

IEEE 802.18

Radio Regulatory Technical Advisory Group
Homepage at <http://www.ieee802.org/Regulatory/>

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From: Carl R. Stevenson
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Dear Senior Regulatory Affairs Manager (Economic Regulation) 3:

IEEE 802.18 is the Radio Regulatory Technical Advisory Group within IEEE Project 802, the Local and Metropolitan Area Network Standards Committee.

As such, IEEE 802.18 is the group within IEEE Project 802 that has the primary responsibility for interactions with regulatory bodies for all of the wireless network standards Working Groups within IEEE Project 802, including those of wireless local area, personal area, and metropolitan area networks¹.

IEEE 802.18 respectfully offers its comments in response to the *Consultation Paper on the Creation of a Class Licence for the Provision of Public Wireless Local Area Network Services under Section 7B(2) of the Telecommunications Ordinance*, which was issued by the Telecommunications Authority, Hong Kong on 2 August 2002.

We appreciate the opportunity to offer our comments on the recent proposals for Wireless Local Area Networks by the Hong Kong Telecommunications Authority ("the TA"). The TA has a long history of leadership in progressive policies encouraging the rapid and wide diffusion of new technologies and telecommunications services for the public benefit.

¹ The IEEE 802.11 WG is responsible for Wireless LANs, the IEEE 802.15 WG is responsible for Wireless Personal area networks, and the IEEE 802.16 WG is responsible for Wireless Metropolitan area Networks.

IEEE 802.18 discusses radio regulations and rules with regulatory bodies around the world and hopes that our comments will highlight what we believe to be the most progressive regulatory options for the TA's consideration.

1. The IEEE 802.18 Committee applauds the TA's efforts to open a wide variety of wireless LAN offerings to the people of Hong Kong. Worldwide, the IEEE 802 wireless standards are growing rapidly and currently include over 30 million users and growth annually of over 20 million new units yearly. Hong Kong growth and involvement in wireless LANs includes a wide variety of current and future users, designers and exporters.

2. We believe that there is the opportunity for the TA to be on the leading edge of Wireless LAN regulation and implementation. As noted in the Public Consultation Paper, there is a significant effort leading up to expected progress in world harmonization of frequencies and regulatory requirements at the 2003 World Radio Conference ("WRC-03") under the auspices of the International Telecommunications Union ("ITU"). Some key opportunities for the TA decision making include:

a. Worldwide harmonization of spectrum

The TA may wish to consider implementation of procedures and regulations in anticipation of the worldwide harmonization effort in the WRC-03 Agenda item 1.5.

- i. to include (as stated in the Consultation document) the 5.15-5.35 GHz bands authorized in North America and Europe
- ii. to include the addition of the 5.47-5.725 GHz Band authorized in Europe, and
- iii. to include (as stated in the Consultation document) the 5.725 -5.850 Band used in North America, opening the opportunities for a large number of new applications and equipment for Broadband Wireless for Metropolitan Networks (The IEEE 802.16a standard and a variety of proprietary systems cover Metropolitan networks - see attachments).

We believe this harmonization will result in the widest array of technologies, services and the lowest costs for Hong Kong users.

b. We believe that the TA may wish to reconsider the restrictions on crossing public streets or unleased government land that it currently proposes. While appropriate for wireline networks, this restriction appears to us to be inconsistent with the nature of wireless signals, their commercial and social advantages, and may be difficult to enforce. Wireless LAN connectivity makes possible untethered communications at a variety of locations in offices, shopping arcades or on campus connecting buildings and across the street at local buildings. The ability to create "wireless neighbourhoods" is a major advantage of the wireless LAN technology.

c. The current categories of personal (or private) and (business) Class License (or public) networks may need clarification regarding the growing category of non-profit, shared LAN's (often referred to as Freenets), that are proliferating in many parts of the world.

These shared LANs, where permitted, operate under private agreements between a variety of private wireless LAN owners to allow guest usage under certain conditions (not to be confused with unauthorized access).

For example, a public library, university or other public or private institution may wish to provide local area access to information by a wider community. This arrangement expands the overall number of users and access to private networks and the Internet.

The TA's proposed Class License category, which, while among the less restrictive regulatory requirements worldwide for this category of service, may nevertheless prove prohibitively complex for such informal, shared wireless LAN's. This type of network will enable access to a vast number of new and existing users at low cost providing improvements in communications, productivity and the public good.

IEEE 802.18 respectfully offers these comments on the TA's proposals in the belief that they will encourage the widespread expansion of wireless LAN access, at lower cost for a variety of new and existing users and applications, extending new commercial and public benefits to the people of Hong Kong.

Respectfully submitted,

/s/

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Attachments: Brief overview of the IEEE 802.16 Wireless Metropolitan Area Network Standard

IEEE 802.16 Broadband Wireless Access Standard for the Metropolitan Area Network (MAN) - Wireless MAN Standard

The IEEE 802.16 standard specifies the physical layer and the medium access control layer of the air interface of interoperable point-to-multipoint broadband wireless access systems and can operate in two of the 5 GHz spectrum bands. The standard applies to the license-exempt North American “U-NII” bands in the frequency range 5.25 - 5.35 GHz operating at up to 250 mW of power, and the frequency range 5.725 - 5.825 GHz operating at up to 1 W of power.

The specification enables access to data, video, and voice services with a specified quality of service.

The medium access control layer is structured to support multiple physical layer specifications, each suited to a particular operational environment, both in licensed bands designated for public network access and in license-exempt bands.