

## **REVIEW OF FIXED-MOBILE INTERCONNECTION**

### **RESPONSE FROM SINGTEL LTD**

#### **1. INTRODUCTION**

1.1 The InfoComm Development Authority (“IDA”) has sought views and comments on the possible scenarios and implications on inter-operator charges, end users and implementation issues arising from a change in the current policy framework should the current Fixed-Mobile Interconnect regime be changed.

1.2 Singapore Telecommunications Limited (“SingTel”) opposes any change to the current Fixed-Mobile Interconnect regime and does not support the introduction of Calling Party Pays (“CPP”) in any form in the Singapore mobile and paging market. At best, the introduction of CPP in the mobile and paging markets represents nothing more than a mechanism to shift the billing and payment for providing mobile and paging services from mobile and paging subscribers to fixed line subscribers. At worst, the introduction of CPP represents an attempt to force fixed line subscribers to bear the burden of paying for mobile and paging services delivered by mobile and paging operators to their own subscribers. Whilst the actual benefits to be derived from CPP are unclear and uncertain, it is abundantly clear and certain that CPP in any form will be to the detriment of fixed line subscribers. No matter how CPP is implemented, fixed line subscribers will end up paying the bill.

1.3 In addition to fixed line subscribers having to foot the bill for mobile and paging subscribers, a shift to a CPP model will require the fixed line operator to provide the supporting infrastructure and systems necessary to bring the CPP service to market. We do not see any CPP benefits flowing to fixed line operators or fixed line subscribers. Yet if CPP were to be introduced, it will be the fixed line operators which will be most affected.

1.4 SingTel does not intend to expend considerable time and resources in supporting CPP which represents nothing more than a billing option for mobile and paging operators to offer to their subscribers at the expense of fixed line subscribers.

## **2. CPP UNFAIRLY DISCRIMINATES AGAINST FIXED LINE SUBSCRIBERS**

2.1 CPP unfairly discriminates against fixed line subscribers and is both unwarranted and unjustified. In our view, fixed line subscribers are disinclined to pay for calls to someone else's mobile or paging service. It is the reasonable expectation, and the current practice, for fixed line subscribers making calls to mobile and paging subscribers not to pay for the airtime or paging costs of the call. Mobile and paging subscribers should bear the charges incurred in providing their mobile and paging services.

2.2 We view CPP as nothing more than an attempt to eliminate the airtime and paging charge from mobile and paging subscribers and to place the responsibility and burden of these charges on the fixed line subscribers. Subscribers to fixed line services are expected to pay for the mobile and paging services delivered to, and enjoyed by, mobile and paging subscribers.

## **3. GREATER PRICING FLEXIBILITY**

3.1 In its consultation document, the IDA refers to providing greater flexibility for mobile and paging operators to offer innovative pricing and service schemes. Should this be the aim of the IDA, we would suggest that rather than create considerable complexity and cost for fixed, paging and mobile operators and fixed line subscribers, the efforts of the IDA would be better focused on relaxing or removing the price controls which are imposed on SingTel Mobile, StarHub Mobile and SingTel Paging and Sun Page.

Vigorous competition in a multi-operator, multi-network market is already meeting market demand.

#### **4. CHANGES IN INTERNATIONAL SETTLEMENT REGIME**

4.1 The IDA has expressed the view that proposed changes in the international settlement regime have prompted the consultation on CPP. CPP is not the answer to this issue. This issue could be addressed simply and easily by adopting CPP only for all international incoming calls to mobile and paging subscribers.

4.2 As the IDA correctly points out, currently, the terminating mobile subscriber pays the airtime charges for terminating the call on the mobile network. As such, there is no need for international gateway operators to differentiate between incoming international calls terminating to fixed, mobile or paging numbers. Irrespective of the point of termination, the charge is the same. The introduction of optional CPP will in fact further complicate international settlements. The terminating mobile operator will not recover its airtime charge from the mobile subscriber, but instead seek to recover the airtime from the international gateway operator, who in turn will seek to recover the additional charge from the foreign correspondent who delivered the call for termination. Owners of international gateway facilities would face the additional problem of identifying and differentiating between international incoming calls that are destined to terminate on CPP subscriber numbers and Mobile Party Pays (“MPP”) subscriber numbers. If the international gateway operator were unable to differentiate between CPP and MPP terminating traffic, operators would not be able to fully recover the charge and could encourage incoming international traffic distortions.

4.3 Alternatively, if the international gateway operator is unable to differentiate, some form of weighted average termination charge would need to be determined which may

either over-recover or under-recover charges. Such an approach may distort traffic and encourage practices such as “tromboning”. Tromboning occurs where the international termination rate charged to foreign correspondents is lower than the domestic mobile termination rate. Some operators rather than pay the higher domestic termination rate may choose to send calls via international facilities and deliver the calls back to another operator within the same country for termination at a cheaper rate.

4.4 As the above serves to illustrate, CPP is not necessarily the solution to a potential change in the international settlement regime and in fact raises its own concerns.

## **5. COMPETITION IN MOBILE AND PAGING MARKETS IS DELIVERING INNOVATION**

5.1 The entry price for consumers continues to decline with competition within the paging market. Available alternatives (eg mobile services) have continued to reduce prices for paging subscription and paging equipment. Further, competition is driving tariff and product diversity with operators offering a variety of tariff packages to suit customers with different service profiles and needs. The availability of paging number portability enables consumers to move between operators with relative ease, choosing the operator that best serves their particular needs in terms of price and non-price attributes. With reductions in prices, diversity in tariffs and products and the availability of paging number portability, the paging market is competitive. We believe that there is no justification for the introduction of CPP.

5.2 In terms of the mobile market, competition has delivered to mobile subscribers benefits such as increased coverage, improved network quality, higher performance handsets and the introduction of innovative value added services such as voicemail, SMS, calling number display, mobile banking etc. The level of mobile penetration has increased from 13.6% in January 1997 to 42.9% in October 1999. As at the end of October 1999, there were 1,357,600 mobile subscribers in Singapore with some 337,400 new subscribers being attracted to the mobile market in the first 10 months. MSP is

working and mobile operators are delivering new and innovative services and offerings to attract new subscribers and retain existing ones. The Singapore mobile market continues to grow and thrive at rates which are comparable with the best mobile markets in the world.

5.3 As the mobile and paging markets clearly demonstrate, there are many opportunities for mobile and paging operators to provide new and innovative price and non-price offerings to their subscribers which they are all actively and aggressively pursuing. Any change in policy is unwarranted and unjustified.

## **6. SOME FIXED LINE ISSUES WITH CPP**

The introduction of CPP will have significant effects for call processing, signaling, billing and collection and customer care systems etc. It is also important to note that the CPP currently considers only the issue of mobile voice traffic and there will need to be a consideration of how CPP will affect mobile data such as e-mail and messaging and new innovative third generation services.

### **6.1 Definition of CPP**

6.1.1 It is unclear from the IDA consultation document whether CPP will apply to all calls in and out of the mobile and paging networks. The consultation document appears to focus on fixed-mobile calls and makes no reference to mobile-mobile, mobile-paging, mobile roaming etc. There are many ways to implement CPP, each method of implementation raising distinct issues such as implementation costs, calling party notification and each will have effects on the mobile market. If the IDA intends to continue to pursue this issue after the initial consultation, then, the first matter which must be addressed is the definition of CPP.

6.1.2 Our understanding is that CPP in other jurisdictions has been implemented in a variety of ways and there exists no uniform CPP model. Jurisdictions such as Australia,

United Kingdom and Germany apply CPP to all calls with only a few exceptions such as domestic or international roaming, whilst others exclude mobile-mobile, international incoming-to-mobile, and other such calls from CPP; in effect, they have a combined CPP-MPP model. Each method of implementation raises its own unique issues.

## 6.2. Calling Party Notification

6.2.1 The implementation of CPP would represent a significant change for the fixed line subscribers who are used to paying only the local call charge for calls to mobile and paging numbers with no additional charge. If optional CPP were to be introduced, calling party notification must be a requirement.

6.2.2 Fixed line subscribers will be exposed to significant risk of incurring high call charges if CPP were to be introduced. As such there will be a need to adopt a calling party notification scheme whereby all calling parties are notified of the terms and conditions, including price, for CPP calls, and are given an opportunity to terminate the call to avoid incurring the additional charge.

6.2.3 Consistent with the proposed requirements of the FCC, the notification process should consist of the following elements:

- (i) notice that the call is to a mobile or paging operator/subscriber who has chosen the CPP option;
- (ii) notice that the calling party will be responsible for the airtime or paging charges;
- (iii) the per minute/per page rate that will be charged; and
- (iv) an opportunity for the calling party may terminate the call prior to incurring any charges.

6.2.4 This notification requirement should be continual as consumers will not know on a per call basis whether the call will incur an additional charge. Further, it needs to be continual as the terms and conditions, including the charges, may change from time to time as mobile and paging operators compete on pricing to encourage incoming calls. The implementation is further complicated by number portability.

### 6.3 Establish Contract

6.3.1 In Singapore, today, the fixed line calling party is a subscriber of the fixed line operator. If CPP is a mobile or paging service, for calls to mobile subscribers, the fixed line calling party has no relationship with the mobile or paging operator as the mobile airtime charges and the paging charges are borne by the mobile or paging subscriber. With the introduction of CPP the relationship becomes more complex as it involves the calling party establishing a contractual relationship with the mobile/paging operator. From a contractual perspective, the calling party is not only a subscriber of the fixed line operator for the local fixed line service, but will also need to become a subscriber of the mobile/paging operator.

6.3.2 The notification as envisaged above is necessary not only for the purpose of disclosing the terms, conditions and price prior to the completion of the call, but also to establish an enforceable contract between the fixed line calling party and the mobile or paging operator.

### 6.4 Network Implementation

6.4.1 The implications for the fixed line network will differ depending upon the manner in which CPP is to be implemented i.e. CPP for all calls or only some calls, CPP for only some operators, optional CPP for subscribers etc.

6.4.2 Undoubtedly, the most costly part of implementing CPP within the fixed line network will be the requirement to identify the dialed mobile and paging number as belonging to a CPP subscriber. The fixed line operator will need to establish a technical

solution to identify those numbers that are CPP and those which are not. In a portable mobile and paging environment, this would require the development of a costly IN solution.

6.4.3 For all calls to mobile and paging, a query would need to be initiated to an IN database. The degree of complexity is similar to that involved in determining the correct routing for number portability. The main difference under this scenario will be that an all-call query approach will need to be adopted. This will mean that all fixed-mobile calls will involve an IN query whether or not the call is to a CPP number. This would serve to increase the cost for fixed-mobile calls. Similarly, should the CPP model be adopted for mobile-mobile calls, this would also require an IN database query process.

## 6.5 Payphones

6.5.1 Today, the mechanism at the payphones to charge for calls to a fixed, mobile and paging line is simple. There is no mechanism available to differentiate the billing of a subscriber for calls made from public or private payphones. Payphones are unable to determine a CPP number vs an MPP number and will have to charge all calls at a higher rate. Alternatively, payphones may end up charging calls at the current local call rate. Enhancements would then have to be made in billing systems to either ensure that the mobile operator does not charge the airtime and the paging operator does not charge a rate per page to the fixed line operator for such calls, or, to ensure that the mobile or paging operator can recover these amounts from the mobile and paging subscribers.

## 6.6 Intelligent Network (IN) Services

6.6.1 There is currently no solution available to pass information needed to bill a calling party using calling cards or VPNs. For IN services which involve flexible routing, the calling party may also not be able to determine whether the call is made to a fixed, mobile or paging line.



## 6.7 Call Blocking

6.7.1 Basically, CPP serves to reduce the cost for mobile and paging subscribers by increasing the cost to fixed line subscribers.

6.7.2 Currently many Centrex business subscribers seek to control costs by blocking high cost calls from certain lines. They are presently able to do so by programming switches or PBXs to identify such calls on the basis of the dialed code. With the introduction of optional CPP, such blocking will not be possible, especially with number portability.

6.7.3 Residential subscribers will also be exposed to the potential of incurring high call charges for fixed-to-mobile and fixed-to-paging calls and the issue of call blocking will need to be addressed.

## 6.8 Billing and Collection

6.8.1 It is reasonable to anticipate that under a CPP model mobile operators will seek billing and collection services from the fixed line operators. Under the MPP model, for the purpose of billing the local call charge, the fixed line network does not need to know whether the call is to a fixed, pager or mobile number. For such local calls the local call rate applies. With the introduction of CPP, there will be a significant impact on the billing and collection of revenue associated with CPP calls.

6.8.2 Currently, there is no need to create Call Detail Records (“CDRs”) for fixed-to-mobile or fixed-to-paging calls. With the introduction of CPP, billing from the local exchange will not be possible and there will be a need to create CDRs within the fixed

line network. This would incur additional network resources, both to create and to store the CDRs for the purpose of billing and collection.

6.8.3 The switches will need to be polled at regular intervals to retrieve the raw billable CDR records. These raw records will then need to be formatted such that they may be processed by downstream billing systems. The large volume of records will require heavy investment in the collector system for the retrieval of these raw records.

6.8.4 The formatted CDR records will need to be rated to attach the appropriate charge. The current billing systems will also have to be enhanced to process as well as store the large volume of CDRs. This will involve the rating of substantial records and require additional expenditure and incur processing costs.

6.8.5 Depending on the billing requirements of the mobile operator (e.g. identifying the operator on the bill etc.), adding the charges to the fixed line subscribers' existing bill will be complex. In any event, there will be additional costs incurred in supporting CPP for mobile and paging operators.

6.8.6 The introduction of CPP will also complicate the inter-operator settlement. Additional costs will be incurred in undertaking collection activities to recover outstanding amounts associated with CPP calls. The bad debt associated with the CPP calls should be borne by the mobile operators. Issues and costs will arise in tracking and reconciling the invoiced CPP amounts and the payments associated with those charges.

## 6.9 Loss of Goodwill/Customer Care

6.9.1 Subscriber dissatisfaction will occur and the fixed line operator, as the likely billing party, will take the brunt of that subscriber backlash.

6.9.2 The introduction of CPP has the potential to create confusion for fixed line subscribers and the loss of goodwill. Fixed line subscribers are used to paying the local call charge for all their local calls, including calls to mobile and paging, and are likely to be confused by CPP and upset with the new charges. The fixed line operators should not be held responsible for handling what could be a host of subscriber complaints concerning the new CPP arrangement, and should not be forced to risk a potential reduction in the sale of their core fixed line services because of CPP.

6.9.3 Further, as indicated above, the introduction of CPP will generate increased queries from subscribers given the higher mobile charge. This could have a significant operational impact.

6.9.4 In addition, the introduction of CPP will raise the question as to the ability of fixed line operator representatives to make adjustments to fixed line subscribers accounts where the charges to be adjusted or waived relate to the provision of mobile or paging services.

## **7. CONCLUSION**

7.1 Mobile and paging subscribers should pay for the services which they receive from mobile and paging operators. CPP is nothing more than a mechanism to shift the burden of responsibility for mobile and paging charges to fixed line subscribers. This serves the interests of mobile and paging operators and their subscribers at the expense of

fixed line subscribers. CPP unfairly and positively discriminates against fixed line subscribers.

7.2 The mobile and paging markets are characterised by falling prices, vigorous competition, tariffs and product diversity, and the availability of portability. Faced with these market conditions there is no justification for a fundamental change in policy.

7.3 In terms of promoting flexibility and innovation, competition in the paging and mobile markets is already delivering this objective. Should the Authority wish to further provide additional scope, the relaxation or removal of price controls on all mobile and paging operators would address this stated aim.

7.4 Potential changes in the international settlement regime do not justify a fundamental change in domestic telecommunications policy. This issue can be solved via a number of means which do not give rise to the cost, complexity or concerns that the introduction of CPP would involve.

7.5 The introduction of CPP will have significant effects for call processing, signaling, billing and collection and customer care systems etc. The implementation will raise many complex issues and involve significant expenditure on the part of fixed line operators to support. These costs will ultimately be passed back to subscribers.

7.6 In light of the above, SingTel strongly opposes the introduction of CPP in the paging and mobile markets and sees no justification for such a fundamental change in policy.