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**CONSULTATION PAPER ISSUED BY**  
**THE INFO-COMMUNICATIONS MEDIA DEVELOPMENT**  
**AUTHORITY**

**ON**

**THE REVIEW OF THE CODE OF PRACTICE FOR INFO-**  
**COMMUNICATION FACILITIES IN BUILDINGS (“COPIF”)**

**Submission by StarHub Ltd to the**  
**Infocomm Media Development Authority**

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## Introduction:

1. StarHub Ltd (“**StarHub**”) thanks the Info-comm Media Development Authority of Singapore (the “**Authority**”) for providing the opportunity to comment on its proposed review of the COPIF. This is a timely review as the last review was completed in 2018, and there have been significant changes in the telecoms environment over the past 8-years.
2. In particular, we note the growing importance of mobile services which is increasingly seen as an essential service to the public and to businesses. This has been reflected in the heavier regulatory obligations imposed by the Authority on the mobile network operators (“**MNOs**”), including more stringent quality of service (“**QoS**”), resiliency and cybersecurity frameworks. Given these market trends and tightening regulatory regime, it is therefore also timely to level-up the COPIF requirements to ensure that the heavier regulatory obligations imposed on the MNOs are commensurately reflected in the obligations imposed on building owners (“**BOs**”) to level-up their support for the provision of mobile coverage.
3. We have reviewed the Authority’s proposals and there are good measures to ensure that MNOs have easier access to mobile installation space (“**MIS**”), and to clarify the existing COPIF requirements. However, there are also unfortunate regressions, which would make it significantly more expensive for MNOs to continue using the MIS.
4. StarHub acknowledges that the deployment of mobile infrastructure is unique in that the MNOs do not deploy equipment in every building. Rather, we focus on key buildings which are identified as important for providing the most effective mobile coverage across an area. The mobile equipment deployed in a building provides coverage not just to the building itself, but also to the surrounding areas.
5. Unfortunately, this results in situations where some BOs adopt a “not-in-my-backyard” approach where the BOs are reluctant to deal with the MNOs but still seek to benefit from mobile coverage. We have encountered many situations where some BOs strongly prefer the MNOs to take up space in adjacent buildings, thus allowing the BOs to avoid dealing directly with the MNOs, while also allowing the building residents to enjoy mobile coverage from nearby buildings. This has manifested into many dispute cases raised to the Authority, where BOs outright refuse to provide space, or refuse to provide space without payment from the MNOs. For many such dispute cases, MNOs typically have to go through many months of discussions with the BOs and the Authority and may end up having to forsake certain building sites due to strong BO opposition.
6. We respectfully submit that if mobile services are seen as essential services, the MNOs need to be adequately supported as essential service providers to provide the essential services to the public. The provision of MIS cannot be seen as a regulatory burden imposed on BOs, with BOs allowed to claim “compensation” from the MNOs. Rather, the COPIF must be a key regulatory instrument to facilitate the public provision of mobile coverage.

7. StarHub detailed comments and responses to the Authority's proposals and queries are set out in the next section.

## StarHub's Detailed Comments on the Authority's Proposals:

### **Question 1: IMDA invites views and comments on:**

- i. Any views on the obligations to be imposed on BOs and MNOs to facilitate this process of pre-identifying a suitable location for mobile deployment;*
- ii. Whether it is useful for MIS to be identified upfront during the development design phase, and if so, an appropriate engagement process between BOs and MNOs, such as leveraging on the Corenet, similar to the process where the Telecommunication Facility Co-ordination Committee engages the developers/BOs; and*
- iii. The appropriate period/timeframe for MNOs to be granted access to carry out their installations without disrupting the TOP schedule (e.g., X months prior to TOP Date).*

8. We are generally agreeable to the proposal to facilitate the process of pre-identifying a suitable MIS in buildings. This is based on the following conditions:

- There needs to be an equal share of sites distributed amongst the MNOs, to ensure that each MNO takes on a fair share of assessment for the buildings.
- All BO submissions should be consolidated through CoreNet and automatically distributed to the “prime” MNO to ensure an efficient process.
- There will be certain risks and deviations that need to be accepted by both BOs and MNOs. Buildings will take several years to complete construction and the MNOs' coverage requirements and considerations may change over time (e.g., when newer sites are planned nearby). Any allocated MIS may remain unused or not fully used by the MNOs. Similarly, the MNOs must also accept that the MIS selected earlier may also not be the best location in future.
- If MNOs choose the MIS on rooftops, and BOs subsequently decide to deploy other rooftop facilities, it should be up to BO to assume the risks and not put the onus on the MNOs to relocate their equipment.
- As MIS will be determined upfront, the facilities supporting the MIS should also be provided upfront with the MIS located within convenient access to the nearest telecom / electrical rise and consumer switch room. As a suggestion, we would also like to engage the Authority on a possible initiative for BOs to provide a simple concrete shelter on the rooftop to lower heat and minimise weather impact on equipment.
- MNOs should be allowed access to the building to start work approximately 12-months before TOP. This 12-month period should be aligned with the takeover of the in-building Telecommunication Facility Co-ordination Committee (“TFCC”) facilities, to ensure that the MNOs and the TFCC are aligned in terms of the deployment of the shared facilities.

- The Authority needs to confirm that there is an ongoing obligation for BOs to provide MIS even if MNOs choose not to select MIS at the earlier stage. This is to factor in new coverage needs as there are new developments / redevelopments in the area.
- Our assumption is that this initiative should exclude buildings which are not required to provide MIS (e.g., landed homes).

**Question 2: IMDA invites views and comments on:**

- i. Whether it is sufficient for BOs to provision telecommunication risers, and cable trays alongside electrical cable trays in the B1 carpark, and if there are other types of ancillary infrastructure required to be provisioned upfront to facilitate MNOs' B1 carpark deployments; and*
- ii. Whether it is beneficial for telecommunication risers and telecommunication cable trays to be extended below B1 for future provisioning?*

9. We have no objections to this proposal, but both the Authority and BOs need to recognise that this infrastructure may not always be used as MNOs may choose to provide coverage through alternative methods (such as through nearby outdoor deployments). For consistency with its QoS framework, the Authority should require the provision of infrastructure to the first-level basement carparks, rather than just carparks labelled as "B1".

10. We would not encourage the provision of telecoms equipment below the first basement carparks unless the BOs are prepared to commercially engage and negotiate with the MNOs for such coverage. Please note that the MNOs' priority will be to provide coverage to the widest base on their customers, and to meet the Authority's QoS standards. Even if BOs are prepared to commercial negotiate for the provision of coverage to lower-level basement carparks, the MNOs may not always have the ability to support such initiatives.

**Question 3: IMDA invites views and comments on:**

- i. The corresponding land take (i.e., space) required for each street lamppost deployment; and*
- ii. Feasible solution(s) to address safety and aesthetic concerns for such lamppost deployments.*

11. StarHub supports this proposal and, for consistency, rent-free space on street lamppost deployments should apply for both existing and new deployments. For StarHub, we typically require 5m<sup>2</sup> of space near the lamppost for our mobile equipment.

12. In terms of safety and aesthetic concerns, we note that there is no one-size-fits-all approach, as this may differ from location to location. For example, a lamppost near Marina Bay Sands may have different aesthetic requirements from a lamppost located on an expressway. For all cases, StarHub already works closely with the relevant authority to address safety and aesthetic concerns.

**Question 4: IMDA invites views and comments on:**

- i. A reasonable lead time for a notice to be served by the BO to an MNO prior to any proposed temporary or permanent relocation;*

- ii. The information to be provided by a BO in order for MNOs to assess and facilitate any proposed temporary or permanent relocation; and*
- iii. The cost responsibility between a BO and an MNO for such temporary or permanent relocation.*

13. We respectfully note that the locations of MIS are agreed upfront between BOs and MNOs. We can understand the need for temporary relocations to support activities such as maintenance works. However, it is unclear why BOs should be allowed to require MNOs to relocate their equipment permanently at the MNOs' own costs. We do not believe that other regulatory agencies allow BOs to require their licensees to relocate equipment at the licensees' own costs.

14. If the Authority treats mobile services as an essential service, then it should treat the provision of mobile services as an essential service and not require MNOs to pay for the relocation of their own equipment. This deters and disrupts the provision of mobile services and runs contrary to the Authority's efforts to enhance mobile coverage.

15. If the Authority insists that the MNOs should pay for their own relocations, the following principles should apply:

- Each building should only be entitled to a one-time request for permanent relocation of MIS. This prevents situations where some BOs can frustrate requests for MIS through making repeated attempts to force MNOs to move their equipment.
- The BO is required to provide a like-for-like space for the MNOs to relocate their equipment, ensuring that the relocated space has ready access to necessary infrastructure like cable trays and power, and continues to meet the MNOs coverage needs. If there is no such suitable space in the building, and MNOs are required by the Authority to move out from the building entirely, the BO needs to pay for the reinstatement of space and there needs to be a waiver of the MNOs' QoS requirements. If the same BO subsequently requests the MNOs to re-provide mobile coverage in the building, such arrangements should be commercially negotiated between the BO and the MNOs. The MNOs cannot be put in a position where they are forced to move out of a building but are still required to comply with ongoing regulatory obligations to provide coverage at the building and in the surrounding areas at our own costs.
- The Authority needs to assess each relocation request to ensure that the BO genuinely requires the MIS for other purposes, and there is no other location within the Building that is suitable for the BO's use. Following the MNOs' relocation, the BO must be required to use the space for its intended purpose within a reasonable timeframe (e.g., within 6-months). Failing which, the BO should reimburse the MNOs for the cost of relocation.

16. In terms of a lead-time for relocation requests within the same building, we believe that a 3-month lead time is reasonable.

**Question 5: IMDA invites views and comments on:**

- i. Should BO be allowed to recover such access charges from MNOs for each instance of rooftop access requested by an MNO;*
- ii. Should the access charges be different for buildings with and without security guards on site; and*
- iii. Should access charges be determined and set by IMDA? What would the appropriate benchmark for IMDA to adopt?*

17. We have serious concerns with the proposal that BOs can impose charges on the MNOs for each instance of rooftop access. We must reiterate the position that mobile services should be seen as essential services, and MNOs should be treated as essential service providers. We do not believe that officers from other utility providers (such as electricity or water) are subject to charges each time they need to access their equipment within buildings, and it is unclear why the MNOs should be treated differently.

18. We note that the Authority proposal is to reference regulated rates under Singtel's Reference Interconnection Offer. These rates ranging from \$90 - \$140 for 2-hours access on weekdays to approximately \$800 per access on Public Holidays or weekends. These are very high rates that will significantly deter access, particularly on weekends and public holiday.

19. Each MNO will have thousands of individual sites, and MNOs will typically only access their equipment a few times a year, for maintenance works, or to investigate alarms which indicate potential service disruption. This is essential for ensuring a proper functioning mobile network and to comply with our regulatory requirements. It is unreasonable to impose a regulatory obligation on MNOs to regularly maintain their equipment, while allowing BOs to charge MNOs for access to their equipment.

20. It is also not a uniform requirement that MNOs are escorted or supervised when we need to access our equipment on building rooftops. For many buildings, MNOs simply sign-in to draw the rooftop keys and are allowed to directly access the rooftop without any escort (subject to the MNOs complying with any applicable house rules). Hence, the need for BOs to expend resources to accompany the MNOs appears to be at their own individual discretion rather than any mandatory security requirement.

21. We acknowledge that more regular access may be required during major national events, particularly for buildings located around the main event location. For example, when the National Day Parade is held at the Padang, the MNOs may need more frequent access to our equipment in buildings around the Padang, to carry out fine-tuning and ensuring that the equipment is in proper working condition. Field engineers are also on standby through the actual events to assist in troubleshooting and to handle potential service disruptions.

22. If the MNOs are subject to charges of up to \$800 **per access per building**, this will significantly deter our efforts to enhance coverage and address faults that occur, particular during major public events which will inevitably fall on public holidays. There will be a strong incentive to wait until the next working day to investigate any potential faults, rather than incur the exorbitant access fees applicable.

23. If the Authority believes that it is absolutely necessary for BOs to recover costs for rooftop access, this should only apply in extremely limited circumstances. For example, when the building is unmanned, and additional costs need to be incurred for personnel to be on-site to allow access for the MNOs staff.

**Question 6: IMDA invites views and comments on:**

*i. Whether it is useful for IMDA provide a sample agreement and if so, what terms and conditions should be included in the agreement?*

24. We agree that having a standardised template would assist both BOs and MNOs to quickly finalise the provision of MIS. However, we respectfully note that many larger BOs will have their own specific commercial templates, and it is unclear if such BOs will be required, or willing, to follow the sample agreement. Individual MNOs may also have company-specific requirements that they may need to incorporate into the agreements.

**Question 7: IMDA invites views and comments on:**

*i. Whether there will be impact or prejudice to the (existing or new) BOs and MNOs in the two scenarios described above; and*

*ii. Whether there is a need for an expiry date for the MIS Agreement?*

25. We believe that the Authority's proposals provide certainty for both BOs and MNOs, ensures that there is continuity of mobile services and avoids unnecessary disputes. We do not see the need for an expiry date for MIS agreements as there is typically an ongoing requirement to provide mobile coverage. Nonetheless, the MNOs must be allowed the right to remove their equipment from the building where necessary to meet their own coverage objectives.

**Question 8: IMDA invites views and comments on:**

*i. The proposal for a PE to be engaged for such mobile deployments.*

26. This is an existing practice, and we have no objections to this proposal.

**Question 9: IMDA invites views and comments on:**

*i. The appropriate cabling standard that has the capability to support broadband speed of 10Gbps and beyond and the reasons for the choice of the proposed cabling standard*

27. We have no comments on this proposal.

**Question 10: IMDA invites views and comments on:**

*i. The proposal to remove and/or reduce the telecommunication Space and Facilities for small single-user non-residential development as described above;*

*ii. Any feedback on the current required telecommunication Space and Facilities, such as the MDF room sizes, for the different types of developments?*

28. We are agreeable to the Authority's proposals on the condition that if the BO subsequently requires telecoms services, it must provide (at its own costs) a suitable space

for operators' equipment, including the provision of a telecom riser (with a minimum 600 mm x 450 mm size).

**Question 11: IMDA invites views and comments on:**

*i. The approach for construction and interim ownership of LIPs, and the transfer arrangements of the LIPs from Licensee(s) to developer or BO once the latter has been identified.*

29. We have no objections to this, and we understand that this is an existing process for newer construction projects.

**Question 12: IMDA invites views and comments on:**

*i. The proposal for the same Telecommunication Space and Facilities obligations imposed on buildings providing vital services to be extended to those buildings designated as SD/SI.*

30. We understand that new buildings will be designated as Special Developments, while existing buildings are designated as Special Infrastructure. Any new COPIF obligation to enhance resiliency should only be imposed on Special Developments which are in the early stages of construction. Imposing new resiliency obligations on Special Infrastructure may be infeasible as the buildings are already completed, and it may be extremely difficult and costly to enhance the buildings for resiliency purposes.

31. In addition, the members of the TFCC must be informed of the designated Special Developments during submission, so that they are aware of the additional resiliency obligations which apply.

**Question 13: IMDA invites views and comments on:**

*i. Other potential changes to enable our telecommunications infrastructure to be future-ready to support Singapore's digital economy*

32. The COPIF has been in-place for over 25 years and the obligation for BOs to provide rent-free space to support outdoor mobile coverage has been in-place for almost 10 years. As highlighted above, mobile services are seen as an essential service, and the Authority's regulatory obligations on mobile coverage have become increasingly stringent.

33. We believe that it is now timely to ensure that the MNOs can use rent-free space at all buildings in Singapore, particularly at buildings where there are perpetual or evergreen agreements in-place. To support the national effort to enhance mobile coverage and quality, all BOs must cooperate with the Authority and agree to move towards rent-free arrangements under the COPIF. The Authority also needs to help alleviate the operational friction or burden that MNOs encounter, which will help to expedite the provision of mobile coverage to the BOs and public.

34. StarHub also makes the following suggestions as a member of the TFCC to facilitate the deployment of telecoms infrastructure within buildings and to provide clarity under the COPIF:

### Main Distribution Frame ("MDF") / Telecommunication Equipment Room ("TER") Requirements

- There should be a standardised room size classification for the MDF and TER under the COPIF:
  - Room sizes <10 m<sup>2</sup> should be classified as TER;
  - Room sizes ≥10 m<sup>2</sup> should be classified as MDF; and
  - Electrical meter panels must not be installed inside the MDF room.

### Shophouses

- Pre-consultation should be required to determine the builder's pipe provisioning via the front or rear of the development.

### MRT / Infrastructure

- Builder manholes for MRT stations should be within the development boundary, not in public areas due to material transition (ABS to UPVC).

### Riser & Structural Requirements

- For floor heights ≥5 m, internal piping must be provided within the riser; and
- As a safety requirement, there should be an installation of wire mesh protection for risers without concrete flooring with load bearing detail.

### Multi-Cable Transit (MCT) / Platform Requirements

- The COPIF should include a diagram of MCT-RGP 150 for reference; and
- For installations >6m, a maintenance platform must be provided.

## **Conclusion:**

35. StarHub is grateful for the opportunity to comment on this matter. We agree that the review of the COPIF is timely, and necessary to address the growing importance of mobile services. To facilitate the provision of mobile services, changes to the COPIF should make it easier for MNOs to obtain MIS, without imposing additional cost burdens on the industry. MNOs are already facing a highly-competitive market and very low prices for mobile services. Mobile services should be treated as essential services, in-line with the increased regulatory obligations imposed by the Authority, with MNOs treated as essential service providers and given more support in their mobile services deployment, rather than giving BOs the opportunity to impose additional charges on the MNOs which deters the provision of mobile coverage.

36. We sincerely appreciate the Authority's consideration of our comments.