

Telecommunications Regulatory Affairs Advisory Committee
**Proposed Creation of a New Licence for the Provision of Private
Localised Wireless Broadband System**

PURPOSE

This paper briefs Members on the proposed creation of a new Localised Wireless Broadband System (Private) Licence (“LWBS (Private) Licence”) for the establishment and maintenance of wireless broadband communications systems for private use at specified locations. The proposed LWBS (Private) Licence will be a restricted form of the existing Localised Wireless Broadband Service Licence (“LWBS Licence”) using spectrum in the same frequency range but with a more limited scope of operation.

BACKGROUND

2. The Communications Authority (“CA”) and the Secretary for Commerce and Economic Development issued a joint statement in December 2018 (“Joint Statement”)¹, in which the CA set out its decision, among others, to set aside 400 MHz of spectrum within the 26 GHz band (24.25 – 27.5 GHz) and 28 GHz band (27.5 – 28.35 GHz), i.e. in the frequency range of 27.95 – 28.35 GHz, for assignment on a geographical sharing basis (“Shared Spectrum”) for the provision of localised wireless broadband services in different specified locations such as university campuses, industrial estates, technology parks, etc., aiming to encourage the introduction of innovative 5G services. The CA has further decided in the Joint Statement that a new Localised Wireless Broadband Service (“LWBS”) Licence will be created for licensing of the services provided using the Shared Spectrum with less stringent regulation than conventional mobile services. Administrative assignment of the Shared Spectrum will

¹ The Joint Statement is available at:
https://www.coms-auth.hk/filemanager/statement/en/upload/480/joint_statement_st_052018.pdf.

be used for granting individual applicant up to a maximum of 400 MHz under the LWBS Licence to provide innovative wireless communications services² based on 5G or other advanced mobile technologies with an aggregate network coverage of not more than 50 square kilometres.

3. Subsequently, in July 2019, the CA created the LWBS Licence and published relevant application guidelines. The first LWBS Licence was granted by the CA in October 2019.

4. The existing LWBS Licence authorises a licensee to provide innovative 5G services both to the public and for private use using the Shared Spectrum assigned to it. Each licensee is subject to a fixed annual licence fee of \$100,000 together with other variable fees, namely base station fee, LWBS device fee and spectrum management fee. However, as LWBS Licence is to regulate the use of the Shared Spectrum for provision of localised public telecommunications services, it would not be appropriate for entities which merely seek to deploy small scale 5G systems solely for private use without providing services to third parties, e.g. for cost saving and/or productivity improvement in in-house property management, warehouse/port management, education, factory operation or other industrial / enterprise applications. Hence, there is a need to create another type of licence to allow these entities to operate private 5G systems implemented for industry or company specific applications.

5. It is noted that regimes for the licensing of private 5G networks have also been introduced in overseas jurisdictions, for example, Australia, Japan, Germany and the United Kingdom to facilitate the use of spectrum on a geographically sharing and localised basis for the development of innovative 5G applications in different industries. Consistent with the Government's policy to support the development of 5G as an important communications infrastructure and a driver to upgrade and transform the overall economy, and taking into account the experience of licensing the Shared Spectrum, OFCA considers it appropriate to formulate a simplified version of LWBS to facilitate the wide and early adoption of 5G and other advanced wireless technologies for innovative applications

² The LWBS Licence does not authorise the licensee to provide any conventional public mobile service.

by different industries and entities which will in turn enhance their competitiveness, efficiency and productivity of operation.

PROPOSED CREATION OF THE LWBS (PRIVATE) LICENCE

6. To facilitate the operation of smaller scale 5G systems for private use by different industries and entities, it is considered that a more restricted scope of service coupled with more light-handed regulation and streamlined licensing procedures compared with the existing LWBS Licence would be appropriate.

7. The proposed LWBS (Private) Licence has the following distinctive features compared with the existing LWBS Licence –

- (a) *Service Scope*: The LWBS (Private) Licence will authorise only the setting up of private wireless communications systems for self-use by the licensee itself within a small specified geographical area; whereas the LWBS Licence authorises the provision of both public and private wireless communications services for specific groups of users within a much larger specified geographical area; and
- (b) *Network Coverage*: Given the smaller scale of operation of private wireless networks in general, the maximum aggregate network coverage permitted under the LWBS (Private) Licence will be no more than 1 square kilometre; whereas the maximum aggregate network coverage permitted under the LWBS Licence is no more than 50 square kilometres.

8. Similar to the assignment of spectrum under the existing LWBS Licence, Shared Spectrum in the same frequency range of 27.95 – 28.35 GHz will be assigned for use by a holder of the proposed LWBS (Private) Licence on a first-come-first-served basis, subject to a much smaller aggregate network coverage for the licensee as specified in paragraph 7(b) above. Again, similar to the LWBS Licence, a maximum of 400 MHz of the Shared Spectrum may be assigned to one entity irrespective of the number of LWBS (Private) Licence(s) it is granted.

PROPOSED LICENCE CONDITIONS

9. Pursuant to section 7(6) of the Telecommunications Ordinance (Cap. 106) (“TO”), the CA may determine, for licences other than exclusive licences and carrier licences, the form of licences, the conditions of licences, the period for which a licence is valid, the types of licences to be issued and the fees payable. As a restricted form of the existing LWBS Licence to cover private 5G systems, it is proposed that the licence conditions of the LWBS (Private) Licence will generally mirror those of the LWBS Licence pertaining to general licence obligation and technical and operational matters, but those licence conditions relating to the provision of public telecommunications services such as publication of tariffs, billing and metering accuracy, provision of information to customers, service contracts and dispute resolution, etc. will not be included.

PROPOSED PERIOD OF VALIDITY AND LICENCE FEE

Period of Validity

10. Similar to the LWBS Licence, the LWBS (Private) Licence shall be valid for five years from the day on which it is issued, and, subject to the discretion of the CA, may be extended for a further period of up to five years.

Licence Fees

11. The licence fees of the LWBS (Private) Licence would be set to recover the cost of administering the licence by OFCA. The licence fees proposed are given below –

(a) Fixed Annual Fee

A fixed annual fee of \$10,000 is proposed. This is lower than the fixed annual fee of \$100,000 for the LWBS Licence, having taken into account the much lower administrative costs expected to be incurred by OFCA in administering the

LWBS (Private) Licence due to the simplified regulation, much smaller scale of network and operation authorised under the licence, and no need of resource on the part of OFCA for handling consumer enquiries and complaints in relation to public telecommunications services.

(b) Base Station Fee (on annual basis)

It is proposed that the same level of base station fee as that applicable to the LWBS Licence will be applied for the LWBS (Private) Licence since base stations installed under both licences will be subject to the same approval procedures by OFCA.

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| (i) for the 1st to the 50th base station installed for the system | \$1,000 per base station |
| (ii) for the 51st to the 100th base station installed for the system | \$500 per base station |
| (iii) for the 101st base station installed for the system and any additional base stations | \$100 per base station |

(c) LWBS Device Fee

No LWBS device fee is proposed as provision of public telecommunications service under the new LWBS (Private) Licence is not applicable and no resource will need to be incurred in handling consumer enquiries and complaints.

(d) Spectrum Management Fee

No spectrum management fee is proposed as it is envisaged that private systems to be licensed under the LWBS (Private) Licence will have small network coverage of not more than 1

square kilometre. The chance that OFCA will need to deal with issues relating to radio interference and radiation hazard should be minimal.

WAY FORWARD

12. OFCA will take into account all the views and comments received from Members before finalising the regime of the proposed LWBS (Private) Licence for consideration by the CA.

13. Subject to CA's approval, we target to implement the new licensing regime and publish the form and general conditions of the LWBS (Private) Licence in the Gazette pursuant to section 7(8) of the TO in 2021. The sample LWBS (Private) Licence, period of validity and fee of the licence, application form and guidelines for application will be published on the website of the CA at the same time.

14. Same as the arrangement for the LWBS Licence, no time limit will be set for application for assignment of the Shared Spectrum under the LWBS (Private) Licence. Along with the development of innovative mobile technologies and applications, interested parties may submit their applications at any time to establish their private localised wireless systems.

VIEWS SOUGHT

15. Members are invited to take note of the content of this paper. Any views and comments from Members are welcome.

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