

**RESPONSE TO THE CONSULTATION PAPER ISSUED BY
THE INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY OF SINGAPORE**

**SECOND PUBLIC CONSULTATION ON THE REVIEW OF THE CODE OF
PRACTICE FOR INFO-COMMUNICATION FACILITIES IN BUILDINGS
("COPIF")**



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

1. M1 is a leading full-service provider of mobile and fixed communications services in Singapore. Since commercial launch in April 1997, M1 has made significant inroads into the info-communications market, gaining considerable brand presence and achieved an outstanding track record in innovation, service and technical excellence.
2. M1 is fully supportive of IDA’s initiative to ensure the continued relevance of the Code of Practice for Info-communication Facilities in Buildings (“COPIF”) in light of the fast changing market dynamics, technological advancements of the info-communication industry, and the evolving needs of end-users. We are pleased that IDA has taken into account industry feedback from the previous consultation and incorporated the necessary changes in the proposed framework. Nevertheless, we would again emphasise that the COPIF must capture all the basic elements (in terms of free access, adequate space, facilities and/or infrastructure etc.) in order for the mobile operators to meet the mobile Quality of Service (“QoS”) standards. That is, there should not be a regulatory disjoint where stringent regulatory requirements are being imposed, but without the corresponding provisions necessary to facilitate achievement of those standards. In this regard, IDA should also include the requirements for 4G deployment.

Minimum Requirements for Mobile Deployment Space (“MDS”)

3. It is critical that the proposed MDS under the revised COPIF provide adequate space, facilities and/or infrastructure etc. to cater for the deployment of installation and plant required by the existing three (3) Mobile Telecommunication Operators (“MTOs”) to provide mobile coverage. Without adequate provisions, operators will be restricted in their efforts to improve/enhance mobile coverage to better serve the public. It will complicate network design and likely result in wastage of resources, and less than optimal service provisioning.
4. In light of the above, it is important to clearly define a set of minimum requirements for MDS:-

a) Adequate Space and Facilities for 2G, 3G & LTE/4G Provisioning

Given the impending nationwide rollout of LTE/4G services and the fact that 2G services are expected to remain in commercial demand for a foreseeable future, it is important that adequate space and facilities be set aside for the provisioning of 2G, 3G and LTE/4G. Based on current equipment footprint, we submit that a minimum 8 m² (excluding access space) per MTO will be required to effectively provide 2G, 3G and LTE/4G coverage.

For common antenna systems, an additional 2 m² (shared) will be required to house the common systems/equipment.

Accordingly, minimum size in Residential Developments comprising one or more multi-storey Residential Buildings should be:

Total number of residential units in the Development	Minimum MDS (m ²)	Remarks
80 – 200	26	$(8 \text{ m}^2 \times 3 \text{ MTOs}) + 2 \text{ m}^2 = 26 \text{ m}^2$
201 – 600	52	Assuming 2 MDS
> 600	78	Assuming 3 MDS

For the avoidance of doubt, the above minimum space should be mandated and not be subjected to commercial negotiations/arrangements.

b) Essential Peripherals

The following are basic essential peripherals required to support the provisioning of mobile coverage:-

- a. Antenna support structure at roof-top or on suitable external walls of a building. 3 mounting poles with minimum spacing of 2 m will be required for antenna mounting;
- b. Lead-in pipes/ducts into the MDS;
- c. Straight-through cable riser of (300 x 100) mm from the basement of the building to the roof-top;
- d. Cable tray of 300 mm width within the cable riser;
- e. A PVC cable duct of 100 mm diameter across the ceiling above each floor including basement;
- f. A floor space of at least 8 m² (based on equipment footprint only) per mobile operator and it should preferably be at the top floor, near the cable riser or with easy access to the riser through two 200 mm cable ducts, for installation of radio equipment. The floor space should have a floor loading of at least 1.5 kN/m²;
- g. Minimum power supply per MTO: 3 Phase 32 Amps AC “unmetered” power source terminating in the MDS. In the event that the power supply does not terminate in the MDS, there should at least be a tapping source not more than 50 m away within the same building for all 3 operators.

From an operational point of view, it will be inefficient not to mandate these requirements upfront, as any consequent provisions/subsequent adjustments can be

costly and create unnecessary inconvenience to the public or residents/users of the respective buildings concerned.

In accordance with the responsibilities and obligations set out in the COPIF, all costs associated with the above provision of MDS/Main Distribution Frame (“MDF”) Room are to be borne by developers/owners of the Developments. The COPIF should also further clarify that any diversion costs needed for MDS, based on the same principle as that for MDF, are to be borne by the developers/owners of Developments. The MTOs will be responsible for utility charges and the maintenance of MDS.

c) Location of MDS

To ensure that the MDS space is suitable for the deployment of installation and plant required by MTOs to provide mobile coverage, the developer/owner of the development and the relevant MTOs should mutually agree on the location(s) of MDS. For the avoidance of doubt, it should not be left to the sole discretion of building owner/developer of the development to decide on the MDS location.

M1 submits that it is also the responsibility of developers/owners to ensure that the MDS has adequate flood prevention measures to mitigate the risk of damage to telecommunication equipment due to flooding. In addition, Developers/owners of developments should fully indemnify MTOs for any damage to equipment and service disruptions.

d) Other Key Requirements (e.g. safety)

- The MDS should be well ventilated with safety barrier, if required.
- For safety reasons, if the MDS is allocated on rooftop, there should be at least 2 m clearing between the allocated space (including access path) and the edge of the building.

Eligibility to use relevant space and facilities for Fixed/Fixed-wireless methods

5. Section 14 of the existing COPIF (i.e. COPIF 2008) states that all licensees (i.e. including Facilities-Based Operators who are also MTOs etc.) who provide telecommunication services via fixed-line method or fixed-wireless method may deploy installation or plant in the relevant space and facilities e.g. MDF, Lead-in ducts etc. of a development. In terms of sharing arrangement, priority will be granted first to the public telecommunication licensees, then to licensees who provide services to the development followed by licensees with other purpose of use. The requirements of licensees and provisions relating to eligibility and priority are still relevant today and should be retained in Section 14 of the proposed COPIF.

Mandatory Provisions Vs Guidelines

6. We note that the purpose of the COPIF is to specify the duties of the developers/owners of developments and operators in providing telecommunication service to the

development; whereas the Guidelines for Info-communication Facilities in Singapore (“Guidelines”) is intended to help building owners/developers plan for the provisioning of space and facilities to allow MTOs to provide mobile telecommunication services, which is advisory and not legally binding. However, it is important that developers/owners of developments factor in the basic requirements for mobile coverage at the design/pre-TOP stage, to facilitate the best outcome for all stakeholders in terms of cost-effectiveness and aesthetic outlook of the building. As such, M1 respectfully requests that all mandatory provisions (i.e the basic requirements listed in paragraphs 3 and 4 above) be specifically spelt out in the relevant sections of the COPIF as mandatory requirements.

Procurement of Space Over and Above the MDS Provided

7. In the consultation document, IDA clarified that for space over and above what the MDS provides, MTOs will have to enter into commercial arrangements with developers/owners of developments for the provision of additional space. We would propose that there be a provision for regulatory recourse in the event of a breakdown of commercial negotiations. In this end, it may be useful for IDA to issue guidelines for the procurement of space over and above the MDS.

Other Miscellaneous

8. M1 submits that Clauses 16.4.4 and 16.4.9 should not be covered in COPIF. These are commercial terms that could vary depending on the building/site/specific conditions or circumstances. These terms are best addressed in the respective commercial agreements mutually agreed upon prior use.