



Consultation Paper :

CHARGING FOR MOBILE PHONE SERVICES:
MOBILE-PARTY-PAYS ("MPP") VS CALLING-PARTY-PAYS
("CPP")

INFOCOMM DEVELOPMENT AUTHORITY OF SINGAPORE

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1 INTRODUCTION

- 1.1 Currently, a mobile phone customer in Singapore pays for both incoming and outgoing calls he makes or receives on his mobile phone¹. This is known as the **Mobile-Party-Pays** charging method. This contrasts with a fixed-line customer, who only pays for calls he makes and not for calls he receives, i.e. **Calling-Party-Pays** charging method.
- 1.2 The purpose of this consultation paper is to seek public comments on IDA’s intention to review the mobile phone service charging method from the Mobile Party Pays (MPP) to a Calling Party Pays (CPP) charging system.

2 IMPACT ON MOBILE PHONE AND FIXED-LINE CUSTOMERS

- 2.1 Currently, under MPP, as mobile operators are entitled to charge its customers for both incoming and outgoing calls. As such, the fixed-line operators need not pay call termination charges to mobile operators for fixed-to-mobile calls as mobile operators are already compensated for terminating such calls by their own mobile customers. Under CPP method, mobile operators will not be entitled to charge its customers for incoming calls. Therefore, mobile operators will then need to recover the costs of terminating such calls from the operator who originates the call.
- 2.2 Fixed-line customers currently pay rates of \$0.014/\$0.007 per minute for peak/off-peak hours for out-going calls. These rates apply whether they make a call to a mobile phone customer or to another fixed-line customer. With the change to a CPP charging method for mobile service, fixed-line operators will then have to pay a termination charge to mobile operators, which they currently do not under MPP. Therefore, fixed-line operators will need to recover call termination charges for carrying fixed-to-mobile calls. Fixed line operators may then differentiate the local call tariffs for fixed-to-mobile calls from fixed-to-fixed calls if the costs for conveying mobile and fixed traffic are different.

¹ Unless the customer subscribes to mobile service plans where the incoming call charges are absorbed by the mobile operators.

IDA invites views on the financial, operational and behavioural implications and impact of the move to CPP charging method for mobile phone services. In particular, we would like public comments on the likely impact on both mobile and fixed line customers with the move to CPP.

2.3 **Annex 1** details some countries that have adopted CPP or MPP charging method for mobile services.

3 GROWTH OF MOBILE DATA COMMUNICATIONS

3.1 2.5G and 3G systems provide increased bandwidth capability to better support mobile data and m-commerce applications. Mobile data services over 2.5G and 3G systems may generally be grouped into two main types of services, i.e. ‘**push**’ and ‘**pull**’ type data applications or services. ‘**Push**’ type services may include location-based services, such as advertising and “e-coupons”. ‘**Pull**’ type services can include search and information services, messaging, etc.

3.2 2.5G and 3G services are packet-switched systems, operators may generally bill their customers differently from circuit-switched voice services. For example, the charges for GPRS in Singapore are based on volume-based-per-kilobyte usage. Voice services are billed on time-based usage basis. The charging method for Japan’s i-mode and 3G wireless services are also packet-based (customers are charged per packet basis, each packet is equivalent to 128 bytes of data). The charging method for mobile data services (i-mode & 3G) in Japan is based on MPP where customers are charged regardless of whether data is sent or received by the customer. However, we understand that voice services are instead based on CPP in Japan where customers pay only for outgoing calls.

3.3 3G networks can support several bearer types (e.g. 64 kbps real-time for video-conferencing or 256 kbps non-real-time for file transfers) as compared to 2G networks. Potential 3G service providers have recognised that using volume-based tariff structures instead of using value-based billing may actually hinder the take-up rate and usage patterns of 3G services. As such, some operators have looked into billing of 3G services by taking into consideration of several layers of granularity such as content provider, type of content, transaction value, action taken on the content, and service quality. For example, we understand that BT Manx have indicated that its tariffing structures for 3G services to be introduced

on the Isle of Man will vary according to the services provided. Pure data services will be billed on download cost per megabyte, online gaming will be charged a fee per game, and video will be billed in 2 ways: as a subscription package or pay-per-view.

- 3.4 In essence, we are concerned that the existing MPP charging method may impact or hinder the growth, usage and proliferation of broadband wireless data services (2.5G & 3G) in Singapore if customers have to pay for every packet or call he initiates or receives.

IDA seeks views on the move to CPP, or the possible implementation of different charging methods for voice and data services. For example, CPP for voice and MPP for data services. Or to implement a single charging method, i.e. CPP or MPP, for both voice and data services.

IDA is interested in comments on the impact this change will have on the growth and usage of mobile data services and applications as compared to voice communications in Singapore.

IDA also requests suggestions and views on the possible safeguards or solutions to address and prevent mobile customers from being “unfairly” charged for “push” type services (like e-advertising or spam on mobile services) under the MPP charging method.

4 EXCEPTIONS MADE FOR MOBILE CALLS UNDER INTERCONNECTION FRAMEWORK

- 4.1 MPP charging method for mobile services as compared with CPP method for fixed-line services impacts the Fixed-Mobile Interconnection (FMI) framework and inter-operator call settlement flows between fixed and mobile operators. In essence, the traffic terminating on mobile networks have to be treated differently from the overall Origination, Termination & Transit (O/T/T) interconnection

framework² under the Telecom Competition Code. The payment flows in scenarios where mobile operators are involved are different from scenarios where all other operators are involved. This has resulted in some confusion among fixed-line and mobile operators during their interconnection negotiations. *Annex 2* describes the various call scenarios illustrating the payment flows for O/T/T traffic.

- 4.2 In addition, the costs of interconnection links³ between fixed-line and mobile operators are currently fully borne by the mobile operators. For all other Facilities-Based Operators (FBOs), each operator will be responsible for the provision and costs of the interconnection links on their side of the point of interconnection. If the mobile charging method aligned to CPP, mobile operators may then be treated as an FBO under the current Interconnection Framework in the Telecom Competition Code. That is, the Fixed-Mobile Interconnection (FMI) framework can be removed as it will no longer be necessary.

IDA invites comments on the changes necessary to the existing Fixed-Mobile Interconnection (FMI) framework with respect to the overall Interconnection Framework under the Telecom Competition Code. For example, O/T/T including interconnection configuration, provision & payment for interconnection links between operators etc if a CPP charging method is adopted.

5 SUMMARY OF QUESTIONS

- a) IDA invites views on the financial, operational and behavioural implications and impact of the move to CPP charging method for mobile phone services. In particular, we would like comments on the likely impact on both mobile and fixed line customers with the move to CPP.
- b) IDA therefore seeks views on the move to CPP, or the possible implementation of different charging methods for voice and data services. For example, CPP for voice and MPP for data services. Or to implement a

² “Information Paper - Charging Regime for Origination, Termination and Transit Services in a multi-operator environment”, <http://www.ida.gov.sg/Website/IDAContent.nsf/vSubCat/Policy+&+RegulationInterconnection+&+Access?OpenDocument>, 21st November 2001

³ Interconnection links are transmission links between 2 interconnecting operators for the purpose of exchanging traffic.

single charging method, i.e. either CPP or MPP, for both voice and data services.

- c) IDA is interested in comments on the impact this change will have on the growth and usage of mobile data services and applications as compared to voice communications in Singapore.
- d) IDA also requests suggestions and views on the possible safeguards or solutions to address and prevent mobile customers from being “unfairly” charged for “push” type services (like e-advertising or spam on mobile services) under the MPP charging method.
- e) IDA invites comments on the changes necessary to the existing Fixed-Mobile Interconnection (FMI) framework with respect to the overall Interconnection Framework under the Telecom Competition Code. For example, O/T/T including interconnection configuration, provision & payment for Interconnection Links between operators etc if a CPP charging method is adopted.

6 INVITATION TO COMMENT

- 6.1 IDA would like to seek the views and comments of the industry and public on the issues set out in this Consultation Paper. Respondents are also invited to comment on any other related issues not covered in this document if they believe are relevant to this review.
- 6.2 IDA will consider inputs submitted and make its policy decisions thereafter. IDA targets to announce its policy decision by second quarter of 2002.
- 6.3 All submissions should reach the IDA **before 5:00 pm on 1 March 2002**. All views and comments should be submitted in writing including softcopy (preferably Microsoft Word format). Respondents are required to include their personal/company particulars as well as the correspondence address, contact numbers and email addresses in their submissions.

6.4 Written responses should be directed to:

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6.5 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. Any part of the submission which is considered commercially confidential should be clearly marked and placed as an annex to the comments raised. IDA will take this into account when disclosing the information raised.