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## **GSMA RESPONSE TO THE CONSULTATION PAPER ON THE PROPOSED REGULATORY FRAMEWORK FOR TV WHITE SPACE OPERATIONS IN THE VHF/UHF BANDS**

The GSMA would like to thank the IDA for the opportunity to provide comments on the “**PROPOSED REGULATORY FRAMEWORK FOR TV WHITE SPACE OPERATIONS IN THE VHF/UHF BANDS**”. As an industry association representing mobile operators and the wider mobile ecosystem globally, the GSMA promotes greater availability and affordability of mobile broadband across the regions, which is facilitated by the availability of sufficient licensed spectrum, regulatory certainty and transparency.

GSMA understands that the consultation paper focuses on the regulatory and technical requirements for White Space Devices (WSDs). Our submission is focussed on the regulatory aspects of IDA’s consultation, in particular question 1 and 4.

### **Question 1: IDA invites views on adopting a licence-exempt approach for WSDs in Singapore, subject to the devices meeting the conditions set by IDA.**

The GSMA recognises the need for efficient use of the radio spectrum resource to meet the fast-growing demand for mobile broadband services. Licence-exempt spectrum, if inappropriately regulated, could cause serious competition issues and distort the level playing field.

Mobile operators, in general, face expensive acquisition costs for licensed spectrum and on-going usage costs, as well as regulatory obligations such as quality of service, tariffs, coverage amongst others. Players who aim to address the same market as the incumbent mobile operators’ by utilizing licence-exempt spectrum do not face the same burden, and may be able to operate at an unfair cost advantage. It’s important that the regulatory framework provides measures that maintain a healthy level playing field, provide certainty and transparency for investment on licensed spectrum and infrastructure. It is also important that the licensing regime not jeopardize the future of the UHF band, some of which has already been allocated for exclusive mobile use.



As technologies evolve at a pace never been seen before and while taking into account the licence-exempt access to spectrum, WSDs need to have the capability to adapt to any change of use of the bands (e.g. network evolutions in band and in the adjacent bands) with no requirement for compensation (e.g. financial compensation or re-farming in alternative bands). WSDs should not claim for any protection and should not create any harmful interference, including in the adjacent bands. WSDs should also not jeopardise the future planning of the UHF band, should re-planning for the primary and/or secondary services in the UHF band occurs.

**Question 4: IDA invites views on allowing operation of WSDs in the 694 MHz – 806 MHz band until IDA allocates these frequencies for IMT deployment.**

Singapore, along with its neighbours Malaysia, Indonesia and Brunei has announced the adoption of the harmonised APT band plan for its 700MHz digital dividend (694 – 806MHz). Singapore will reap the many significant social and economic benefits from mobile broadband delivered via the digital dividend spectrum, as well as the economies of scale brought by the multi-regionally harmonised band plan.

Low powered WSDs operating below an e.i.r.p of 100mW, without a need for mandatory registration, would be difficult to locate and manage. In the case of the TVWS channels in the 694 – 806MHz band being blocked in the geolocation database when transitioning out of the band as the consultation paper suggests, there is no guarantee that the WSDs will not cause harmful interference (e.g. spurious emissions, co-channel interference, unauthorised transmission) to the new primary service, mobile. Should harmful interference occurs, managing interference of such devices as seen from some other low powered short-range devices, is costly and time-consuming. This increases compliance costs for both the licensees and the regulator, and casts uncertainty over the time required for the 694 – 806MHz band to be fully vacated after Analogue Switch Off (ASO), as well as the potential of harmful interferences to licensed mobile services.

Studies<sup>1</sup> have shown that an earlier ASO and the early release of the digital dividend spectrum (694 – 806MHz) to mobile bring significant greater social and economic benefits. By allowing WSDs in the band before ASO will not only add complexity when considering bringing the ASO date forward, but will also create uncertainty to the mobile operators who plan to acquire the 694 – 806MHz band for mobile broadband services (on the unencumbered nature of the band), thus reducing the value of the spectrum. Any reduction of the level of flexibility on planning for the ASO, could lead to Singapore potentially losing out on the additional benefits of an earlier ASO. It is also important to ensure that the operations of WSDs do not impact the need for more spectrum during the broadcasting simulcast period prior to ASO.

Considering the above reasons, the GSMA recommends that operations of WSDs are not allowed in the 694 – 806MHz band.

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<sup>1</sup> For example the Boston Consulting Group paper on The Economic Benefits to Indonesia of Early Harmonisation and Assignment of the Digital Dividend to Mobile (<http://www.gsma.com/spectrum/indonesia-benefits-of-early-harmonisation-and-digital-dividend>)



GSMA is committed to engaging in an open dialogue with the IDA as you develop and review your policies and frameworks. Please do not hesitate to contact us if you have any questions and would like to discuss the content further.

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