

**ADDENDUM TO THE CODE OF PRACTICE FOR INFO-  
COMMUNICATIONS FACILITIES IN BUILDINGS ISSUED IN  
SEPTEMBER 2000 (COPIF)**

The following is the amended version of Part 7 incorporating amendments to be made to the September 2000 issue of the COPIF. This Addendum shall take effect from 15 March 2001 and shall supersede the respective paragraphs of the specifications and guidelines that were stated in the September 2000 issue of the COPIF. Save as revised by the Addendum, all other provisions of the COPIF remain unchanged.

**PART 7            IN-BUILDING RADIO COVERAGE FOR PUBLIC MOBILE  
COMMUNICATION SERVICES**

**7.1    GENERAL**

- 7.1.1 While the Public Cellular Mobile Telephone Services (PCMTS)/ Public Radio Paging Services (PRPS)/ Facilities-Based Operator (FBO) licensees operating 3G mobile communication services networks endeavour to provide island-wide coverage for public mobile services, it is constrained by radio propagation characteristics from extending the coverage into buildings and their basements. The difficulty to provide in-building coverage is significant where building structures use materials unfavourable to radio signal penetration, e.g., metallic wall cladding, metalised window film, etc.
- 7.1.2 These FBO licensees shall endeavour to provide adequate signal strength outdoors, i.e., outside the building coverage.
- 7.1.3 These guidelines are provided for building developers and owners to inform them the procedures and requirements for improvement of in-building coverage for public mobile services.

**7.2    RESPONSIBILITY OF DEVELOPERS OR OWNERS**

- 7.2.1 These guidelines shall not exempt the building developers or owners (as the case may be) and/or their contractors from obtaining:
  - (a) licences from relevant authorities to install and operate radio equipment; and
  - (b) approvals from the relevant authorities for installation of physical structures and reinforcements to support antenna and other equipment, where necessary.

**7.3    OFFICIAL REQUEST TO LICENSEES**

- 7.3.1 The building developer or owner may make an official request to these licensees for consideration to install radio equipment to improve in-building coverage.

- 7.3.2 The building developer or owner shall provide easy access to its premises at all times to licensees' staff to survey and conduct field tests to determine the suitability of in-building coverage.
- 7.3.3 These licensees shall have the discretion to decide whether or not to improve the radio coverage of the building in the non-public area. At the discretion of these licensees, the cost of such improvement work shall be charged to the building developer or owner (as the case may be).
- 7.3.4 In the event that these licensees undertake the in-building coverage improvement work, the building developer or owner (as the case may be) shall provide an equipment room and antenna support structure ready for installation of radio equipment. The details are as follows:
- (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) Straight-through cable riser of 200 x 100 mm from the basement of the building to the roof-top;
  - (c) Cable tray of 200 mm width within the cable riser;
  - (d) A PVC cable duct of 110 mm diameter across the ceiling above each floor including basement;
  - (e) A floor space of about 10 sq. m. be provided preferably at the top floor, near the cable riser or with easy access to the riser through two 100 mm cable ducts, for installation of radio equipment. The ceiling height should be at least 2500 mm. The 10 sq. m floor space should have a floor loading of at least 2.5kN/sq m; and
  - (f) Commercial (PUB) AC power supply of 30A, 230 volts terminated at a distribution board in the equipment room.

#### **7.4 ENQUIRIES**

- 7.4.1 Any enquiry on these guidelines and technical specifications can be made to these licensees.