



Draft Spectrum Reallocation Recommendation for the 26 GHz band in cities and regional centres, Consultation paper

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Subject: Draft spectrum reallocation recommendation for the 26 GHz band in cities and regional centres

Dear Sir,

Huawei thanks the Australian Communications and Media Authority (ACMA) for seeking input and feedback from industry stakeholders on the draft spectrum reallocation recommendation for the 26 GHz band before its final submission to the minister.

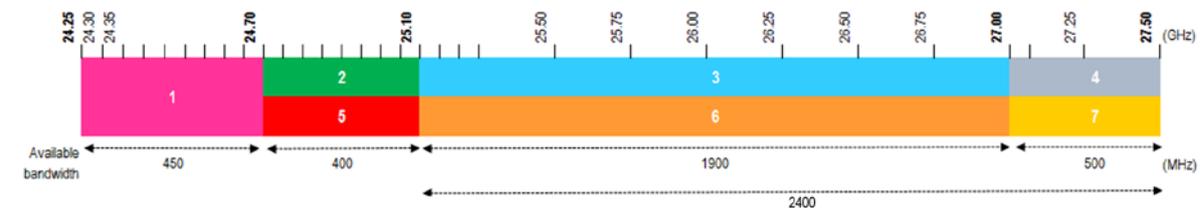
The main purpose of Huawei’s response to this paper is to support the ACMA in proceeding with the spectrum reallocation recommendation to the minister for the 26 GHz band, in the frequency range of 25.1 – 27.5 MHz (2400 MHz of spectrum bandwidth) in 34 defined cities and regional centres – subject to the practical considerations, noted below.

Overall, Huawei supports the ACMA’s considerations and preliminary proposals on matters relevant to the reallocation and auction process, including auction methodology and spectrum lot configuration for allocation.

- Preferred licence type for the 26 GHz band in defined areas and their adjacencies**

Huawei supports the ACMA’s proposal to recommend to the minister responsible for the communication portfolio in making a declaration that the 26 GHz band allocation in cities and regional areas (34 defined areas) are to be with spectrum licences.

Huawei noted the ACMA’s planned arrangements, shown below, in its decision paper for the use of the wider 26 GHz (24.25 – 27.5) band which includes the lower part of the adjacent frequencies 24.25 – 25.1 GHz to the defined areas frequencies range 25.1 – 27.5 GHz.



Source: ACMA

- 1** Class licence for indoor use Australia-wide
- 2** Class licence for indoor & outdoor use Australia-wide
- 3** Spectrum licence Defined areas Additional conditions to protect SRS earth stations
- 4** Spectrum licence Defined areas (within certain areas) Additional FSS co-existence conditions
- 5** Apparatus licence Australia-wide
- 6** Apparatus licence Australia-wide except defined areas Additional conditions to protect SRS earth stations
- 7** Apparatus licence Australia-wide except defined areas Additional conditions to protect FSS uplinks, New FSS will also be permitted, on a first-in-time coordinated basis with wireless broadband



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Considering for an efficient utilisation of the 26 GHz band, Huawei recommends the ACMA to reconsider the planned arrangement of frequency block #1 and #2. They are not to be with class licensing arrangements as currently planned. We recommend, the frequency block #2 is to be allocated to spectrum licence users and the frequency block #1 is to be allocated to apparatus licence users, respectively.

In Australia, the class licence is open to all users without the need to apply individual licence to the ACMA. Having the unlicensed frequency block #2 next to the defined spectrum frequency block # 3, may create issues for 5G New Radio deployments including a high risk in managing interference even if they will be limited to indoor use.

The global frequency bands can be considered for a licence exemption, the feasibility of sharing between licensed and unlicensed users, and the mandating technical requirement and standardisation for licence exemption usages in order to minimise the deployment interference are still under development by the 3GPP.

It is also important to note that the industry is not planning at this point in time to produce 5G New Radio as well as LTE evolution equipment for unlicensed use in the 26 GHz band. The recent equipment deployments for the United States, Japan, Korea and China are based on licence approach. The current planned unlicensed (class licence) approach could jeopardise the spectrum users' ability to deliver IMT-2020 requirements due to uncontrolled deployments from unlicensed users.

The licensed approach also controls the users to manage (and thus enabling to protect) the other radio services including incumbent - SRS and FSS services for in band and adjacent bands.

Thus, our recommendation to the ACMA is to be with licensed arrangements for the entire 26 GHz (24.25 – 27.5 GHz) band, identified as the most valuable mmWave band for New Radio deployments globally.

• Areas with additional conditions to protect the existing services

Huawei appreciates the ACMA's consideration and proposal to have additional conditions to the defined spectrum licensed users in protecting the existing services - SRS and FSS and also to permit new FSS service on a coordinated basis.

Huawei will support the ACMA and the technical liaison group (TLG) from industry in developing licence technical framework which is currently subject to the outcome of consultation.

At this point in time, there are several relevant references that we can look at to fit to the purpose of our national requirements during the upcoming TLG discussion(s). They are, but not limited to:-

- ITU Radiocommunication Study Groups TG5/1 reports including different studies scenarios in sharing and compatibility of passive services in adjacent frequency bands and IMT operating in the 24.25-27.5 GHz frequency range;
- 3GPP Technical Specification TS38.101 Radio Access Network- NR, User Equipment (UE) radio transmission and reception, Part 1, Part 2 and Part 3 Release 15;
- 3GPP Technical Specification TS38.104 Radio Access Network- NR, Base Station (BS) radio transmission and reception Release 15;
- 3GPP Technical Specification TS37.105 Radio Access Network- Active Antenna System (AAS) Base Station (BS) transmission and reception Release 15;



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- 3GP Technical Specification TS37.104 Radio Access Network- NR, E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) radio transmission and reception Release 16;
- ECC Decision (18)06, Harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 24.25 – 27.5 GHz;
- ECC Report 303, Guidance to administrations for co-existence between 5G systems and fixed links in the 26 GHz (“Toolbox”);
- ECC Decision (19)784, Harmonisation of the 24,25-27,5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union;
- ECC Report xxx, synchronisation framework in the 26 GHz band (consultation stage);
- ECC Report xxx, Advanced technologies for fixed GSO FSS earth stations in the 27.5-29.5 GHz band (draft stage); and
- ECC Recommendation xx, Guidelines to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned FSS transmitting earth stations in the frequency band 24.65-25.25 GHz and the possibility for future deployment of these earth stations (draft stage).

- **Proposed frequency lot configuration for defined areas**

Huawei supports the ACMA’s proposed frequency lot configuration with 100 MHz bandwidth each for frequency block #3 and #4 (frequency range 25.1 – 27.5 GHz) for defined areas.

To be consistent with the performance objectives and meeting IMT-2020 requirements, we recommend the mmWave spectrum bandwidth to be at 800 -1,000 MHz per network operator. This will allow network operators to have a sufficient bandwidth within the band to support future design developments and innovations.

- Huawei appreciates the ACMA’s explanation to the stakeholders for the proposed enhanced simultaneous multi-round ascending auction (ESMRA) format. We also commend the ACMA for reviewing to achieve further simplifications at the auction design rules.
- Huawei noted the ACMA proposal for 2.5 years reallocation period with 1 year reallocation deadline, and for 15 year licence term. We recommend the ACMA to shorten reallocation period where feasible. We also suggest to have a longer licence term of 20 years for network operators to attract and to recover their investment.

Huawei once again welcomes the opportunity to make this submission to the ACMA. Please do not hesitate to contact us if you have any queries regarding our points in this submission.

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About Huawei

Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. With integrated solutions across four key domains – telecom networks, IT, smart devices, and cloud services – we are committed to bringing digital to every person, home and organisation for a fully connected, intelligent world.

Huawei's end-to-end portfolio of products, solutions and services are both competitive and secure. Through open collaboration with ecosystem partners, we create lasting value for our customers, working to empower people, enrich home life, and inspire innovation in organisations of all shapes and sizes.

At Huawei, innovation focuses on customer needs. We invest heavily in basic research, concentrating on technological breakthroughs that drive the world forward. We have more than 188,000 employees, and we operate in more than 170 countries and regions. Founded in 1987, Huawei is a private company fully owned by its employees.

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