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MOTC plans priority of spectrum allocation for beyond 5G satellite communication

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The Ministry of Transportation and Communications (MOTC) is actively pursuing amendments to the Radio Frequency Supply Plan by bringing forward the use of next generation satellite communication in the following frequency bands in phases:

- 10,700-12,700MHz;
- 14,000-14,500MHz;
- 17,800-19,300MHz;
- 27,500-27,900MHz; and
- 29,500-30,000MHz.

In light of the growing need for high-speed broadband services in uneconomical rural areas, the MOTC has affirmed that next generation satellite communications are the right solution in the immediate future, as has been seen in the United States, the United Kingdom, Germany and Australia.

The consultation is in progress and will finish on 22 July 2021.

In the first phase, the aforementioned bands will be made available to registered telecoms service providers for the deployment of non-geostationary fixed satellite communications. The frequency licence will be for a term of two years and may be renewable upon expiration. The MOTC announcement highlights that the International Telecommunication Union (ITU) regulations must be followed. Nevertheless, no frequency usage protection for geostationary satellites operated under the ITU Radio Regulations will apply to non-geostationary satellites. During their period of operation, non-geostationary satellites must immediately eliminate any harmful interference with geostationary satellite services. The harmony and effective use of radio frequencies are required for non-geostationary satellite systems.

The MOTC will be in discussion with the Board of Science and Technology of the Executive Yuan regarding the introduction of the use of geostationary satellite services within the same bands as the final phase.

As the bands of 10,700-12,700MHz, 14,000-14,500MHz and 29,500-30,000MHz are currently used for digital microwaves, fixed satellite communications and satellite broadcasting television services, newcomers in the first phase must not interfere with the existing radio stations of incumbents.

Further, the 27,500-27,900MHz band is a subset of the 3rd Generation Partnership Project band n257, which was offered in the April 2020 5G spectrum auction. The 27,000-27,900MHz segment remained unsold (for further details please see "[5G spectrum auction ends and real competition begins](#)"). In its 17 June 2021 announcement, the MOTC explained that further proposed use of non-geostationary satellite systems in the 27,500-27,900MHz band must coordinate with the future licensed 5G operator for share-use in this case.

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