

**PROPOSED REGULATORY APPROACH FOR 3G
MOBILE VIRTUAL NETWORK OPERATORS
(MVNOs)**

A Consultation Document



27 April 2001

1 INTRODUCTION

- 1.1 The term Mobile Virtual Network Operator (MVNO) is used loosely in the industry to describe a mobile phone service provider that does not possess its own frequency spectrum, but relies on access to infrastructure of an existing mobile network operator (MNO) to provide services to customers. It could range from “maximalist” MVNOs at one end (where the MVNO does not rely on the MNO except for the use of the spectrum, and invests in all other facilities required to provide service to customer¹) to the “minimalist” approach (where the MVNO has minimal investment in network and rely heavily on MNO’s infrastructure). Although MVNO activity is in its early stages of development, it is expected that it will proliferate quickly, especially across Europe.
- 1.2 IDA considers that an MVNO should at least market the service under its own brand name; otherwise it would be no different from a pure reseller². Under IDA’s existing MVNO framework for 2G mobile services, an MVNO is defined as an operator who provides mobile subscription and call services to its customers with no allocation of spectrum. The MVNO must use part of the network components of the 2G MNOs licensed by IDA to originate and deliver its customers’ calls. The MVNO will pay the licensed MNO for the use of the network and the essential radio segment of the network (see **Annex 1** for details of licensing framework). IDA to date does not intervene to mandate 2G MNOs to provide network connection or wholesale services to MVNOs. While these agreements are left to commercial negotiations, IDA expects that negotiations for such agreements to be conducted in accordance with the provisions in the Telecom Competition Code (TCC)³.

2 OBJECTIVE OF INDUSTRY CONSULTATION

- 2.1 IDA has stated that MVNOs wishing to offer 3G services must negotiate commercially with the 3G MNOs for access to their networks, with IDA intervening only in cases of “unduly restrictive or anti-competitive practices”, in accordance with the relevant provisions of the TCC. This

¹ May include having its own network code, billing systems, SIM cards, switches and even base stations

² Although in Europe, because of the difference in definitions, such pure resellers are called MVNOs.

³ The TCC came into force on 29 September 2000 and sets out the regulatory framework for the development of fair and effective competition in the telecommunications industry in Singapore. The TCC is available on the IDA website.

approach stems from IDA's intent to rely on market forces as much as possible to resolve commercial disputes and in consideration of MNOs' investments in 3G networks and services and hence, having to bear much of the business risk. Concerns have been raised over when and how IDA will actually intervene in 3G MVNO negotiations. In particular, 3G MNOs have expressed that they bear considerable business risks by investing heavily in obtaining 3G Spectrum Rights and in building the 3G network infrastructure. They view that if they are to be required by IDA to make available 3G network capacity to MVNOs at terms unfavourable to the MNOs, this would unfairly favour the MVNOs, increase the business risk of 3G MNOs and discourage the latter from making more investments.

2.2 While IDA recognises that undue regulatory intervention could lessen the attractiveness of the 3G network operations, on the other hand, MVNOs could be potentially important players in the development of the wireless market in Singapore. MVNOs could promote healthy competition by providing more innovative and value-added services at competitive prices, and serving market segments overlooked by MNOs. Given the uncertainty over the 3G business, some MNOs might also welcome the opportunity to wholesale their excess capacity to MVNOs. However, MVNOs' reliance on MNOs means that they could potentially face the prospect of high cost of access being imposed by the latter, which may impact negatively on their business viability and unduly restrict competition. Hence, in consideration of the potentially important role of MVNOs, IDA considers it necessary to be able to intervene in such cases when appropriate.

2.3 It is IDA's intention to balance the need for regulatory intervention to encourage healthy competition vis-à-vis the need to encourage investment in 3G networks and services. How this balance should be maintained depends very much on the level and nature of competition in the 3G market. However, in the foreseeable future, there is much uncertainty in the 3G market. The objective of this industry consultation is thus to gather industry feedback & comments so as to

- (a) provide inputs for IDA in our review of the MVNO regulatory framework; and
- (b) facilitate industry understanding of the framework to be adopted.

3 ISSUES FOR CONSULTATION

3.1 Types of Services and Benefits

3.1.1 To date, 3G mobile services are still not clearly defined. While the potential of 3G technology is undeniable, there are still uncertainties surrounding the range and types of service offerings and pricing plans, the likely applications and usage. Correspondingly, the possible types of services a 3G MVNO might offer and the role they would play in the 3G market arises. Nonetheless, IDA expects the entry of MVNOs into the 3G market to raise the level of competition by providing consumers with a wider choice of service providers, a wider range of innovative value-added services and more competitive pricing plans.

Question: IDA seeks comments on the possible types of services a 3G MVNO might offer, the role that they might play to promote competition, the benefits they would bring to consumers and consequently the scope of network access and services that 3G MNOs should offer MVNOs.

3.2 Licensing Framework

3.2.1 At present, 2G MVNOs are licensed as a Services-based Operator (SBO) (Individual)⁴ as the MVNOs generally do not deploy their own networks but leased transmission capacity from MNOs. However, it is noted that theoretically, a “maximalist” MVNO is almost similar to an MNO, except it does not own any spectrum.

Question: IDA seeks comments on whether a distinction should be made of the different types of MVNOs, and if certain “maximalist” MVNOs should more appropriately be licensed as FBOs.

3.3 Level and Nature of Competition in the 3G Market

3.3.1 Where negotiations between MVNOS and MNOs fail, IDA has stated that it will intervene in cases of “unduly restrictive or anti-competitive practices” in accordance with the relevant provisions of the TCC.

⁴ Under the SBO licensing framework, licensees generally do not have networks, systems and facilities to offer telecom switching and/or transmission capacity or services.

However, some MNOs have commented that the determination of “unduly restrictive or anti-competitive practices” could potentially be subjective and open to disputes. IDA views that it is important to better understand how the market has developed in terms of the extent and nature of competition before an assessment can be made if a situation of undue restrictive or anti-competitive practice has arisen in the commercial negotiations.

Question: IDA seeks comments on the benchmarks and parameters that IDA should use to determine the competitiveness of the 3G market; and hence, on when and how it should intervene where commercial negotiations between MNOs and MVNOs fail.

3.4 Regulatory Intervention Approach and Charging Principles

3.4.1 If regulatory intervention is deemed necessary, IDA would need to establish the appropriate charging framework and principles, the methodology, and the non-price terms and conditions for access by MVNOs to MNOs’ networks. The charging framework on which access should be charged is an important factor that will impact the pricing and operations strategy of MVNOs. A variety of charging principles can be considered, among them retail-minus or cost-plus principles.

Question: IDA seeks comments on the charging framework and principles that MNOs should base their charges for network access and other services they offer to MVNOs. Under what circumstances and conditions should the charging framework and principles be applicable? Should there be variations depending on the circumstances and conditions and as the market develops? What are the non-price terms and conditions that should be set?

3.5 Timing for MVNO Entry

3.5.1 IDA is considering whether a moratorium needs to be imposed on when MVNOs could enter the 3G market. This is in view that it may be necessary to allow the 3G MNOs some time to recoup their investments, given that they bear much of the business risk with their investment in the 3G spectrum rights and network infrastructure.

Question: *IDA seeks comments on whether there should be a moratorium before MVNOs should be allowed to enter the market; and if yes, how long such moratorium should be and under what circumstances and conditions such moratorium should be reviewed and removed or extended.*

3.6 Number Portability and Quality of Service

3.6.1 IDA currently requires 2G MVNOs to implement number portability, at its own cost, according to any requirements and guidelines established by IDA. IDA also reserves the right to establish minimum quality of service standards for the services provided by the MVNOs.

Question: *IDA seeks comments on whether 3G MVNOs should be required to offer number portability services; whether IDA should impose minimum quality of service standards on 3G MVNOs; and if so, whether the requirements and standards should be different from that imposed on MNOs.*

3.7 Technical Issues

3.7.1 IDA's intention is for MNOs and MVNOs to commercially negotiate and co-operate in good faith with each other to address technical issues that may arise, including call handling, call routing requirements, number portability, security, capacity planning. However, there may be a need to set out a framework of the minimal requirements that MNOs should offer MVNOs.

Question: *IDA seeks comments on the technical issues that should be addressed, in particular, any potential technical issues from the MNOs' technical operations perspective that might arise that could potentially impede or restrict the MVNO operations and service offerings and how these may be resolved satisfactorily, taking into account the concerns of both parties and yet allow the development of fair and sustainable competition.*

4 INVITATION OF COMMENTS

4.1 In summary, IDA would like to seek the views and comments of industry and public, including the reasons, considerations and justification for the views and comments expressed on the following proposals and issues raised in the consultation paper:

- (a) *IDA seeks comments on the possible types of services a 3G MVNO might offer, the role that they might play to promote competition, and the benefits they would bring to consumers and consequently the scope of network access and services that 3G MNOs should offer MVNOs.*
- (b) *IDA seeks comments on whether a distinction should be made of the different types of MVNOs, and if certain “maximalist” MVNOs should more appropriately be licensed as FBOs.*
- (c) *IDA seeks comments on the benchmarks and parameters that IDA should use to determine the competitiveness of the 3G market; and hence on when and how it should intervene where commercial negotiations between MNOs and MVNOs fail.*
- (d) *IDA seeks comments on the charging framework and principles that the MNOs should base their charges for network access and other services they offer to MVNOs. Under what circumstances and conditions should the charging framework and principles be applicable? Should there be variations depending on the circumstances and conditions and as the market develops? What are the non-price terms and conditions that should be set?*
- (e) *IDA seeks comments on whether there should be a moratorium before MVNOs should be allowed to enter the market; and if yes, how long such moratorium should be and under what circumstances and conditions such moratorium should be reviewed and removed or extended.*
- (f) *IDA seeks comments on whether 3G MVNOs should be required to offer number portability services; whether IDA should impose minimum quality of service standards on 3G MVNOs; and if so,*

whether these requirements and standards should be different from that imposed on MNOs.

(g) IDA seeks comments on the technical issues that should be addressed, in particular, any potential technical issues from the MNOs' technical operations perspective that might arise that could potentially impede or restrict the MVNO operations and service offerings and how these may be resolved satisfactorily, taking into account the concerns of both parties and yet allow the development of fair and sustainable competition.

4.2 All views and comments should be submitted in writing and in both hard and soft copy (Microsoft Word 97 format), and should reach the IDA **on or before 12 noon 31 May 2001**. Respondents are required to include their personal/company particulars as well as the correspondence address in their submissions. Comments and views should be addressed to:

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4.3 IDA reserves the right to make public all or parts of any written submissions made in response to the Consultation Paper and to disclose the identity of the source of any comments or views published. In this regard, any part of the submission that is considered commercially confidential should be clearly marked and placed as an annex to the comments and views raised. IDA will take this into account when disclosing the information submitted.

4.4 IDA targets to issue the final 3G MVNO framework by 3rd quarter 2001.
