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Director-General (Telecoms and Post)
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Dear Ms Chia,

RESPONSE TO THE PUBLIC CONSULTATION ON THE REVIEW OF THE CODE OF PRACTICE FOR INFO-COMMUNICATION FACILITIES IN BUILDINGS (“COPIF”)

- 1. Statement of Interest.** SuperInternet ACCESS Pte Ltd (“SA”) is a relatively new FBO and is in the process of rolling out our own infrastructure. It is our assertion that the info-communications landscape is better served by having more, rather than less, FBO’s with their own infrastructure capable of delivering services to the end users. It is axiomatic that incumbents have advantages over challengers but it is our view that the challengers are the ones more inclined to launch innovative offerings as they are unfettered by internal cannibalization considerations that plague incumbents every day. To this end, our various comments, detailed below, seek primarily to highlight the considerations of FBO’s rolling out infrastructure at the present time. These considerations may not be applicable to incumbents who already have similar infrastructure in place. It is our hope that IMDA will agree that any regulation should be equitable towards new FBOs who are seeking to move quickly to effect portions of the push towards a Smart Nation.
- 2. Response to Question 1.** With regard to Para. 15, SA would like to point out that same considerations are applicable for wireline networks. Most networks today are implemented in a topology where the transmission goes in a ring from node to node with a failover mechanism that allows for a change in direction of the circulation of the packets in the event of a break in the said ring. Therefore, the old notion of whether any particular deployment in a building MDF is solely to serve that building alone should be eliminated from consideration in the COPIF or at least reduced to a notion of being Primarily, rather than exclusively, for the said building. The implications of this comes in terms of access to a different building to effect network changes required for deployment to a building adjacent to it, network-wise. The mutual network resiliency provided by adjacent buildings in a wireline network is akin to the considerations put forth in Para 15.
- 3. Response to Question 3 (i).** We are of the view that the efficient use of available space is a critical matter and ought to be more closely regulated to ensure that the first few operators deploying their equipment do not effectively obstruct later operators. This same issue is presently observed in MDF rooms. We would welcome this set of guidelines and a similar set for MDF rooms.
- 4. Response to Question 3 (ii).** We are of the view that the rules should be clarified / enlarged as follows. It is not without precedent that a regulator in a highly competitive

market where there are dominant incumbents puts forth stipulations to ensure that the dominant incumbents are not unduly further advantaged solely by nature of their incumbency rather than innovation or any other form of competitiveness. Our points raised below seek to ensure this.

- a. **Timeframe.** There should be a clear stipulation of the required timeframe within which the Building Manager (“BM”) must respond to each step of the process from initial contact to the actual date where an Operator is allowed to deploy infrastructure. It is our view that the total number of days for this should be less than 90 even in the event that it becomes necessary to Direct the compliance of the BM. End Users ought to be able to expect that an order for infocomms services ought to be deliverable in 90 days (or less) notwithstanding an uncooperative REIT.
- b. **Registered Point of Contact.** There should be a requirement for a designated point of contact to be registered with IMDA for the purpose of coordination with Operators. Alternatively, it could be mandated that the registered contact, as per the BCA registers, Must be valid for the purposes of co-ordination with Operators for infocomm matters. The said matters should also include determination of plant maps for the portion of the system of ducts within the premises which ought to be within the BM’s control. Similarly, a BM relegating complete control of the infocomm infrastructure to an Operator should be proscribed. If IMDA is of the opinion that it cannot be proscribed, it should nevertheless be stipulated that such delegation of responsibility must be in a formal document and registered and the party to which the control is delegated must be made to assume all responsibilities (and the relevant penalties for shirking from the said responsibilities) of the BM, for purposes of enforcement of the COPIF. The situation where a BM claims to have relegated control over the MDF to an Operator (or any other party) and where the said party is non-cooperative therefore leaving the Requesting operator with an extended deployment time, must be addressed.
- c. **House Rules.** There should be a clear stipulation of the allowable scope of “house rules” which the BM is permitted to lay down. It is commonplace in the construction and building management industry that unscrupulous BM’s resort to making up house rules on an ad hoc basis. It should also be mandatory to publish any house rules openly (with a revision history) to police this. One particularly contentious “House Rule” that we keep coming across manifests itself generally as the requirement to have the requesting end-user endorse the form(s) before an Operator is allowed to submit the said forms to the BM. It is in effect forcing the end-user to accept liability for the acts of the Operator since the BM is proscribed from pushing this to the Operator itself in the form of insurance requirements. Another frequent occurrence is the blatant disregard of the COPIF by the BMs in requesting for additional insurance from Operators.
- d. **Penalties and *locus standi*.** In contrast to the myriad of other regulations in Singapore, the COPIF appears relatively devoid of Penalties towards BM’s who blatantly flout the provisions of the code. Furthermore, an Operator has

no *locus standi* to enforce any of the provisions and therefore has recourse only back to IMDA in the frequent event of obstruction in its various forms.

- e. **Charging Back to Tenants.** Notwithstanding that the relationship between landlord and tenant is beyond the ambit of IMDA, it is our view that BMs should be restricted in their ability to push charges back to tenants when the said tenant seeks services from a new Operator who does not already have infrastructure deployed in the building. The mode of achieving this restriction could perhaps be in the clear stipulation, by IMDA, of the BM's obligations to new Operators seeking entry to their premises, and thereby offering tenants a good basis to reject any such charges as these would be costs which the BM is anyway required to bear.
 - f. **Pre-Deployment.** It is of critical importance to non-incumbents to have infrastructure ready to serve would-be customers. Without firm, enforceable timelines with strict penalties, BMs have been known to delay deployments indefinitely. This only benefits incumbents. Apart from the point of the said timelines being stipulated (as mentioned in (a) above), Operators should not be denied escalation to IMDA for BM obstruction in cases where no actual customer order is yet received. The commercial reality is that an Operator cannot effectively market its services when the said Operator cannot commit to the delivery timeframe (for reasons already stated above).
 - g. **Undue Preference.** A fine line exists between outright Obstruction and a BM offering undue preference to an Operator with existing infrastructure in the said BM's premises. There should be stipulations against undue preference by a BM towards Operators. For example, charging one operator for Utilities while not charging others. While the Act and Code offer a Right of Way to Operators equally, this is effectively trumped by BMs if they continue to be allowed to arbitrarily give undue preference to Operators of their choosing.
 - h. **BM for a-typical Buildings.** If it is IMDA's intent to differentiate between the rights and responsibilities of typical BMs of commercial / residential properties vs BMs of Government, Quasi-Government buildings and Statutory boards, this should be made apparent in the COPIF together with a codification of the relevant procedures to engage these special BMs and what an Operator is entitled to expect in terms of the obligations of these BMs.
 - i. **Power Supply.** Some BMs have engaged Electricity Retailers for their entire building. In the case of tenants, the tenancy agreement is usually drafted such that the landlord has the right to do this. That is, the landlord would then bill the tenants for power consumed while the landlord enjoys some discount to market rates by engaging the contestability provisions as laid down by the EMA. The issue for Operators arises when an additional power meter is to be installed to power the said Operator's equipment in the MDF. In these cases, the BM would then preclude the Operator from pursuing their own contestability provisions.
5. **Response to Question 3 (iii).** SA has no objection to this on the basis that the removal of the BM's obligation does not effectively result in a situation where the BM is entitled to

charge Operators exorbitant fees for the use of the BM's equipment while placing obstacles to Operators bringing in their own equipment for access. For example and in relation to the point at Para 4(h) above, the obligations of the BM to provide access at transport hubs should be addressed. SA also highlights that it should not be acceptable for any BM to merely show that their preferred or exclusive contractor charges a certain rate and the said rate is then taken as cost basis. This is a common ploy by some BMs to levy exorbitant charges way above market rates.

6. **Response to Question 3 (iv)(a).** SA welcomes this provision for reasons already mentioned above. Furthermore, it is our view that a model framework, if not a model agreement itself, should be annexed to the COPIF. We would further encourage IMDA to consider extending this provision or "model agreement" to encompass the entire relationship between an Operator and a BM rather than catering only for emergency access.
7. **Response to Question 3 (iv)(b).** It is also our view that at least an upper limit should be specified for unmanned buildings and that 6 hours is a reasonable balance between undue burden on a BM vs Time-To-Restore for infocomm services.
8. **Response to Question 3 (iv)(c).** The requirements should clearly state:
 - a. Limits of any charges from BMs to Operators, if charges are to be allowable at all.
 - b. Contact information must be kept current (Quite apart from outright obstruction, the situation where the relevant people are simply uncontactable must be addressed.)
 - c. Security clearance for engineers where sites require this
 - d. Access for vehicles (possibly carrying replacement equipment and/or equipment needed to work at heights >4m)
9. **Response to Question 4 (i).** It is our view that 2 sets of pipes are sufficient, but there should be stipulations for the design such that the degree of diversity is maximized rather than merely a requirement for additional pipes. Furthermore, if it is stipulated that lead-in pipes from the MDF should be first terminated at a Builder's Manhole rather than directly joined to an Operator's Manhole, this would maximize the availability of resources to all other Operators as multiple operators could, even after initial construction of the building, join their main trunks to the said Builder's Manhole and obtain access to the MDF room.
10. **Response to Question 4 (ii).** SA would welcome the stipulation that additional MDF rooms are a Mandatory Requirement for vital service buildings. The degree of resilience obtainable by having multiple MDFs (and risers and cable distributions systems) is very much in demand but commercially infeasible where such supporting infrastructure does not already exist. **Size of MDF.** While not specifically within this section, SA also seeks to bring to IMDA's attention the related issue of MDF sizing in relation to the type of building as opposed to merely a function of the size of the building. For these vital service buildings, it is our view that the sizing of the MDF along with the stipulated total number of lead-in pipes needs to be at a different scale from that of a similarly sized

“normal” building. As it now stands, there are critical buildings where the MDF room is hopelessly undersized, under ventilated and in danger of catastrophic failure.

11. **Response to Question 4 (iii).** We suggest that by default all government Ministry HQs and Statutory board HQs also be included in this list as the infocomms resiliency to these organizations is usually of a critical nature. Perhaps by offering recognition of the status of a building as being compliant to the proposed resiliency requirements, developers could be encouraged to voluntarily adopt the design even for buildings for which it is not mandatory on the pretext that they would then be able to secure potential tenants for which the resiliency is important.
12. **Response to Question 5 (i).** SA would welcome the additional 2-core optical fiber as this would allow us to offer residential customers specialized services require 2-core of optical fiber (as opposed to GPON which only requires 1-core).
13. **Response to Question 5 (ii).** We would suggest that additional outlets somewhere in the ceiling or high along the walls of the living room be considered. Based on our customers, we see an increase in the demand for IP Cameras and WiFi access points mounted at high vantage points for optimal coverage. We would also agree with the illustration in Fig 1 that points close to the main entrance and in the kitchen would certainly be useful for any family seeking to deploy a “Smart home”.
14. **Response to Question 5 (iii).** We would suggest that there also be some stipulation as to the design of the box surrounding the patch panel and also the stipulation that there ought to be a power outlet in close proximity. As it now stands, the design of the box and surrounding the patch panel and in relation to the power outlet leaves the whole setup of the copper “wiring closet” unusable without extensive modifications. It is reasonably foreseeable that any use of the system would entail the deployment of a router and/or switch where the concentration patch panel is located and therefore the design should take this into account.
15. **Response to Question 5 (iv).** SA would very much welcome the mandatory pre-installation of the said fiber infrastructure for new developments. For reasons already detailed above and summarized simply as being for the efficient deployment of infocomms services, pre-installation effectively solves a myriad of issues between Operators and BM’s. We would also suggest that the resources expended in regulatory intervention in policing the issues between Operators and BM’s could be better spent in ensuring this pre-installation is in fact done to the specifications and thereby negating any need for further intervention as more Operators deploy into the building. SA further proposes that if it is nevertheless determined that this pre-installation is Not to be Mandated, a reference design should be still laid out in the COPIF, albeit left as optional but BM's obligations ought then to be modelled around their decision as to whether the reference design is adopted.. For example, in cases where the developer chooses to do the pre-installation, any further requirement by Operators for access panels may be passed back on a cost basis.
16. **Response to Question 5 (v)(a).** It is our opinion that the pre-installation should comprise 6-cores of fiber to every unit and that a 6-port outlet box be deployed within the perimeter but above the false ceiling (if present) of every unit within the development (as defined in the development plan). Where it is vital service building (as discussed above),

there should be a 6-port outlet box to each of the MDF rooms. The management of the cabling system could be modelled around how a BM is required to engage a Licenced Electrical Worker (LEW) to maintain the Building's electrical system. This would then be not without precedent. It is our opinion that the issue of removal of unused connections can be left with the occupier of the Unit in question. That is, where an Operator seeking to provision a new service to the unit in question is authorised by the occupant of the said unit to do so, the Operator may unpatch any connection in the MDF that goes to the said unit. Where the new Operator is not completely replacing the existing Operator, it should be for the same said occupier (i.e. the end user) to confirm which ports on the 6-port outlet box are in fact in use by the existing Operator. The new operator may then use any of the others, unpatching as necessary. Any other mechanism would leave open the situation where the end user (occupier of a unit) seeking a new service from an Operator, at the mercy of any previous Operator who did not unpatch. So long as this is limited to the outlet box within the unit itself (and therefore only serving that unit/end-user), there ought to be no issue of a previous Operator laying claim to needing to maintain the said connection if the end-user says otherwise.

17. **Response to Question 6 (in general).** SA is not an MNO and expresses no opinion on the LCX requirements. However, as a corollary to the issues raised in this section, we would request that IMDA also considers facilitating the use of Road Tunnels (we are aware of the space limitations for MRT tunnels) for running fiber cabling. In light of the push-back from various parties with regard to traffic obstruction and other inconveniences caused by open trenching along public roads, we would ask that IMDA considers backing a call for permitting fiber cabling to be run within road tunnels. We would be glad to clarify further on the technical feasibility of this.
18. We thank IMDA for the opportunity to air our views on the COPIF and hope that you find the points raised to be of relevance to the betterment of the infocomm landscape in Singapore.

Regards,

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