

STARHUB'S RESPONSE TO IDA'S CONSULTATION PAPER –
INTERCONNECTION CHARGING MODEL FOR
INTERNET DIAL-UP TRAFFIC

StarHub Pte Ltd and StarHub Internet Pte Ltd (“StarHub”) appreciate the opportunity to comment on the issues of Interconnection charging model for Internet dial-up traffic.

General Comments

The Internet dial-up access market can be broadly categorised into two main segments, paid Internet dial-up access and free Internet dial-up access services. The former requires payments from the end-users to the Internet Access Service Providers (IASPs) in the form of monthly subscription fees and/or usage charges based on duration or quantum of data access. In addition, customers subscribing to non toll-free Internet dial-up access services will also incur local telephone call charges payable to their fixed network operators.

On the other hand, free Internet dial-up access services are provided free-of-charge to the end-users by the IASPs. End-users need only pay to their fixed network operators local telephone call charges computed based on usage duration, for what is essentially a telephone call in the manner that voice calls are transmitted.

StarHub was the first to introduce, in December 1999, free Internet to Singapore through our “Surf-For-Free” service. The response received from the consumers to Surf-For-Free was overwhelming. StarHub Internet's subscriber base tripled to over 200,000 within three months of introducing Surf-For-Free.

Today, Surf-For-Free continues to enjoy much success despite the thriving competition among Internet service providers and the introduction of broadband Internet access. What was once a revolutionary concept in the Singapore marketplace has now precipitated a distinct and popular demand for this free-of-charge service whose subscribers recognise the value proposition compared to the other offerings in the market. Evidently, paid Internet services and Surf-For-Free serve different users with distinct needs and requirements.

IDA's proposal to change the Interconnection Charging Model will “kill” free Internet

StarHub is puzzled with IDA's intent in respect of this consultation. All the new charging models proposed by IDA (as pointed out in the consultation paper) will make it not viable for IASPs to offer free Internet services. StarHub does not see how IDA's proposals serve consumers' interests. By IDA's own admission, consumers will see an end to free Internet access services as all the charging proposals advocate the deconstruction of the self-sustaining business model of free Internet dial-up access services. This means that consumers whose “Internet access needs” are currently met by free Internet services will be forced to either change to paid Internet access plans or not enjoy Internet access at all.

Ironically, such a foreseeable outcome as emphasised by IDA time and again in the consultation paper sharply contrasts with IDA's objective for this review, which is to ensure that end-users will enjoy the widest choice and flexibility in choosing their Internet access services. IDA's decision to change the charging model will single-handedly and immediately “kill” free Internet and deprive customers of this innovative service, which StarHub intends to continue to offer for the foreseeable future.

Another likely result from IDA's proposals is that fixed network operators hosting the IASPs will need to recover their costs from the IASPs. This will most probably lead to costlier Internet access plans for the end-users.

Specific Comments

IDA welcomes comments on the need for a review of the current Interconnection charging model for inter-network conveyance of Internet dial-up traffic. Is the current model still appropriate in the new multi-network, multi-operator competitive environment, and why? Are there other reasons why the current model should, or should not be changed?

Over-compensation to Fixed Network Operators hosting IASPs

Today, inter-operator settlements for paid and free Internet dial-up access services are transacted based on the relevant Interconnection agreements between the operators and in accordance with the Telecom Competition Code.

Based on these existing arrangements, Internet dial-up traffic are treated in the same manner as fixed-line phone-to-phone local calls in view of the similarity in routing configuration and utilisation of network elements. To date, there has been no change in these network bases which the arrangements rely upon to support a review of the Interconnection charging model for Internet dial-up traffic.

In this regard, StarHub would appreciate clarification from IDA on the basis of its view that the current inter-operator charge based on the call termination model (which is computed based on the network elements used for a fixed-line phone-to-phone local call) for terminating Internet dial-up traffic, over-compensates the fixed network operators who host the IASPs.

There is no provision in the network for separate routing of Internet dial-up traffic as compared to fixed-line phone-to-phone local call traffic. In essence, the same network elements are utilised to facilitate the routing of these two types of traffic.

StarHub therefore disagrees with IDA that the network elements, and their associated costs, required to connect an Internet dial-up call to an IASP are actually fewer/lower than those required for a normal fixed-line phone-to-phone call. StarHub submits that the only difference between a fixed-line phone-to-phone call and an Internet dial-up call is the call duration where the latter typically lasts longer than the former.

However, local telephone call charges and call termination payments are computed based on duration of use, whether it is an Internet dial-up call or a fixed-line phone-to-phone local call. Such time-based charging equitably and proportionately compensates the originating fixed network operators and the operators hosting the IASPs for the use of their network resources, irrespective of the nature of the calls. It thus effectively addresses the concern that Internet dial-up calls are typically of longer duration as compared to normal PSTN calls. Otherwise, IDA may need to review the need for separate call termination charges for calls that are longer in duration. Such charges would need to apply to both voice and Internet traffic.

Under the existing arrangement whereby Internet dial-up access are treated as call termination services, originating fixed network operators are compensated by Internet dial-up subscribers who are directly connected to their network through the collection of local telephone call charges. Out of these receipts from their customers, the originating fixed network operators would make payments to the fixed network operators hosting the IASPs for the latter's termination of Internet dial-up calls at their networks.

Hence, while the originating fixed network operators have to buy call termination services from the operators hosting the IASPs, the net sum of local telephone call charges which the former receive from their directly connected customers and call termination payments to the operators hosting the IASPs provide adequate compensation for such service provision.

In light of the above, StarHub is of the view that:

- i. Internet dial-up access services are similar to fixed-line phone-to-phone local calls in terms of network routing configuration and utilisation;

- ii. there is no over-compensation by originating fixed network operators to fixed network operators hosting the IASPs in respect of Internet dial-up traffic originating from customers directly connected to the former; and
- iii. the local telephone call charges received by the originating fixed network operators for originating Internet dial-up calls from their networks, and the call termination payments from these operators to the fixed network operators hosting the IASPs for the latter's termination of Internet dial-up calls at their networks, duly compensate the respective operators for conveyance and termination of Internet dial-up traffic in accordance with existing Interconnection charging arrangements.

Non-alignment with Interconnection and Access Framework

As highlighted above, the treatment of Internet dial-up access as call termination services under the current Interconnection and Access Framework is consistent with the principle of cost causality. The originating operators are compensated for conveyance of Internet dial-up traffic through collection of local telephone call charges from the IASP subscribers directly connected to their network. In turn, the fixed network operators hosting the IASPs receive call termination payments for termination of the Internet dial-up calls. Such is the Interconnection charging arrangements for fixed-line phone-to-phone local calls which utilise the same routing and network elements as Internet dial-up traffic.

In consideration of the proposal to classify Internet dial-up access as call originating traffic, it is also necessary to evaluate the following:

- i. in light of IDA's position that the network elements and their associated costs required to connect an Internet dial-up call to an IASP are fewer/lower than those required for a normal fixed-line phone-to-phone call, it would follow that the network elements and the associated costs required to originate a data call to an IASP's services are also fewer/lower as compared to those required for originating voice calls to services such as IDD and 1800 toll-free services. Therefore, based on such derivation from IDA's analysis, adopting a call origination model for Internet dial-up traffic would instead over-compensate the originating fixed network operators whom the IASP subscribers are directly connected with; and
- ii. adoption of the call origination model for inter-operator charging of Internet dial-up calls conveyance would effectively demolish the self-sustaining business model of free Internet dial-up access products. Consequently, consumers would be deprived of innovative Internet access services which are provided free-of-charge by the IASPs.

To what extent do we have to consider the advent of mobile Internet, i.e. should we consider a model that caters for IASPs hosted by a mobile network? Are there other issues that we should take note of?

In the case of an IASP which is hosted by a mobile operator, the inter-operator charging model for Internet dial-up traffic to be adopted should be no different from that for a fixed-to-fixed Interconnection. The mobile network operator is deemed as offering a fixed network service as host to the IASP and the Terminating Access Model under the existing Interconnection and Access Framework provides due compensation to both the fixed network from which the Internet traffic originates and the mobile network terminating these traffic.

IDA welcomes views and comments on the issues raised above (Originating Access Model). Are there other issues that should be considered? How should these be addressed under the Originating Access Model?

The current Industry practice of treating inter-network Internet dial-up access as call termination services is based on the fact that similar routing configuration and network utilisation are assigned to fixed-line local phone-to-phone and Internet dial-up traffic.

Pending the clarification from IDA on the basis of its view that routing of Internet dial-up traffic uses less network elements and therefore incur lower costs, IDA's reasoning that call origination charges would better reflect the underlying network costs incurred for Internet dial-up traffic conveyance appears to contradict the implied distinction made by IDA in respect of PSTN and data traffic.

As mentioned, if termination of Internet dial-up traffic is perceived to require fewer network elements and incur lower costs, it should imply that origination of such traffic to the IASPs would similarly involve fewer network elements and result in lower costs consequently. Effectively, the call origination payments which will be received by the originating fixed network operators whom the IASP subscribers are directly connected with would over-compensate the originating operators. Hence, the Originating Access Model is therefore not appropriate for inter-operator charging of Internet dial-up traffic conveyance and termination.

Further, in the event that such a charging model is adopted for Internet dial-up traffic, consumers would see an end to free Internet dial-up access products as the costs incurred in conveying the Internet dial-up traffic would be recovered from the IASPs, who may in turn decide to pass on the costs to their subscribers. Paid Internet dial-up would also be impacted directly due to the increase in costs incurred to provision the services. In addition, the IASPs will have to upgrade their billing systems and put in place processes to bill their subscribers for the telephone service, which would inevitably translate to higher provisioning costs. Inter-operator arrangements for verification of records on telephone access will also need to be established, which may result in delays in billing cycles in relation to the usage period.

IDA welcomes views and comments on the issues raised above (Sender-Keeps-All or Bill-and-Keep Model). Are there other issues that should be considered? How should these be addressed under the Sender-Keeps-All or Bill-and-Keep Model?

As IDA rightly pointed out, the Sender-Keeps-All (SKA) or Bill-and-Keep Model will only be feasible in the case when the Internet dial-up traffic volumes between the two interconnecting network operators are fairly balanced in both directions.

Being the dominant fixed network operator, SingTel currently commands a significant market share in local PSTS access. This being the case, the Sender-Keeps-All (SKA) or Bill-and-Keep Model is clearly not suitable for adoption by local fixed network operators for inter-network conveyance of Internet dial-up traffic.

Under this model, the fixed network operators hosting the IASPs will not be able to recover the costs incurred by them in terminating the Internet dial-up calls at their networks. Logically, the operators would seek to recover these costs from the IASPs, who may in turn decide to pass on the costs to their subscribers. Ultimately, the Sender-Keeps-All or Bill-and-Keep Model would deprive consumers the benefits of free Internet dial-up services which are provided free-of-charge by the IASPs. It is also highly likely possible that consumers will have to pay higher Internet access charges for paid services.

Such a model would also indirectly limit the choice of IASPs seeking alternative hosting services from competing network operators since the fixed network operator with the smaller subscriber base would inevitably incur higher cost for terminating Internet traffic. This clearly does not promote a competitive environment and level playing field for all network operators and service providers.

IDA welcomes views and comments on the issues raised above (Transit Model). Are there other issues that should be considered? How should these be addressed under the Transit Model?

While the Transit Model may be relatively straightforward to implement as compared to the Originating Access Model and the Sender-Keeps-All (or Bill-and-Keep) Model, it is not necessarily the best option among the three models. Importantly, IDA's consideration on the most appropriate Interconnection charging model for Internet dial-up traffic must be based upon clear and objective guiding principles, rather than choosing a "quick fix" solution.

Termination of Internet dial-up calls at the fixed network operators hosting the IASPs cannot be equate to a call transit service. To adopt such a simplistic view of network services is highly objectionable and completely deprive the terminating fixed network operators of the recognition and compensation that they duly deserve. It must be emphasised that the network elements and the associated costs required to terminate Internet dial-up calls are borne by the operators hosting the IASPs, not by the IASPs.

Under this model, the originating fixed network operator makes lower payments to the terminating operator hosting the IASPs. As such, the originating network operator will be over-compensated since it will now keep a larger proportion of the payments collected from the IASP subscribers.

Similar to the other charging models proposed by IDA, consumers would see an end to free Internet dial-up access products as the costs incurred in terminating the Internet dial-up traffic could not be fully recovered from the originating fixed network operator. The IASP may decide to pass on these costs to their subscribers. Paid Internet dial-up services would also become costlier due to this increase in provisioning costs.

StarHub would like to reiterate that the motivation to select the appropriate charging model for Internet dial-up traffic must be driven by sound guiding principles, rather than the desire to seek a convenient substitute to address IDA's concern of over-compensation.

IDA seeks feedback on which of the above three models is the most preferred to replace the current Interconnect charging model for inter-network conveyance of Internet dial-up traffic and why, and the implementation issues that should be considered. Are there other models that should be considered, and why?

As evident from the above discussions, it is difficult to appreciate the motivation behind this IDA consultation. It appears that from the three models proposed for charging of inter-network Internet dial-up traffic, IDA is prepared to accept the fact that consumers would be impacted most since all these models advocate the deconstruction of the self-sustaining business model of free Internet dial-up access products. Ultimately, regardless of which of these models is adopted, consumers must realise that they would see an end to Internet dial-up access services which are provided free-of-charge by the IASPs. Consumers will have a more limited choice and lesser flexibility in choosing their Internet access services, which completely defeats the objective of this IDA consultation.

Potentially, such market intervention by IDA could also stifle innovation in the Industry and deter the launch of future products and services which would benefit the consumers at large.

In conclusion, StarHub does not agree with the basis of this consultation. The Terminating Access Model adopted by the Industry today in respect of Interconnection charging for Internet dial-up traffic, and the local telephone call charges paid by IASP subscribers, adequately compensate the originating and the terminating fixed network operators for the respective network utilisation to convey and terminate Internet dial-up calls.