A Position Paper of the Philippine Internet Services Organization (PISO) on the proposed NTC Memorandum Circular for the 2.4Ghz and 5 Ghz.

The initiative of the National Telecommunications Commission in producing a Memorandum Circular clarifying and setting the guidelines for the use of ISM radio technologies (i.e., 2.4Ghz and 5Ghz radio devices) is both timely and vital to the progress of our country. These technologies and their use (limited or otherwise, regulated or unregulated) will, as with the Telecommunications Act of 1995 (RA 7925) which largely determined the communication landscape in the last decade, be a critical determinant of our country's progressiveness in the communication space in this decade. We have seen how forward-looking laws can bring about positive change in our society. RA 7925 provided the basis for new players to enter the market and this resulted in the service improvement of telecommunication companies, increase of tele-density, entry of value-added service providers and the Internet and, with the introduction of cellular technology made the Philippines the "text" capital of the mobile world, all in short order.

Mainly because of the rapid rise of the demand for connectivity to the Internet and the high cost (not to mention the frequent delays of provisioning) of using traditional physical links, radio equipment manufacturers have utilized the ISM radio frequencies used for Industrial, Scientific and Medical applications to address the needs of the market. The ISM frequencies, as defined by the International Telecommunications Union (ITU), are commonly referred to as the "unregulated frequencies"[1] and as such is recommended to be available for public and private use without any need of government franchises and regulation.

It is in this context that this paper presents PISO's position on the first draft of the proposed ISM frequency Memorandum Circular. We wish to comment not on specific sections of the proposed memorandum but rather by presenting several positions on what we feel are issues that are explicitly specified or merely inferred to in the said document. These are issues which the organization feels are more important (at this point) than its specific implementation details.

Issue: Opening up of the ISM frequencies for public use.

PISO strongly supports the opening of the ISM frequencies (e.g. 2.4Ghz and 5Ghz) for use by the public without the necessary government licensing requirements typically required for radio services. However, it is imperative to ensure that this resource is only used using certified devices and as such the commission should continue to regulate and type-approve devices in order to minimize interference problems. PISO is also of the position that service providers using this resource register the topology of their networks as well as any changes in their network to provide the commission with the necessary information for its administrative functions.

Issue: Limitations on the use of the ISM frequencies to protect the incumbent operators interests (or investments as some are wont to say).

Naturally, incumbent telephone carriers see this initiative as a potential revenue killer and as such their natural position would be to either resist the opening of the frequency as recommended by the ITU or, should that prove to be an untenable position, to take the position of limiting the application of these technologies.

Because of the limitations set by RA 7925, preventing alternative and value-added-service providers from setting-up their own infrastructure (Section 11), the telephone companies have used this particular section to leverage their own competing value-added-services. For a decade since RA 7925, VAS providers in general and ISPs in particular continue to face an uphill battle in the Internet service provisioning arena mainly because of this one-sided situation set by the law. The VAS situation was and remains far from being fair or competitive.

As with the opening of the local telecommunications industry to new players in the early 1990s, PISO believes that with the unfettered use of the ISM band, our country will see the entry of new players, rapid deployment of services, introduction of new and better products, deployment of alternative communication services even to the remotest barrios and promote homegrown innovations. The latter is particularly important as a motivation for our countrymen to gain new skills and create new products and services not only for the local but global market.

The resulting new businesses, innovative services and products, skills upgrade and employment will not only mean more economic activity specially in the information technology field and benefits for the most number of people (not only limited to the telephone operators who even now are in the process of laying-off their people) but will result to a healthy and competitive environment whose real beneficiaries will be the public.

Issue: Regulating the ISM frequencies.

PISO's position on the regulation of the ISM frequencies is that regulation be focused on administering and ensuring that the frequencies remain available to the public rather than becoming an exclusive resource of any single or group of companies. However, assuming that the said frequencies are available for direct use by companies other than by or through the incumbent telephone operators, PISO maintains that companies or organizations register (as opposed to obtaining a franchise) with the commission for administrative purposes.

Sub-issue on Hot-Spots

It is PISOs position that Hot-spots, which is typically synonymous to (though not exclusively referring to) the Wi-Fi technology, be practically free (aside from the

type-approval of the equipment) from any form of regulation or registration. Because of its limited use, virtually "set-up anywhere and anytime" type of service and the potential frequency interference with more mission-critical applications of nearby LAN or WAN ISM applications, PISO is of the position for specifying the maximum power the base devices of such hot-spots may operate on.

Sub-issue on Local-Area (LAN) and Campus-Area Networks (CAN)

PISO adopts the position that organizations employing wireless technology be encouraged to have a wireless access or provisioning policy within their jurisdiction. These are not without precedents, in developed countries, universities[2] have developed and implemented their own guidelines with the goal of ensuring the best utilization of the frequencies for the most number of people under their jurisdiction.

Organizations whose use of the frequencies fall under the LAN or CAN categories can serve as the representatives of users under their jurisdiction and since it is of their best interest that devices under their jurisdiction do not cause interference with other devices in and outside of their networks, administrators of these networks will make every effort to ensure these policies and best practices are followed.

Investigation of interference can also be done faster and easier as the jurisdiction's administrators will have reasonably good records of the devices employed within their jurisdiction.

Sub-issue on Wide-Area (WAN) and Metropolitan-Area Networks (MAN)

Companies or organizations that require medium and long-haul connectivity for their networks and wishes to set-up their own wireless infrastructure should be allowed to do so using the ISM frequencies. PISO holds the position that the same organizations register with the commission for administrative purposes. This is to ensure that the equipment used is type certified and proper testing for each node(if necessary, to verify the signals and to check for interference) are made prior to approval.

Sub-issue on VAS providing last mile connectivity services via the ISM frequencies

For over a decade, incumbent telephone operators have in some way or another denied access to, price-discriminated against, grossly delayed or simply refused to provide last mile services needed by Value-Added Service providers for its customers. Opening up the ISM band, not only for inter-company but intra-company services as well, will fill the service hole left by the oftentimes lethargic and very expensive last-mile services of incumbent players.

Opening up alternative last-mile providers will result in the roll-out of inexpensive last mile services not only within the country's metropolitan areas but in the provinces as well. This is because the low cost of ISM equipment will allow organizations (businesses or local governments) to provide connectivity even in the most extreme of "missionary" areas.

Summary

PISO supports the initiative of the commission to have a dialogue with the stakeholders of the ISM frequency and its attempt to face head-on the issues and specific interests of the players, particularly in the telecommunications, equipment and value-added service industries. The ISM frequency has been set by an international organization (ITU) for use by the general public for Industrial (ie also for commercial purposes), for Scientific (this means for educational and R&D which is needed for innovation) and Medical purposes. PISO is of the position that these frequencies be used for the greater good of the public rather than limit its use to protect the interests of a few companies.

PISO strongly encourages the commission to take progressive steps to truly liberalize and democratize the communications industry by following the direction taken by progressive and even still developing countries(such as Uganda[3]) by making communication via the airwaves free, as it should be.

About PISO

The Philippine Internet Service Organization is an association of independent Internet Service Providers in the Philippines. Incorporated as a non-profit organization in mid-1996, it seeks to promote the use and acceptance of the Internet in the domestic market. Largely because of the success of these early efforts and the introduction of competing and often predatory practices of a few incumbent telephone operators, the organization has shifted its focus towards advocacy work for and on-behalf of independent Internet service providers.

PISO's website can be located at: www.piso.org.ph.

APPENDIX

1. ITU ISM Definition (http://www.itu.int/ITU-R/terrestrial/faq/4ISM.html)

> 5.138 The following bands: 6765-6795 kHz (centre frequency 6780 kHz), 433.05-434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No. 5.280, 61-61.5 GHz (centre frequency 61.25 GHz), 122-123 GHz (centre frequency 122.5 GHz), and 244-246 GHz (centre frequency 245 GHz) are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
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> 5.150 The following bands: 13553-13567 kHz (centre frequency 13560 kHz), 26957-27283 kHz (centre frequency 27120 kHz), 40.66-40.70 MHz (centre frequency 40.68 MHz), 902-928 MHz in Region 2 (centre frequency 915 MHz), 2400-2500 MHz (centre frequency 2450 MHz), 5725-5875 MHz (centre frequency 5800 MHz), and 24-24.25 GHz (centre frequency 24.125 GHz) are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. 15.13.

2. Representative List of ISM band guidelines for Universities

2.1 University of Idaho (US)
http://www.helpdesk.uidaho.edu/Wireless/24_GHz_policy.htm
2.2 Carnegie Mellon University (US)
http://www.cmu.edu/computing/documentation/policies_airspace/airspace.html
2.3 University of Virginia (US)
http://www.itc.virginia.edu/policy/wirelessairspace.htm
2.4 Dalhousie University (Canada)
http://www.dal.ca/~ucis/about/policies/wireless.pdf

3. ITU Internet Country Case Study: Uganda Communications Commission
http://www.itu.int/ITU-D/ict/webs/ucc/Background.html