravention of the Code. IDA will find that an agreement actually has unreasonably restricted competition if the evidence of its competitive effect, taken as a whole, demonstrates that the agreement has:

(i) restricted output below the level of demand, increased prices above cost, reduced quality below the level that Customers seek, reduced Customers' choice or deterred innovation; or

(ii) deterred or precluded efficient entities from participating in the market.

(c) Where there is no conclusive evidence of actual market effect because the agreement is relatively recent, IDA will determine the permissibility of the agreement by seeking to assess whether it is likely to unreasonably restrict competition. In conducting this assessment, IDA will use a 3-step process consisting of:

(i) a preliminary assessment;

(ii) where necessary, an assessment of the likelihood that the agreement will restrict competition; and

(v) where necessary, an assessment of any offsetting, pro-competitive efficiencies that are likely to result from the agreement.

4.4.1 Preliminary Assessment (Sub-section 9.4.1 of the Code)

IDA will first conduct a preliminary review of the agreement. IDA is not likely to find that an agreement contravenes the Code, and therefore generally will terminate its review, if both of the following conditions are met:

(a) first, the agreement involves a small number of Non-dominant Licensees. In general, IDA will find that an agreement involves a small number of Non-dominant Licensees if the participating Licensees collectively have a market share of less than 20 percent. Where necessary, IDA will define the relevant market and assess the their collective market share using the principles and/or methodology described in Paragraphs 2.4.1 and 2.4.2(a) of IDA's Reclassification and Exemption Guidelines; and

(b) second, the agreement is likely to benefit Customers by increasing supply, reducing price or providing other pro-competitive benefits.

4.4.2 Likelihood of Competitive Harm (Sub-section 9.4.2 of the Code)

(a) IDA will conduct a more detailed assessment where any of the following conditions are met:

(i) the agreement involves a significant number of Non-dominant Licensees;

(ii) the agreement involves a Dominant Licensee; or

(iii) the agreement has the potential to reduce supply, increase price or otherwise deprive Customers of the benefits of competition.

(b) In conducting its assessment of whether the agreement has the potential to deprive Customers of the benefits of competition, IDA will consider:

(i) whether (and, if so, to what extent) the Licensees that have entered into the agreement retain the ability to act independently;

(ii) the duration of the agreement;

(iii) whether, in the event the Licensees acted anti-competitively, new entry into the market would be likely, sufficient and timely enough to counteract any competitive harm; and

(iv) any other factors that help predict the likely competitive effect of the agreement.

(c) If, after assessing these factors, IDA concludes that the agreement is not likely to result in a restriction of output or an increase in prices of telecommunication services or equipment, or otherwise adversely affect Customers, IDA will conclude that the agreement does not contravene the Code.

4.4.3 Efficiencies (Sub-section 9.4.3 of the Code)

(a) If IDA's review demonstrates that the agreement has the potential to result in a restriction of output or an increase in prices of services or equipment, or otherwise adversely affect Customers, IDA will consider whether the agreement is likely to achieve any off-setting efficiencies.

(b) IDA will find that an agreement is likely to result in efficiencies if the Licensee demonstrates, with reasonable specificity, that the agreement is likely to result in reductions in the cost of developing, producing, marketing and delivering services or equipment. IDA will not consider any cost reductions that result from reductions in output or service.

(c) IDA will conclude that the agreement does not contravene the Code if the efficiencies that it identifies:

(i) are large enough to offset any potential anti-competitive effect;

(ii) could not reasonably be achieved through measures that reduce competition to a lesser extent; and

(iii) are likely to be passed on to Customers.

4.5 Agreements Between Licensees and Entities That are Not Direct Competitors (Non-Horizontal Agreements) (Sub-section 9.5 of the Code)

(a) Agreements between a Licensee and another entity (whether or not licensed) that is not a Competing Licensee ("**non-horizontal agreements**") generally do not adversely affect competition. Indeed, in many cases, non-horizontal agreements may promote competition. However, because telecommunication markets are often characterised by both significant concentration and vertical integration, agreements that involve entities that are at different levels in the "supply chain", such as agreements between a Licensee and a supplier or a distributor, may sometimes raise competitive concerns – especially where one of the parties to the agreement has Significant Market Power. Such agreements are often also referred to as "**vertical agreements**".

(b) Vertical agreements can restrict competition in at least three different ways.

(i) Vertical agreements can reduce or eliminate "intra-brand" competition, such as competition between two resellers of the same Licensee's service or equipment. For example, an agreement in which a Licensee grants Reseller A the exclusive right to resell the Licensee's service in one geographical area, and Reseller B the right to resell the Licensee's service in another geographical area, will eliminate competition among providers of the Licensee's service in both geographical areas. If the Licensee has Significant Market Power, this could significantly reduce the competitive choices available to End Users in both geographical areas.

(ii) Vertical agreements can also facilitate a horizontal Customer allocation agreement between two distributors, which would also raise competitive concerns (see Paragraph 4.3.1.3 of these Guidelines).

(iii) Vertical agreements may also deter new entry by foreclosing significant sources of supply or distribution. For example, an agreement between an equipment dealer and an equipment manufacturer that has Significant Market Power, in which the manufacturer gives the dealer the exclusive right to distribute its equipment in Singapore, could foreclose competition in the equipment distribution market.

(c) At the same time, vertical agreements can give rise to significant pro-competitive benefits.

(i) Vertical agreements may promote "inter-brand" competition between two Licensees' services or equipment. For example, where a Licensee does not have Significant Market Power, an agreement in which the Licensee grants Reseller A the exclusive right to resell the Licensee's service in one geographical area, and another agreement in which the Licensee grants Reseller B the right to resell the Licensee's service in another geographical area will reduce intra-brand competition. However, the two agreements may facilitate inter-brand competition in both geographical areas by giving each reseller an increased incentive to resell the Licensee's service to End Users in its respective service area.

(ii) Vertical agreements may also benefit End Users by eliminating market failures, such as the "free rider" problem. For example, telecommunication equipment Dealer A may provide a high level of customer service (such as provision of detailed product

information) and, as a result, charge a higher price for the equipment to recover its higher costs of operation. At the same time, competing telecommunication equipment dealers may provide little or no customer service, but in turn are able to charge lower prices due to their lower costs of operation. If many End Users obtain information from Dealer A, but make their purchase from one of the other dealers, Dealer A will eventually stop providing good customer service in order to lower its costs to compete with the other dealers, thereby depriving End Users of a valued service. By granting Dealer A an exclusive dealership, a telecommunication equipment manufacturer may provide Dealer A with an incentive to continue to provide this service without fear of competitors "free riding" on its efforts.

4.5.1 General Prohibition (Sub-section 9.5.1 of the Code)

(a) Sub-section 9.5.1 of the Code contains a general prohibition against a Licensee entering into a non-horizontal agreement that unreasonably restricts or is likely to unreasonably restrict competition.

(b) IDA will assess the permissibility of any non-horizontal agreement based on its actual, or likely, effect on competition. In assessing whether a vertical agreement unreasonably restricts competition, or is likely to unreasonably restrict competition, in a Singapore telecommunication market, IDA will consider both the pro-competitive and anti-competitive effects of the agreement. IDA will only find that a vertical agreement unreasonably restricts competition, or is likely to unreasonably restrict competition, in a Singapore telecommunication market, if IDA concludes that the actual or likely anti-competitive effects of the agreement outweigh the actual or likely pro-competitive effects of the agreement.

(c) In considering whether an agreement is pro-competitive, IDA will consider whether the agreement:

(i) has increased, or is likely to increase, inter-brand competition;

(ii) has reduced, or is likely to reduce, market failures, such as "free riding";

(iii) has facilitated, or is likely to facilitate, new entry; or

(iv) has provided, or is likely to provide, other pro-competitive benefits.

(d) In considering whether an agreement is anti-competitive, IDA will consider whether the agreement:

(i) has substantially eliminated, or is likely to substantially eliminate, intra-brand competition;

(ii) has facilitated, or is likely to facilitate, collusion among competitors;

(iii) has foreclosed, or is likely to foreclose, other Licensees from being able to access a significant source of supply or a significant channel of distribution, thereby impeding its ability to compete against other Licensees; or

(iv) has had, or is likely to have, any other anti-competitive effect.

(e) A vertical agreement is more likely to contravene the Code if it involves an entity, whether or not a Licensee, that has Significant Market Power.

4.5.2 Agreements That Will be Assessed Based on Competitive Effects (Sub-section 9.5.2 of the Code)

Paragraphs 4.5.2.1 through 4.5.2.3 of these Guidelines describe three common types of vertical agreements, and their potential pro-competitive and anti-competitive effects. In determining whether these types of agreements have unreasonably restricted competition, or are likely to unreasonably restrict competition, IDA will use the methodology described in Paragraph 4.5.1 of these Guidelines.

4.5.2.1 Resale Price Maintenance (Sub-section 9.5.2.1 of the Code)

(a) A resale price maintenance agreement is an agreement in which one entity agrees with another entity that distributes its product on the price that the second entity will charge Customers for the product. For example, an equipment manufacturer could agree with an equipment dealer as to the price that the dealer will charge for the equipment. Similarly, a Licensee could agree with a reseller as to the price at which the reseller will resell the Licensee's service.

(b) There is increasing economic evidence that resale price maintenance agreements often are competitively neutral and, in some cases, may enhance competition. For example, such agreements may allow dealers to provide significant customer services, without incurring the risk that competing dealers will "free ride" (see Paragraph 4.5(c)(ii) of these Guidelines). Nonetheless, resale price maintenance agreements may raise competitive concerns when they foreclose price competition in a significant portion of the market. For example, where an entity has

Significant Market Power in a given product market, price competition among distributors of the product may provide a significant source of price competition in the market, which would be eliminated if the distributor entered into a resale price maintenance agreement.

(c) IDA will find that a Licensee that has entered into a resale price maintenance agreement has contravened the Code, where the evidence demonstrates that the agreement has, or is likely to, unreasonably restrict competition in any telecommunication market in Singapore.

4.5.2.2 Vertical Market Allocation (Sub-section 9.5.2.2 of the Code)

(a) A vertical market allocation agreement is an agreement in which an entity that produces a product, and distributes that product through more than one distributor, allocates different Customers or markets to different distributors. For example, an equipment manufacturer could agree with one equipment dealer that the dealer will sell the manufacturer's products only to business Customers, and could agree with another dealer that the dealer will sell the manufacturer's products only to residential Customers. Similarly, a Licensee could agree with one reseller that the reseller will resell the Licensee's service to End Users in one geographical area, and could agree with another reseller that the reseller will resell the Licensee's service to End Users in another geographical area.

(b) Vertical market allocation can promote competition by providing a distributor with a strong incentive to market a specific Licensee's service or a specific manufacturer's equipment. Doing so may help a new entrant establish itself in the market. However, vertical market allocation agreements can raise competitive concerns where they foreclose competition in a significant portion of the market. For example, where an entity has Significant Market Power in a given product market, competition among distributors of the entity's product may provide a significant source of competition in the market, which would be eliminated if the distributor entered into a vertical market allocation agreement.

(c) IDA will find that a Licensee that has entered into a vertical market allocation agreement has contravened the Code, where the evidence demonstrates that the agreement has, or is likely to, unreasonably restrict competition in any telecommunication market in Singapore.

4.5.2.3 Exclusive Dealing (Sub-section 9.5.2.3 of the Code)

(a) An exclusive dealing agreement is an agreement in which one entity agrees with another entity to, on an exclusive basis:

(i) supply goods or services to the other entity;

(ii) purchase goods or services from the other entity; or

(iii) distribute goods or services produced by the other entity

For example, an equipment manufacturer could designate an entity that holds an equipment dealer licence as its exclusive distributor in Singapore. Similarly, a Licensee could designate another Licensee as its exclusive reseller.

(b) Exclusive dealing agreements can promote competition by providing an assured supply and by creating strong incentive for a distributor to promote a product. However, exclusive dealing agreements can also raise competitive concerns where they foreclose a substantial portion of the supply, or a substantial portion of the distribution outlets, for a product. For example, if an entity has Significant Market Power in the telecommunication equipment market, an exclusive agreement with one distributor could preclude other distributors from participating in that market. Alternatively, if an entity that has Significant Market Power in the telecommunication equipment market requires its distributors to distribute its products exclusively, such exclusive agreements could foreclose a substantial portion of the distribution outlets from other equipment suppliers.

(c) IDA will find that a Licensee that has entered into an exclusive dealing agreement has contravened the Code, where the evidence demonstrates that the agreement has, or is likely to, unreasonably restrict competition in any telecommunication market in Singapore.

5. LENIENCY PROGRAMME: LENIENT TREATMENT FOR LICENSEES COMING FORWARD WITH INFORMATION ON CARTEL ACTIVITY

5.1 Introduction

5.1.1 Under Section 9 of the Code, agreements between Competing Licensees that unreasonably restrict, or are likely to unreasonably restrict, competition in any telecommunication market in Singapore are prohibited.

5.1.2 The following types of “cartel” agreements between or amongst Competing Licensees constitute unreasonable restrictions of competition and are

specifically prohibited under Section 9 of the Code, even in the absence of evidence of anti-competitive effect:

(a) Price Fixing/Output Restrictions;

(b) Bid Rigging;

(c) Market and Customer Divisions; and

(d) Group Boycotts.

5.1.3 Due to the secret nature of cartels, Licensees participating or which have participated in cartels should be given an incentive to come forward and inform IDA of the cartel's activities. Licensees who come forward and inform IDA of the cartel and its activities may benefit from lenient treatment for coming forward with vital information on the cartel. The benefits of granting lenient treatment to Licensees who cooperate with IDA outweigh the need to impose financial penalties on these Licensees.

5.1.4 As leniency programmes have been found to be effective in competition law regimes, IDA will similarly adopt a leniency programme as part of its enforcement strategy. The following Paragraphs 5.2 to 5.7 of these Guidelines outline the Leniency Programme that IDA will adopt.

5.2 Total Immunity for the First to Come Forward before an Investigation has Commenced

5.2.1 IDA may impose financial penalties not exceeding the higher of the following amounts on a Licensee that contravenes any provision of the Code under section 8(1) of the Telecommunications Act:

(a) 10% of the annual turnover of that part of the person's business in respect of which the person is granted the licence, as ascertained from the person's latest audited accounts; or

(b) $1 million.

5.2.2 IDA will nevertheless grant a Licensee the benefit of total immunity from financial penalties if both of the following two conditions are satisfied:

(a) The Licensee is the first to provide IDA with evidence of the cartel activity before an investigation has commenced by IDA, provided that IDA does not already have sufficient information to establish the existence of the alleged cartel activity; and

(b) The Licensee:

(i) provides IDA with all the information, documents and evidence available to it regarding the cartel activity and the information

provided by the Licensee must be such as to provide IDA with a sufficient basis for taking forward a credible investigation or to add significant value to IDA's investigation. In practice, this means that the information is sufficient to allow IDA to exercise its formal powers of investigation or genuinely advances the investigation;

(ii) maintains continuous and complete co-operation throughout the investigation and until the conclusion of any action by IDA arising as a result of the investigation;

(iii) refrains from further participation in the cartel activity from the time of disclosure of the cartel activity to IDA (except as may be directed by IDA);

(iv) must not have been the one to initiate the cartel; and

(v) must not have taken any steps to coerce another Licensee to take part in the cartel activity.

5.2.3 If a Licensee does not qualify for total immunity under Paragraph 5.2.2 of these Guidelines, it may still benefit from a reduction in the financial penalty of up to 100 percent under Paragraphs 5.3.1 and 5.3.2 of these Guidelines.

5.3 Reduction of Up To 100 Percent in the Level of Financial Penalties where the Licensee is the First to Come Forward but which does so only After an Investigation has Commenced

5.3.1 A Licensee may benefit from a reduction in the financial penalty of up to 100 percent if:

(a) the Licensee seeking immunity is the first to provide IDA with evidence of the cartel activity;

(b) this information is given to IDA after IDA has started an investigation but before IDA has sufficient information to issue a decision that Section 9 of the Code has been contravened; and

(c) the conditions set out in Paragraph 5.2.2(b) of these Guidelines are satisfied.

5.3.2 Any reduction in the level of the financial penalty under these circumstances is entirely at the discretion of IDA. In exercising this discretion, IDA will take into account:

(a) the stage of the investigation at which the Licensee comes forward;

(b) the evidence already in IDA's possession; and

(c) the quality of the information provided by the Licensee.

5.4 Subsequent Leniency Applicants: Reduction of Up To 50 Percent in the Level of Financial Penalties

5.4.1 Licensees which are not the first to come forward but which provide evidence of cartel activity before IDA issues a decision that Section 9 of the Code has been contravened may be granted a reduction of up to 50 percent in the amount of the financial penalty which would otherwise be imposed, if the conditions set out in Paragraph 5.2.2(b) of these Guidelines are satisfied.

5.4.2 Any reduction in the level of the financial penalty under these circumstances is entirely at the discretion of the IDA. In exercising this discretion, IDA will take into account:

(a) the stage of investigation at which the Licensee comes forward;

(b) the evidence already in IDA's possession; and

(c) the quality of the information provided by the Licensee.

5.5 Procedure for Requesting Immunity or a Reduction in the Level of Penalties

5.5.1 A Licensee which wishes to take advantage of the lenient treatment detailed in these guidelines must contact IDA. Applications for leniency can be made orally or in writing. Anyone contacting IDA on the Licensee’s behalf must be authorised or empowered to represent the Licensee.

5.5.2 Initial contact with or “feelers” to IDA may be made anonymously to find out if leniency is available in respect of a particular alleged cartel activity or for any information on the Leniency Programme. However, for the leniency application proper to be recorded and proceeded with, the Licensee’s name must be disclosed to IDA.

5.5.3 The Licensee making a leniency application should immediately provide IDA with all the evidence relating to the suspected infringement available to it at the time of the submission.

5.5.4 IDA will provide a marker system for leniency applications under Paragraphs 5.2 and 5.3 of these Guidelines. If the Licensee is unable to satisfy Paragraph 5.5.3 above, the Licensee may, alternatively, apply for a marker to secure a position in the queue and IDA will provide instructions to the Licensee on the process and timing by which the marker must be perfected by the prompt provision of relevant information. For a Licensee to secure a marker, the Licensee must provide its name and a description of the cartel conduct in sufficient detail to allow IDA to determine that no other Licensee has applied for immunity or a reduction of up to 100 percent, for such similar conduct.

5.5.5 A marker protects a Licensee's place in the queue for a given limited period of time and allows it to gather the necessary information and evidence in order to perfect the marker.

5.5.6 To perfect a marker, the Licensee must provide all the evidence relating to the suspected infringement available to it at the time of the submission.

5.5.7 If the Licensee fails to perfect the marker, the next Licensee in the marker queue will be allowed to perfect its marker, to obtain immunity or a reduction of up to 100 percent in financial penalties. If the marker is perfected, the other Licensees in the marker queue will be informed so that they can decide whether to submit leniency applications for consideration under Paragraph 5.4 of these Guidelines. The marker system will not apply to leniency applications under Paragraph 5.4 of these Guidelines and such applicants should immediately provide IDA with all the evidence relating to the suspected infringement available to it at the time of the submission.

5.5.8 The grant of a marker is discretionary. However its grant is expected to be the norm rather than the exception. An applicant will only be informed whether it has been the first to come forward.

5.6 Confidentiality

A Licensee coming forward with evidence of cartel activity may be concerned about the disclosure of its identity as a Licensee which has volunteered information. IDA will therefore endeavour, to the extent that is consistent with its obligations to disclose or exchange information, to keep the identity of such Licensees confidential throughout the course of its investigation, until IDA issues a decision that Section 9 of the Code has been infringed.

5.7 Effect of Leniency

Leniency given by IDA under this Leniency Programme applies only in respect of any penalty which may be imposed for a breach of Section 9 of the Code and does not provide immunity from any penalty that may be imposed on the Licensee under any other laws.

Appendix 1 – Entry Barriers

1. IDA's Competition Guidelines specify a number of situations in which IDA must make an assessment regarding the existence, and significance, of barriers to entry. In general, the more significant the barriers to entry, the more likely it is that IDA will need to intervene in a market or find that an anti-competitive action has occurred.

2. In assessing barriers to entry, IDA will seek to identify those factors that could preclude an efficient Licensee from being able to market or provide a service.

3. In conducting its assessment, IDA may seek information regarding the cost of, and barriers to, entry from: Licensees that are currently in the market; Licensees or other entities that have sought to enter the market; and Licensees or other entities that may seek to enter the market. Where appropriate, IDA will consider whether changes over time have increased or decreased the difficulty of entry.

4. IDA has identified five broad, but non-exclusive, categories of barriers to entry:

   (a) technical barriers;

   (b) access barriers;

   (c) financial barriers;

   (d) commercial barriers; and

   (e) regulatory barriers.

5. Technical barriers exist when a new entrant must use technology that is costly or difficult to develop or obtain from third parties. This may occur, for example, where a new entrant must obtain a licence to use proprietary technology, especially where the rights are controlled by a competitor. In assessing the existence of technical barriers, IDA will consider the extent to which new entrants must use such technology, and the cost and difficulty of doing so.

6. Access barriers exist when a new entrant must access a competitor's infrastructure in order to provide a service to End Users, and doing so is costly or difficult. For example, where a competitor controls a facility that constitutes a "bottleneck" or "essential" facility, its refusal to provide access to this facility may create an absolute barrier to entry. Access barriers are potentially significant in the telecommunication market, which is characterised by both economies of scale and network effects. Economies of scale refers to the situation in which the average cost of providing services decreases as the volume of services increases.

Network effects arise when the value a consumer places on connecting to a network depends on the number of others already connected to it. A new entrant into the telecommunication market typically must be able to provide End Users with the ability to communicate with all other End Users. Once an entrant has done so, the cost of serving any individual Customer is relatively low. However, due to the high cost of infrastructure deployment, it is often not economically feasible for a new entrant to deploy a ubiquitous infrastructure. Therefore, in order to provide a service, the new entrant may need to access infrastructure controlled by a competing operator that is currently in the market. In assessing the existence of access barriers, IDA will consider the extent to which existing regulation ensures that new entrants have access to infrastructure that is required to provide a competitive service on just, reasonable and non-discriminatory prices, terms and conditions.

7. Financial barriers exist when a new entrant must incur significant costs in order to enter the market. For instance, new entrants into the telecommunication market may often have to incur significant costs to roll-out their network. Such costs cannot be recovered quickly. Neither can the entrant readily recoup these costs if it decides to exit the market within a short period. Such barriers will be especially significant if there are high "sunk costs". Sunk costs refer to the cost of acquiring capital and other assets that are incurred in order to enter the market and supply services, where the costs cannot be recovered and assets cannot be redeployed in another market when the service provider exits the market or ceases service supply. Therefore, in assessing financial barriers, IDA will consider the costs that a new entrant must incur, as well as the extent to which such costs constitute sunk costs.

8. Commercial barriers exist when a new entrant must incur significant costs to obtain, retain, and serve End Users. For example, a new entrant to a market may need to incur significant costs including: advertising costs in order to obtain brand recognition; additional costs to get individual End Users to switch from their current service provider; and high on-going “customer care” costs in order to retain the End User’s “brand loyalty”. In assessing the existence of commercial barriers, IDA will consider the need for, and cost of, such expenditures.

9. Regulatory barriers exist when a new entrant must obtain regulatory approval to enter, or participate in, a market. Such barriers may be especially significant in markets in which resource constraints – such as limited amounts of spectrum – require regulatory authorities to impose an absolute numeric limit on the number of entrants.

10. IDA will consider any other barrier to entry that is identified by a party. Parties seeking to do so should provide verifiable data about the nature of the

barriers, the costs that a new entrant would have to incur, and the other obstacles a new entrant would have to overcome in order to surmount the barrier.