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Licensing for Satellite
Systems In China

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Satellite Frequency Spectrum and Orbits Regulating in China



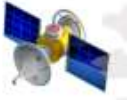


Satellite Frequency Spectrum and Orbits Regulating in China

Ministry of Industry and Information Technology(MIIT)



- ❑ With the rapid evolution of satellite services, China will continue to support the ITU-R in fulfilling its mandate and mission.
- ❑ On the basis of fulfilling the provisions of the Radio Regulations, China administration has joined our characteristics, the mode of Satellite-Communication Network-Earth Station to supervise and approval.
- ❑ After each WRC, the newly agreed provisions, resolutions and recommendations of the Radio Regulations are localized in time to convert into domestic regulations.
- ❑ China has an open attitude towards global satellite services, on the basis of completing relevant coordination, we not only actively promote the system to go out, but also welcome the global system to come in China.



Satellite Frequency Spectrum and Orbits Regulating in China

The Radio Regulations of the People's Republic of China is currently the most fundamental regulations



The Regulations about Filing, Application, Coordination and Notification of Satellite Networks



Administrative Measures for Satellite Network Filing, Coordination, Notification and Maintenance



Working Rules for Domestic Coordination Meetings on Satellite Networks

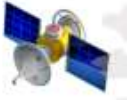


The Demonstration Method on the feasibility of the Satellite Radio Frequency Use



Application of the Simplified Procedures for Satellite Networks





Satellite Frequency Spectrum and Orbits Regulating in China

The Radio Regulations of the People's Republic of China is currently the most fundamental regulations

The Regulations about Licensing of Satellite Systems



Regulations of Radio Station Frequency Licensing



Regulations on Establishing Satellite Communication Networks and Using Earth Stations



Regulations on Establishing satellite stations



Administrative Measures for Terminals of Satellite Mobile Communication System



Administrative Measures for Earth stations in Motion using GSO satellites



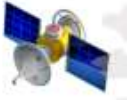
The Approval Service Guide of Establishment and Use of Satellite Stations, Satellite Communication Networks and Earth Stations

https://wap.miit.gov.cn/jgsj/wgj/bszn/xksx/art/2020/art_88b568d7620248c0bddc330e506ee6a6.html



Radio Regulations for Satellite Communications in China



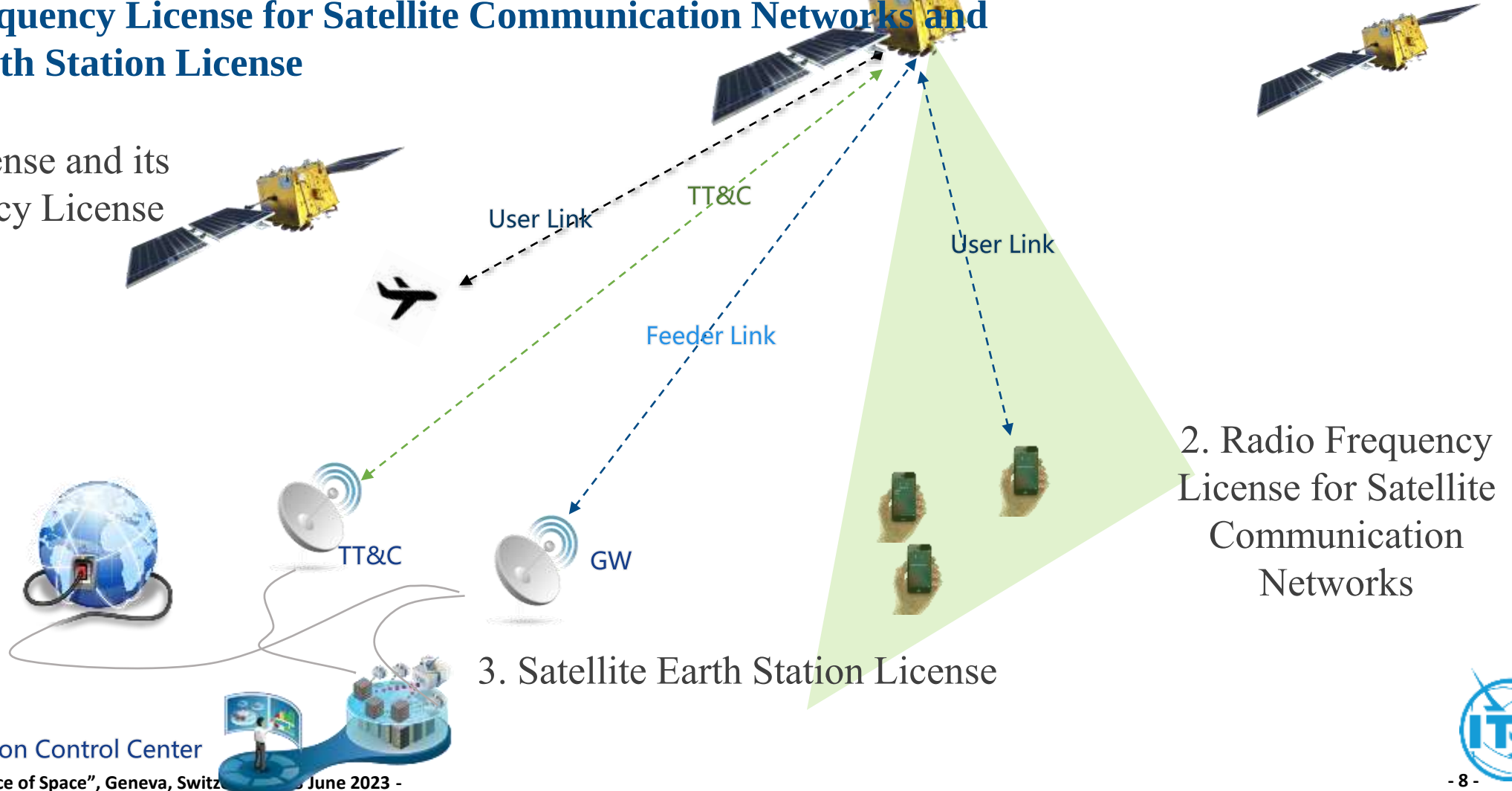


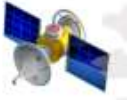
Radio Regulations for Global Satellite Communications



The satellite system is involved in 3 categories of administrative licenses: **Satellite Radio License and its Frequency License, Radio Frequency License for Satellite Communication Networks and Earth Station License**

1. Satellite License and its Radio Frequency License





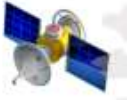
Radio Regulations for Satellite Communications



Satellite License and its Radio Frequency License

According to the Radio Regulations of the People's Republic of China

- To operate a satellite system within the territory of China, entities operating the space station shall apply from MIIT for obtaining the satellite license and its radio frequency license.
- To obtain a license, the following conditions shall be met:
 - a. abiding by the ITU Radio Regulation, the Radio Regulations of the People's Republic of China, the Frequency Allocation of the People's Republic of China and other relevant laws and administrative regulations
 - b. Having a clear and specific purpose and a feasible technical plan for operating of radio frequencies
 - c. Having professional technical personnel on radio regulations
 - d. Ensuring the performance index comply with the standards and relevant provisions on radio regulations, and meet the limitation of the international and domestic coordination agreements of the associated satellite networks.



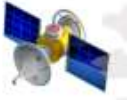
Radio Regulations for Satellite Communications



Satellite License and its Radio Frequency License

- e. Available satellite frequencies and orbit resources have been registered through the notification procedure with the ITU-R
- f. The radio transmitting equipment must have obtained the model approval certificate in accordance with the Radio Regulations of the People's Republic of China
- g. Completing coordination with the relevant satellite radio frequencies and terrestrial radio frequencies in China
- h. Not causing harmful interference to other legal radio stations
- i. Other conditions required for the relevant service must be met

A package license is available for constellation system



Radio Regulations for Satellite Communications



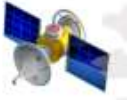
Satellite communication network is a communication network composed of earth stations using satellite space stations to communicate.



Radio Frequency License for Satellite Communication Network

According to the Regulations on Establishing Satellite Communication Networks and Using Earth Stations

- China administration implements a licensing system for establishing satellite communication network
- To establish a satellite communication network in China, entities with legal personality shall be subject to the approval of MIIT for a satellite communication network frequency license
- To obtain a license of radio frequency license for satellite communication networks, the following conditions shall be met:
 - a. The space station to be used shall complete the frequency coordination with the relevant space stations and terrestrial stations, and its technical characteristics comply with the requirements of the agreement reached by the associated administrations, and the satellite frequency license obtained from MIIT
 - b. Having funds and professional technical personnel for the construction and operation of the satellite communication network
 - c. To operate a satellite communication network involving telecommunication service, a corresponding telecommunication operation license shall also be held.



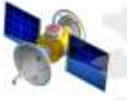
Radio Regulations for Satellite Communications



Satellite Earth Station License

According to the Radio Regulations of the People's Republic of China,

- the establishment and use of satellite tracking, telemetry and command (navigation) station, satellite gateway station and satellite international special line earth station shall need to obtain a satellite earth station license from MIIT
- Except the earth stations above, the other earth stations shall be approved by provincial radio regulation agencies



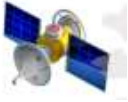
Radio Regulations for Satellite Communications



Satellite Earth Station License

To set up a earth station the following conditions must be met:

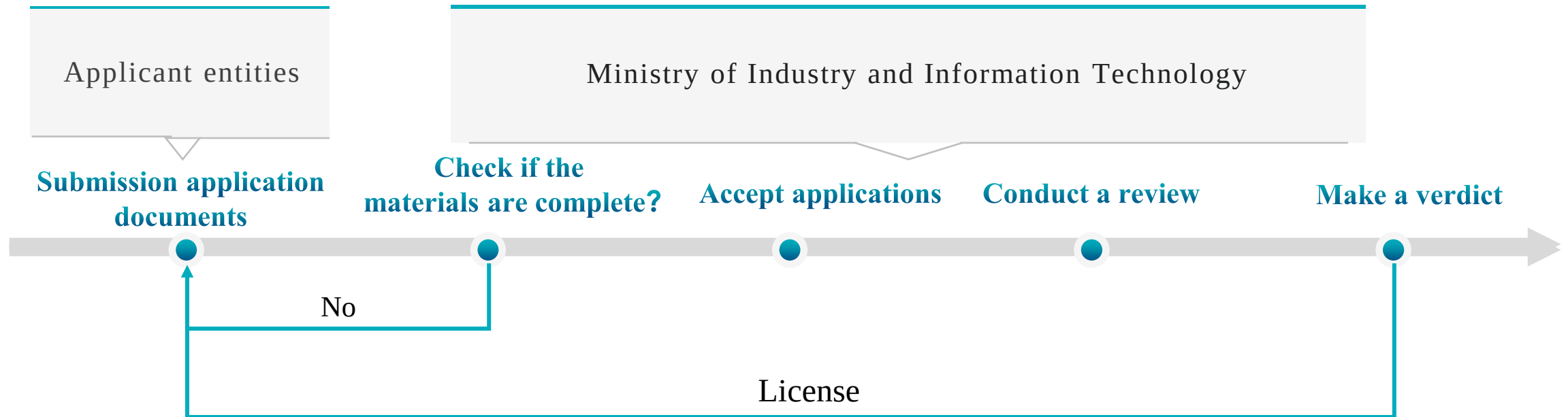
- a. Available satellite frequency resources provided by legal operators approved by MIIT with a Satellite Radio Frequency License or a Satellite Communication Network License
- b. Completed frequency coordination with relevant terrestrial stations
- c. The technical characteristics of the earth station and the corresponding communication space station shall meet the agreement requirements reached between the two administrations and shall be consistent with the approved license
- d. The technical characteristics and site selection of the earth station and other conditions for carrying out relevant service should comply with China's standards and administrative regulations
- e. Not causing harmful interference to other legal radio stations
- f. Other conditions required for the relevant service must be met



Radio Regulations for Satellite Communications



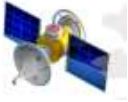
License approval process



04

Issues

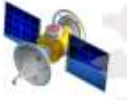




Issues

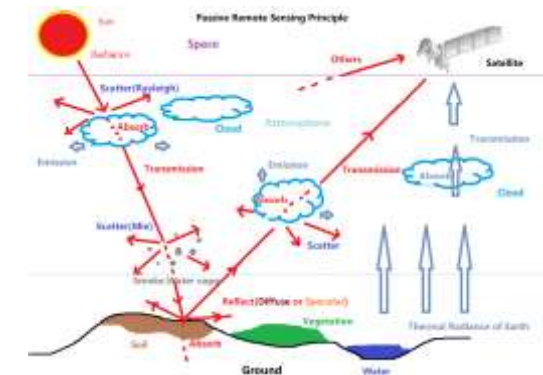
- **Issue 1:** The protection criteria in the sharing frequency between space and terrestrial band need to be complete, such as lack of compatibility criteria and PFD limit in ground between EESS (active spaceborne SAR) and weather ground-based radars in 9.3-9.5GHz
- **Issue 2:** How to cope with the increased use of No. 4.4 of Radio Regulation for satellite communication networks not subject to coordination
- **Issue 3:** How to deal with modification of the orbital parameters for a NGSO space station which may cause unacceptable interference to the existing or planned satellite networks or systems





Issues

- **Issue 4:** For global satellite systems, how to protect existing systems without affecting its own development. For example, the NGSO constellation, how to protect existing GSO systems and space science services systems (SRS, EESS, EESS (passive)), since the existing EESS (passive) and SRS (passive) services operating in the same and adjacent bands have been harmfully interfered by the satellite systems.
- **Issue 5:** How to ensure the fair and safe use of satellite spectrum in sovereign countries all over the world
- **Issue 6:** How to deal with the radio frequency and earth stations/terminals without licensing/authorizing by the sovereign state where the earth stations are located



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