

6th June 2018

Ms Aileen Chia
Director-General (Telecoms & Post)
Deputy Chief Executive (Policy, Regulatory & Competition Development)
Infocomm Media Development Authority
10 Pasir Panjang Road
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Dear Ms. Chia,

Second Public Consultation on the Review of COPIF

TPG Telecom Pte Ltd (TPG) would like to thank IMDA for the opportunity to comment on the proposed key amendments to be adopted in the Code of Practice for Information Communication Facilities in Buildings 2013 ("COPIF"). In general, TPG is supportive of the position on the proposed revised Code issued on 20th April 2018.

TPG responses to the amendments raised in the proposed revised Code are as follows:

1.2 Definitions

"Mobile coverage area" refers to any area within a development which is to be served by any public cellular mobile telecommunication system and shall comprise: -

- (a) The total Gross Floor Area (GFA) of all buildings within the development; and***
- (b) All other areas within the boundary of the development, covered or uncovered, at which an end user of public cellular mobile telecommunication services may reasonably expect to have access to such services, including but not limited to lift lobbies, walkways, pavilions, playgrounds and open-air carparks***

The understanding of this is that Mobile Coverage Area is only for the purpose of calculating MDS and has nothing to do with QoS.

"Reasonable Time"

The term "reasonable time" appears throughout the document but is not defined in the definitions or in the document. It is therefore left open to interpretation and is a big issue with the existing COPIF as it allows a party to drag matters out for an extended period in a deliberate act to delay.

2.2.6 For the avoidance of doubt, the space occupied by facilities required to be installed to serve the installation, plant and systems deployed by a mobile telecommunication licensee at the mobile deployment space (e.g. cable distribution systems and power distribution systems) shall not be counted towards the computation of the mobile deployment space.

Wall and ceiling mounted equipment (e.g. ceiling antennas, wall mounted distribution boxes) is missing and it is important that this equipment be excluded from the computation of mobile deployment space so as to make things very clear.

2.2.9 The location of the mobile deployment space to be provided under paragraphs 2.2.3 and 2.2.4 shall be determined by the mobile telecommunication licensee in consultation with the developer or owner, subject to the following –

- (a) where feasible, the mobile deployment space shall be located on the rooftops of buildings to optimise the coverage of the installation, plant or systems to be deployed by the mobile telecommunication licensee;
- (b) there should be sufficient space around the mobile deployment space to reasonably enable the mobile telecommunication licensee to carry out any requisite works in relation to the installation, plant or systems to be deployed in the mobile deployment space;
- (c) the mobile telecommunication licensee shall, where practicable, take suitable measures to address any reasonable concerns that the developer or owner may have in relation to the aesthetics of the mobile deployment space;
- (d) the mobile deployment space may be split into one (1) or more locations within the development so as to facilitate the provision of public cellular mobile telecommunication services to the whole development, provided that the total amount of mobile deployment space at all locations combined shall not exceed the maximum amounts specified in paragraphs 2.2.3 and 2.2.4;
- (e) the mobile deployment space shall be located at unused spaces within the development;
- (f) the mobile deployment space shall not be located in the main distribution frame room or the telecommunication equipment room, unless there is sufficient space available after having fulfilled the space requirements of the main distribution frame room or telecommunication equipment room and there is a clear demarcation of the space designated as mobile deployment space; and
- (g) the mobile deployment space shall not be located in any area that –
 - (i) is susceptible to the risk of flooding;
 - (ii) is directly subject to the discharge of water, steam, fumes, gases or dust;
 - (iii) is within or near a bin centre; and
 - (iv) is not able to withstand a loading of 1.5kN/m² or more; and
 - (v) will subject the installation, plant or systems deployed therein to vibration of more than 0.05 G, where G is the acceleration due to gravity (G=9.81 m/s²).

TPG would like to suggest that Chapter 2.2.9(c) be worded in a manner that if any aesthetic requirements are proposed by the developer or owner it should meet the mobile equipment operational requirements and should not cause degradation to the performance of the mobile network. Also, that aesthetic measures (e.g. camouflage frames that may be floor mounted) should not be counted towards the mobile deployment space.

Chapter 2.2.9 (d) should also be worded to include the requirement that the MDS space location for each licensee should be contiguous and usable space.

Chapter 2.2.9 (e) add in the word "suitable" to "unused spaces".

2.2.12 Where the mobile telecommunication licensee requires lighting and ventilation to be provided at a mobile deployment space to enable the mobile telecommunication licensee to deploy and operate its installation, plant or system at that location, the developer or owner shall render all necessary access and assistance in a timely manner to facilitate the provision of such lighting and ventilation, save that the mobile telecommunication licensee shall bear the cost and expense for the provision of the necessary lighting and ventilation.

Not all spaces are suitable for MDS and in a poorly chosen area it could be impractical for the licensee to provide ventilation to a mobile deployment space chosen by a BO. In such cases, alternate areas should be considered and if an agreement cannot be reached the IMDA can be called in to adjudicate.

2.3.3 The developer or owner shall not, in relation to a licensee's use of, and access to, the relevant space and facilities, impose –

(a) any costs, expenses, charges or rent (including but not limited to administrative charges and security escort charges) on the licensee; or

There's a growing number of developers or owners wanting the licensee to bear all the legal cost and expenses incurred for any reason. This includes provision of the Agreement.

It should be clearly set out that both parties are to bear their own legal costs for the provision of the Agreement.

Only in the event of a breach by the MNO should the MNO have to pay for the BOs legal costs.

3.1.1 The information specified in paragraph 3.4.1 shall be submitted to the mobile telecommunication licensees at their respective email addresses below –

SingTel Mobile Singapore Pte Ltd	g-stmscp13@singtel.com
M1 Limited	m1mfcc@m1.com.sg
StarHub Mobile Pte Ltd	mobilesetup@starhub.com
TPG Telecom	TPGsetup@tpgtelecom.com.sg

TPG Telecom should read as TPG Telecom Pte Ltd.

3.1.2 The information specified in paragraph 3.4.1 shall be submitted to the mobile telecommunication licensees at their respective email addresses below –

SingTel Mobile Singapore Pte Ltd	g-stmscp13@singtel.com
M1 Limited	m1mfcc@m1.com.sg
StarHub Mobile Pte Ltd	mobilesetup@starhub.com
TPG Telecom Pte Ltd	TPGsetup@tpgtelecom.com.sg

10.4 Additional provision for road tunnel

10.4.1 For every road tunnel, unless otherwise agreed with the mobile telecommunication licensee, the developer or owner shall provide, at every interval of 200 metres, a niche of 7m (length) x 1.5m (height) x 0.7m (depth).

10.4.2 For every road tunnel, the developer or owner shall provide a 20A isolator at every niche as specified in paragraph 10.4.1. For every mobile deployment space provided for road tunnel coverage as specified in paragraph 10.2, the developer or owner shall provide 4 x 32A power source or meet such power requirements as may be agreed with the mobile telecommunication licensee.

In addition to the 4x power source for each MNO’s BTS as specified in paragraph 10.2, an additional power source is required for common equipment (e.g. power supply for master unit, UPS). An additional 32A is required.

10.4.3 For every road tunnel, the developer or owner shall provide a 20A isolator at every niche as specified in paragraph 10.4.1. For every mobile deployment space provided for road tunnel coverage as specified in paragraph 10.2, the developer or owner shall provide 5 x 32A power source or meet such power requirements as may be agreed with the mobile telecommunication licensee.

Eligibility to use

16.5 Additional obligations in relation to mobile deployment space

16.5.1 Every mobile telecommunication licensee shall comply with the obligations specified in this paragraph 16.5, in addition to all other obligations specified in this chapter.

16.5.2 In determining the location of the mobile deployment space to be provided by a developer or owner, the mobile telecommunication licensee shall observe the following –

(a) where feasible, the mobile deployment space shall be located on the rooftops of buildings to optimise the coverage of the installation, plant or systems to be deployed by the mobile telecommunication licensee;

(b) there shall be adequate access and work space provided around equipment sited in the mobile deployment space to reasonably

enable the mobile telecommunication licensee to carry out any requisite works in relation to the installation, plant or systems deployed therein;

Error - The obligation under this Chapter 16.5.2 is the obligation of the building owner, and not of the licensee.

- (c) the mobile deployment space may be split into one (1) or more locations within the development so as to facilitate the provision of public cellular mobile telecommunication services to the whole development, provided that the total amount of mobile deployment space at all locations combined shall not exceed the maximum amounts to be provided by the developer or owner as specified in this Code;**
- (d) the mobile deployment space shall be located at unused spaces within the development;**

Propose to add "unless otherwise agree in writing", so that it gives more flexibility to both building owner and licensee to mutually agree on a MDS space that may not be "unused spaces".

- (e) the mobile deployment space shall not be located in the main distribution frame room or the telecommunication equipment room, unless there is sufficient space available after having fulfilled the space requirements of the main distribution frame room or telecommunication equipment room and there is a clear demarcation of the space designated as mobile deployment space; and**

16.5.4 Where the mobile telecommunication licensee requires lighting and ventilation to be provided at a mobile deployment space to enable the mobile telecommunication licensee to deploy and operate its installation, plant or system at that location, the mobile telecommunication licensee shall bear the cost and expense for the provision of the necessary lighting and ventilation.

Not all spaces are suitable for MDS and in a poorly chosen area it could be impractical for the licensee to provide ventilation to a mobile deployment space chosen by a BO. In such cases, alternate areas should be considered and if an agreement cannot be reached the IMDA can be called in to adjudicate.

16.7 Deployment of installation, plant or system

16.7.1 Where a licensee (the "Existing Licensee") has deployed its installation, plant or system in a manner which does not efficiently optimise the use of the relevant space and facilities (save for mobile deployment space), the Existing Licensee shall co-operate in good faith with any other licensee (the "Requesting Licensee") who wishes to deploy its installation, plant or system within the same space and facilities to –

- (a) rearrange, remove or alter, at the Existing Licensee's own expense, such installation, plant or system or any part thereof; and**
- (b) perform any such rearrangement, removal or alteration within a reasonable timeframe to facilitate deployment by the Requesting Licensee.**

16.7.2 In the event that the licensees are unable to reach agreement on the rearrangement, removal or alteration that should be effected, they may refer the matter to IMDA for a decision which shall be binding on the licensees.

16.7.3 All mobile telecommunication licensees shall share the mobile deployment space provided within any development (without road and train tunnels) on an equal basis, unless otherwise agreed between the licensees. For example, where a mobile telecommunication licensee (the "Earlier MTL") has already occupied all or a substantial part of the maximum amount of mobile deployment space provided for a development and other mobile telecommunication licensees (the "Later MTLs") subsequently desire to use that same mobile deployment space, the Earlier MTL shall remove, alter or relocate its installation, plant or system, as may be necessary, to enable the Later MTLs to share the mobile deployment space equally. Where any mobile telecommunication licensee is required to remove, alter or relocate its installation, plant or system to accommodate equal sharing of the mobile deployment space with other mobile telecommunication licensees, that licensee shall do so within a reasonable timeframe and at its own cost and expense.

The reallocation of an existing MDS to provide equitable distribution of space to accommodate another operator must be a contiguous and usable space. This is to prevent multiple isolated spaces being allocated that are impracticable to use.

"Reasonable timeframe" needs to be defined.

16.7.4 For developments with 1 or more road and train tunnel(s), each mobile telecommunication licensee shall co-operate in good faith to reach agreement with all the other mobile telecommunication licensees as to the allocation of the mobile deployment space that is provided by the developer or owner under chapter 10.

MDS space in Road and Rail tunnels should be reallocated providing an equitable distribution of the existing space. As older technologies are retired the new technologies are taking up less and less space. Past allocation of space must not be a justification for the amount of space required for the future.

Yours Sincerely,



Wayne Springer
General Manager, Operations