



**ARTICLE 19 WRITTEN SUBMISSION ON
MALAYSIA'S PROPOSED POSITIONS ON WRC-19 AGENDA ITEMS**

To:

The Chairman
Malaysian Communications and Multimedia Commission
MCMC Tower 1
Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan
Malaysia
Tel: +60 3 8688 8000
Fax: +60 3 8688 1000

Attention to: Spectrum Planning Division

Introduction

ARTICLE 19 welcomes the opportunity to provide comments to the Malaysia Communications and Multimedia Commission ahead of the WRC-19 and takes this opportunity to share recommendations the Commission, as well as the Government, should consider when shaping and managing the country's national spectrum plan. ARTICLE 19 is an international human rights organisation, founded in 1987, which defends and promotes freedom of expression and the right to information worldwide. The organisation takes its mandate from the Universal Declaration of Human Rights, which guarantees the right to freedom of expression and information.

Information and communication technologies, including the Internet, are an increasingly important means of expression and tool for seeking, receiving and imparting information. ARTICLE 19 has been promoting Internet rights and freedoms for over 10 years.

Unlicensed spectrum

ARTICLE 19 encourages a stronger commitment by the Malaysian authorities to defending existing unlicensed allocations and proactively encouraging future unlicensed spectrum allocations throughout the WRC-19 position paper.

The governments of most of the countries in which ARTICLE 19 operates consider unlicensed radio devices an integral part of their access to connectivity strategy. In particular, well-known WLAN technologies are often considered a suitable mechanism for local authorities (such as schools, universities or public agencies) or commercial entities (railway stations, cafés, etc.) to develop access to connectivity in conjunction with government-level investments in backhaul networks.

The unlicensed bands hold the unparalleled advantage of allowing anyone to deploy a device in the presence of a robust backhaul infrastructure. Any school, university, public authority, bank or café could therefore contribute to Malaysia's connectivity without the administrative burden of managing licenses and without an obligation to wait for a larger commercial entity to commit. The Malaysian government may, in this regard, reflect on the introduction of technology-neutral rules on devices such as listen-before-talk (LBT) features.

ARTICLE 19 also hopes the MCMC will bear in mind the following strategies, which have been successfully deployed by countries around the world to enable economic efficiency, human rights and connectivity:

TV White Spaces. The term TV White Space (TVWS) refers to unused portions of wireless spectrum in frequency bands allocated to terrestrial broadcast television. White space arises when television is not being broadcast in a local area and the spectrum resources allocated to television stations (primary users) are not being used. Additionally, more white space is available as research aims to improve the utilization of broadcast spectrum resources, which enables sharing between the primary terrestrial television service and other uses of the spectrum, such as long-range, wireless internet provision. Trials are currently underway in several countries and some commercial applications have emerged. While wireless broadband applications are the main focus of trials, the usefulness of this portion of spectrum could also be used to connect devices locally.

It is generally accepted that improved spectrum availability benefits society. Repurposing TVWS and dynamic spectrum allocation could be reliable solutions to internet access provision since low-frequency spectrum has the physical capacity to travel long distances and at lower rates of energy consumption.

For these reasons, we support the adoption of TVWS regulatory policies that ensure TVWS are deployed in a way that guarantees individuals' freedom of expression and privacy.

More license-exempt spectrum. TVWS is not the only spectrum that could be used without a license. Although States tend to favour licensing the use of spectrum—and, to a certain extent, telcos, broadcasters and other players that need spectrum to provide their services do the same—the United States' regulator has recently announced that it intends to propose new rules allowing Wi-Fi devices to operate in the 6 GHz band. If completed as foreseen, the process could, by 2019, make more than 1 gigahertz of new unlicensed spectrum available for Wi-Fi, more than double

the size of current Wi-Fi operating bands. This could provide incentives for a new class of unlicensed wireless service providers, as well as boost existing wireless ISPs. It is reasonable to believe, as well, that the availability of that broad amount of spectrum could trigger another wave of Wi-Fi innovation, including new use cases.

Local and “social use” licences

ARTICLE 19 would also like to point the MCMC to recent attempts in the United Kingdom, Germany and Mexico to modernise licensed spectrum allocation, in view of the increasingly obvious economic inefficiencies that arise from expensive, cumbersome license procedures:

In the **United Kingdom**, Ofcom, the UK regulator, has proposed making shared access to the 3.8 GHz-4.2 GHz band more widely available by offering local licenses. Rather than auctioning the spectrum in the usual way and issuing national licenses to mobile network operators, Ofcom would grant access to the spectrum on a first come, first served basis with applicants specifying the location where they wish to operate. The regulator is also considering similar licensing conditions for portions of spectrum in 1800 MHz and 2300 MHz. According to Ofcom, low power licenses for local connectivity would cover a 50-meter radius circle. The spectrum could be issued in blocks of 10 MHz or larger. Medium power licenses would cover longer ranges and might be limited to rural coverage applications. The 3.8 GHz – 4.2 GHz spectrum could be used for private 4G LTE or 5G networks, fixed wireless access, as well as rural and in-building coverage. Private 5G networks could serve numerous sectors including manufacturing, logistics, mining and the industrial Internet of Things. Thus, local licenses could create various new business use cases.

In **Germany**, BNetzA, the German regulator, has decided to make regional 5G licenses available to aspiring network operators. Such licenses have previously been used for Wireless Local Loop (WLL) applications, but it is now hoped that they will enable the roll-out of Industry 4.0 applications under factory owners’ control or local services by small and medium-sized enterprises in rural areas.

In **Mexico**, Federal Telecommunications Institute, the Mexican regulator, amended in 2015 its frequency plan to set aside 2 x 5 megahertz of spectrum in the 800 MHz band “for social use”. To qualify for a social use license, applicants must demonstrate that the spectrum would be used to service communities of 2,500 people or less, or communities located in a designated indigenous region or priority zone. In July 2016 the regulator decided to award the first licenses for social indigenous use, one for the use and benefit of radio frequency bands, and the other for Telecomunicaciones Indígenas Comunitarias, A.C. (Indigenous Community Telecommunications or TIC A.C.). This historic resolution, the first of its kind in Mexico and in the world, allows for the installation of a community mobile phone network in the states of Oaxaca, Chiapas, Veracruz, Guerrero and Puebla —areas that have typically garnered little interest from incumbent operators. TIC A.C. was the first social indigenous license holder to operate a telecommunications network in Mexico, providing communities with unlimited call and messaging services at a saving of up to 98%. This model enables the development of technologies and tools that meet the needs of each

locality, allowing the resources generated to remain within the communities so that local people can determine how they are used.

Privacy and security requirements

Beyond the WRC-19, ARTICLE 19 invites the MCMC to consider, in its national context, the possibility of complementing its radio technologies regulations with security and privacy requirements in the licensing and authorization requirements for operators.

Currently, security and privacy mechanisms are being developed in both the mobile network equipment and wireless local area network communities, with regulatory and economic barriers to deployment being the primary stopping block for stronger cybersecurity for all. We suggest, in this sense, that the current lack of credible metrics is creating a scenario where individuals, governments and companies are exposed to greater threats than necessary. For example, if encrypting an IMSI number increases latency by 0.1 millisecond, an operator which is only exposed to latency metrics will sacrifice the more robust security arising from encrypted IMSI numbers. Similarly, if an operator feels obliged not to provide end-to-end encryption to consumer communications, any communications user will ultimately suffer from exposed and insecure communications. If the operator also is accountable for not implementing sound security measures, they can feel confident that they will not be commercially punished for following best practises.

Malaysian authorities could consider requesting, in its national context, that operators disclose their ability to implement already standardized privacy and security features, in a manner similar to already well-tested performance measurements for network coverage and broadband speed. ARTICLE 19 would like to explore the possibility of future interaction with Malaysian authorities in this direction, bearing in mind the national conditions in Malaysia.

ARTICLE 19 offer of further assistance

ARTICLE 19 would be happy to provide further information or clarification regarding the issues raised in this submission, or to support the Malaysian Government in its development of the country's national spectrum plan. If you require any further information or assistance, please contact:

- Mallory Knodel, Head of Team Digital, mallory@article19.org
- Maria Luisa Stasi, Senior Legal Officer, maria@article19.org