



ASIA PACIFIC CARRIERS' COALITION

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26 February 2007

Mr. Andrew Haire
Assistant Director –General (Telecoms)
Infocomm Development Authority of Singapore
8 Temasek Boulevard
#14-00 Suntec Tower Three
Singapore 038988
Fax: 6211-2116

RE: Public Consultation Paper on Decommissioning of Co-Location Sites Offered under Singapore Telecommunications Limited's Reference Interconnection Offer (issued 25 January 2007)

Dear Mr Haire

The Asia-Pacific Carriers' Coalition (APCC) welcomes the opportunity to respond to Info-Communications Development Authority of Singapore's (IDA) consultation in relation to Decommissioning of Co-Location Sites Offered under the Singapore Telecommunications Reference Interconnection Offer.

The APCC is an industry association of global and regional telecommunications carriers operating in Asia Pacific, formed to work with governments, National Regulatory Authorities (NRA's) and consumers in promoting open market policies and best practice regulatory frameworks throughout the region that will support competition and encourage new and efficient investment in telecommunications markets.

Further to the above consultation paper issued on January 25, 2007, please find enclosed the submissions of the Asia Pacific Carriers' Coalition.

Should the IDA wish to discuss any of these matters in greater detail please do not hesitate to contact us.

Yours sincerely

Asia Pacific Carriers' Coalition

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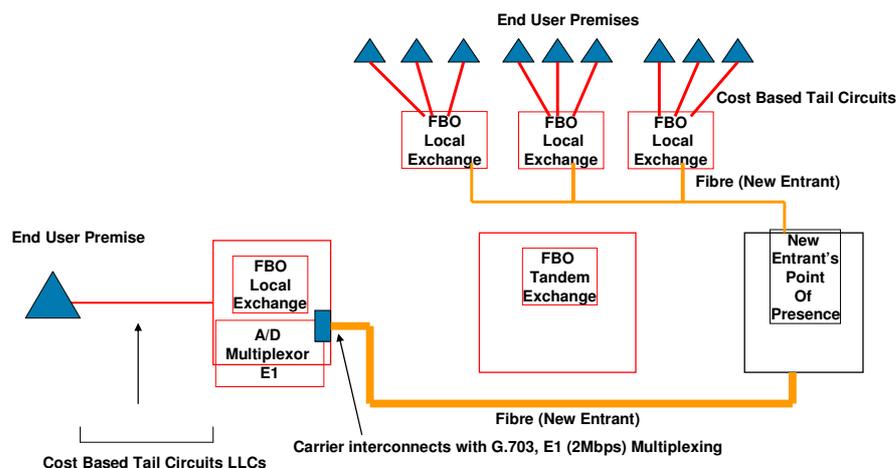
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- 1. Do you agree that SingTel's Announcement to consolidate its exchanges without specific details identifying the exchanges and the decommissioning timeframes will significantly affect your network deployment plans to co-locate in SingTel's exchanges? Please state your views clearly and explain why and how it will/will not affect your network deployment plans, taking into account the existing requirement of at least 6 months' written notice period.**

Local leased lines are essential network element inputs for any telecommunications service provider involved in the supply of dedicated services to end-users. In recognition of the fact that full conditions for effective and sustainable competition in the retail local leased line market required, in part, an effectively competitive wholesale local leased line market, the Info-Communications Development Authority of Singapore (IDA) on 16 December 2003 designated "last mile" leased lines (known also as tail circuits) as an Interconnection Related Service (IRS). These cost-based last mile circuits are priced 50-80% lower than Singapore Telecommunication's Ltd (SingTel) pre-regulation wholesale commercial rates.

With the implementation of that decision on 18 April 2006, SingTel's local exchanges have effectively turned into critical facilities for leased lines interconnection. Competitive carriers that have not extended their networks into these facilities are strictly excluded from the regulated relief. The Singapore Reference Interconnection Offer (RIO) Model is shown in the diagram below.

Singapore's Reference Interconnection Offer (RIO) Model



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We are of the opinion that the above approach, by restricting leased lines interconnection to local exchanges, poses a challenge for the competitive carriers. Within months of initial compliance with that decision, SingTel on June 29, 2006, announced that it planned to embark on a network rationalization effort, "taking advantage of Next Generation Network advances", aiming to reduce the number of Singapore local exchanges, from 27 to 12.

With little transparency regarding the local exchange rationalization effort, the competitive carriers will likely face difficulties at attempting to build-out their networks efficiently to the local exchanges for leased lines interconnection. We submit that network rollouts to these local exchanges have now become a financially dangerous proposition, one fraught with high investment risks. A simple risk assessment will help draw the conclusion that these carriers face a one-in-two chance of misdirecting their network investments to a facility that has been scheduled for decommissioning. Competitive carriers who have gone ahead to collocate at these exchanges do so with the risk of a complete investment write-off should such facilities be shut-down within months of network deployment and equipment installation.

We note that network investments for leased lines involve the deployment of Synchronous Digital Hierarchy (SDH) and Synchronous Optical Network (SONET) rings connecting the facilities belonging to the competitive carriers to SingTel's local exchanges. Without tandem exchange access, competitive carriers must replicate a dedicated set of network ring and interconnection equipment to each of the 27 local exchanges to achieve nationwide access. Each of these networks carries a depreciable lifespan in excess of 10 years. The requirement to replicate these investments to each local exchange, in the absence of transparency on exchange closures, multiplies the investments risks for these carriers.

2. *What are your views regarding the proposed approach? Is the information to be provided by SingTel sufficient? What other information will be necessary? Please explain and justify your views clearly.*

The IDA has sought to rectify the problem by proposing amendments to SingTel's RIO, requiring SingTel to give notice of at least 18 months prior to the estimated date which an exchange is expected to be decommissioned and if a period of shorter than 18 months is required, SingTel must provide full justifications why a shorter notification period is necessary.

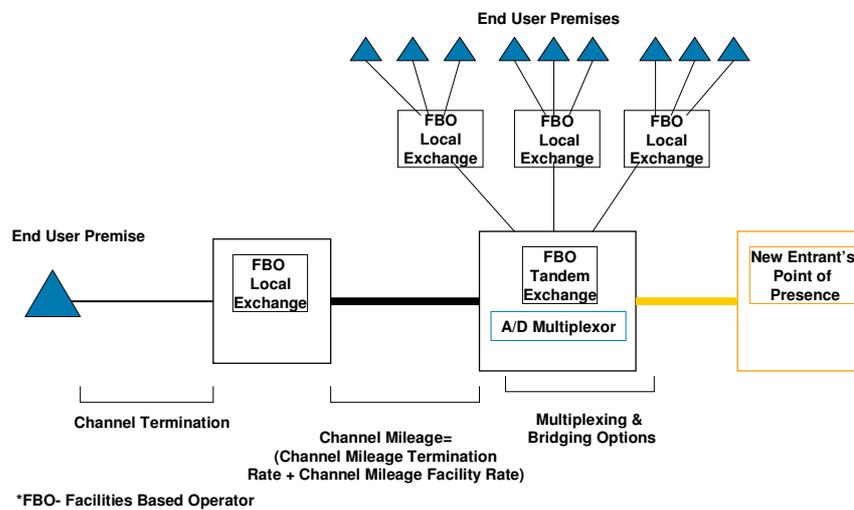
We acknowledge that the IDA has taken a positive step by proposing an 18-month notification period. The proposal however does not address the core of the problem faced by the competitive carriers. While an 18-month notification period for exchange decommissioning surpasses similar notification requirements in the United States (US) and the United Kingdom (UK), we note that the respective regulators do not mandate collocation at the local exchange a precondition for the supply of local leased lines. Special Access, a local leased line service in the US, is available to competitive carriers at the Tandem Exchange within each Local

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Access Transport Area (LATA). UK's Private Partial Circuits (PPC) can also be similarly obtained at the Tandem Exchange.

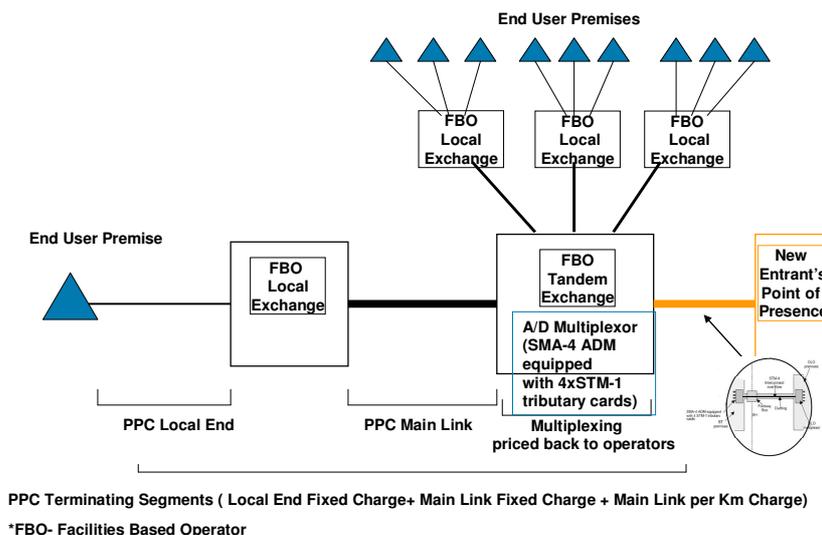
US Special Access



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The UK Partial Private Circuits (PPC)



As a result of the open access, we observe that the rules governing the supply of local leased line services in these markets are remarkably resilient- they continue to remain applicable irrespective of the local exchange closures and minimize the negative impact on competitive carriers. We also observe that competitive carriers particularly, in the United States, can exercise flexibility to vary their investment exposures by opting for a leased entrance facility as opposed to a network build-out to the mandated interconnection points.

We believe that interconnection facilities for access services must exhibit a sufficiently high degree of permanence. Submarine cable landing stations and voice interconnection gateways are examples of such facilities. Submarine cable consortiums must first be satisfied that any proposed submarine cable landing stations would continue to remain operational for the foreseeable future before landing points are designated. The same rules apply when carriers assess the viability of deploying backhaul facilities to the submarine cable landing station for the purpose of accessing own cable capacity, or to provide third party backhaul and transit services. This is also true when telecommunication service providers design their voice networks for interconnection with other operators at the designated interconnection gateways. For the same reasons above, we would require SingTel's local exchanges, as the IDA-designated critical facilities for leased lines interconnection, to exhibit a sufficiently high degree of permanence.

We note that SingTel's exercise at hand involves a network structure migration onto a Next Generation Network (NGN) platform. This will entail a geographic rearrangement of points of interconnection. An 18-month notification period in our view unfortunately does not address the

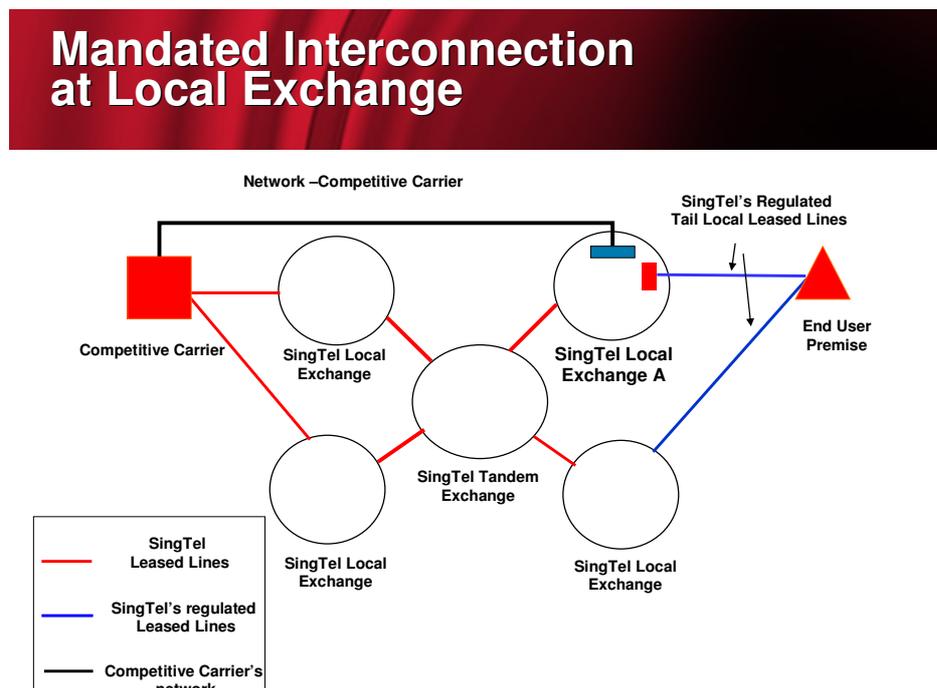
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fact that the impending structural change will render irrelevant a great number of such access points and together with it any committed investments by the competitive carriers. We believe the IDA can address this risk through suitable modifications to its December 16, 2003 decision by recognizing the fact that SingTel's Next Generation Network exercise, involving consolidation of more than half of its existing local exchanges, could not have been reasonably foreseen during the public consultation and decision making exercise on local leased lines in 2002/2003.

We believe that it is possible for the IDA to consider implementing Tandem Exchange Access requirements comparable to the "US Special Access" regime in the US and the PPC regime in the UK. These rules allowing access at the tandem exchange, in our view, could better cope with the uncertainties created by SingTel's local exchange rationalization program.

We demonstrate the application of Tandem Exchange Access to the Singapore situation as follows: To be eligible for the regulated leased lines, IDA requires a carrier to extend its network to a local exchange designated by SingTel as the serving facility for a geographic cluster of end-users¹. This is depicted in the diagram below.



¹ We believe that SingTel's leased line network does provide for diverse routes-SingTel provides a premium retail leased line service known as "Premium Digi-Link" where an end-user premise can be connected to the two nearest serving local exchange for diversity reasons.

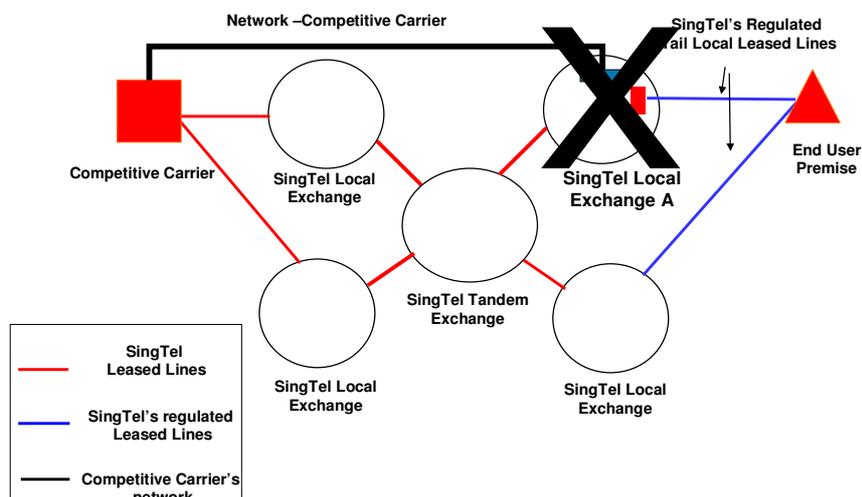
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With interconnection restricted at the local exchanges, the competitive carrier's network investments, comprising of the SDH/SONET fibre ring and network interconnection equipment, at SingTel Exchange A are completely written-off, if SingTel chooses to decommission the facility in its Next Generation Network upgrade exercise. Despite the extended notification period, the carrier's sunk investments are nevertheless subjected to an accelerated depreciation exercise, when normal depreciation rules would have otherwise dictated a much longer economic lifespan².

Of immediate concern to the competitive carrier would be the urgent need for a replacement network connecting to another SingTel local exchange in order to preserve its ability to serve its end-users. Within the notification period, the affected carrier needs to raise resources to build to another designated interconnection point, work with SingTel on accessing the new facility, and engage in circuit migration activities before it can safely resume service provision to its customers. In the absence of transparency and with as many as half of SingTel's existing local exchanges awaiting consolidation, we submit that network build-outs to these facilities have ceased to become an attractive proposition for the carrier.

Significant Impact of SingTel's Network Consolidation Exercise on Local Exchange Interconnection



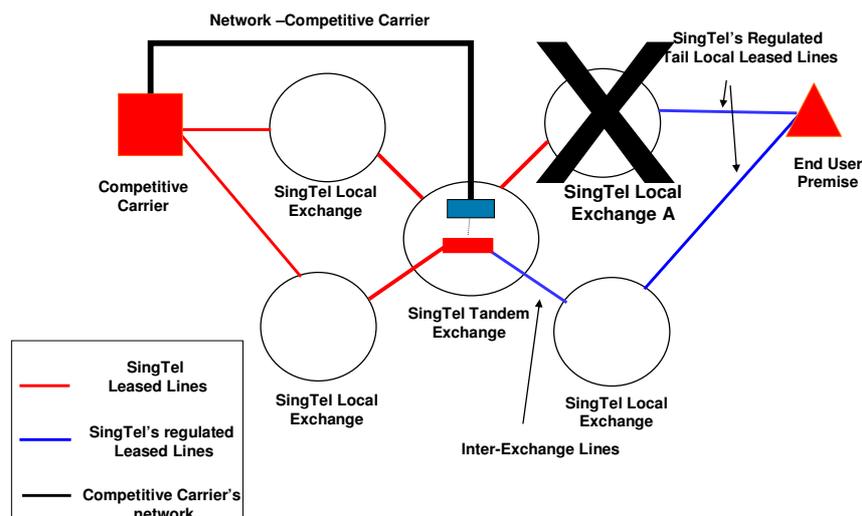
² Networks have a depreciation lifespan in excess of 10 years.

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We submit that a revision to the existing leased line regulation, featuring tandem exchange access, is a logical solution to the problem at hand. Competitive carriers interconnecting at the tandem exchange, or a designated SingTel key exchange, can continue to serve end users on the regulated leased lines unaffected by SingTel's local exchange consolidation program. To complete the exercise, it will be necessary for the IDA to undertake the task of attaching a price to the inter-exchange circuits. We note that a similar costing exercise for inter-exchange circuits³ was undertaken for the UK PPCs in 2001/2002 by its National Regulatory Agency (NRA), OFTEL.

Limited Impact of SingTel's Network Consolidation Exercise on Tandem Exchange Interconnection



3. *Is the notification period of at least 18 months reasonable? Please explain and justify your views clearly.*

As explained above, an 18-month notification period may be helpful but it will do little to mitigate the high investment risks faced by the interconnecting carriers. We note that SingTel's local exchange rationalization program is not precipitated by ad hoc network alternations involving a few exchanges but is instead driven by a network structure migration onto a Next Generation Network platform.

³ These inter-exchange circuits are known as "PPC Main Links" in UK's Partial Private Circuits and "Channel Mileage" in the US Special Access Service.

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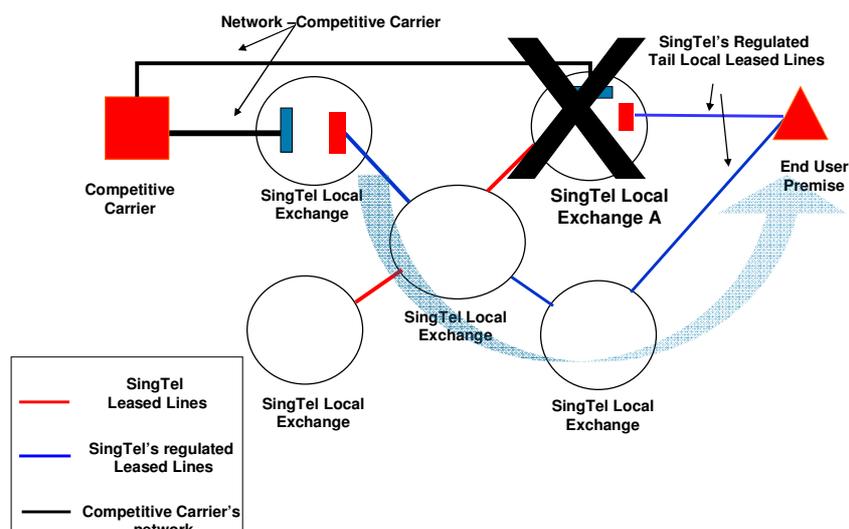
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4. Are there any other considerations relating to this review that IDA should consider, over and above those mentioned in the above questions?

SingTel's early announcement identifying the 15 local exchanges affected by its Next Generation Network upgrade program is important to the competitive carriers. We urge the IDA to engage SingTel in proactive discussions to provide a complete list of the local exchanges scheduled for rationalization under its Next Generation Network plans, first announced on 29 June 2006. We believe that SingTel needs to provide full transparency regarding these exchanges before carriers can find assurance in IDA's regulated relief requiring carriers to co-locate at SingTel's local exchanges as mandated pointed for interconnection.

The IDA could also consider restoring affected carriers to their original benefit position. A competitive carrier, which has done all it could to comply with IDA's policy requirements for the regulated relief, should not be penalized from a deliberate withholding of information regarding the affected exchanges. With regard to a carrier's inability to serve end-users in the affected geographic location arising from an unexpected closure of a local exchange, we suggest that SingTel restores the carrier to its original benefit position. This can take the form of permanently assigned replacement leased lines, from another facility where the carrier has access, to the geographic region previously served by the decommissioned local exchange. The charge for the entire line rental should not cost more than the regulated tail local leased line. The carrier should also be allowed to purchase new lines from the same facility and at the same regulated rates, to serve new customers at the affected geographic location.

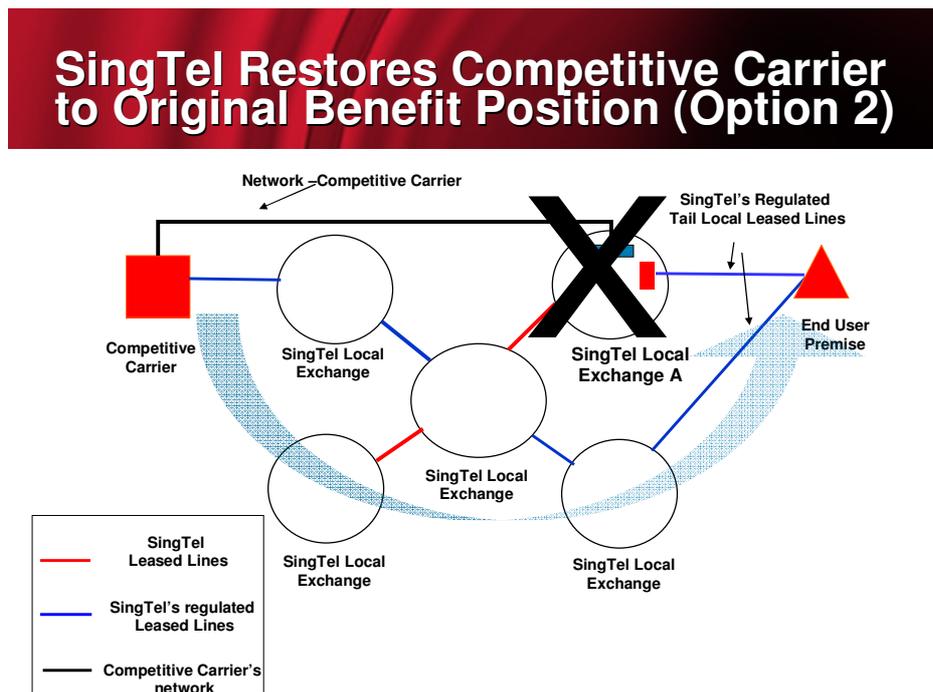
SingTel Restores Competitive Carrier to Original Benefit Position (Option 1)



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This remedy could also apply to carriers who have lost their ability to interconnect with SingTel's leased line network arising from a closure of their sole network access point. This is demonstrated in the following diagram:



As correctly noted by the IDA, SingTel, like many network operators around the world, needs to continuously upgrade its circuit-switched telecoms network towards a packet-switched IP based network to remain competitive. Along with this will be the need for considering an appropriate regulatory regime (including options for no regulatory intervention). We urge the IDA to consider its policy approach regarding next generation access networks in Singapore. We note that UK's Office of Communications has begun to solicit views from the industry, through a public discussion document⁴, as it considers the regulatory challenges posed by next generation access. We would be pleased to provide our written views in response to IDA's public discussion exercise on this matter.

Singapore, 26. February 2007

⁴ Regulatory Challenges Posed by Next Generation Access Networks dated 23 November 2006, OFCOM