



**Procedures**

**for the advance publication, coordination  
and notification of satellite systems  
in the name of Germany**

**and**

**for the assignment of orbit and  
frequency usage rights**

**(VVSatSys)**

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# General principles

## **1. Scope**

Under section 56 of the German Telecommunications Act (Telekommunikationsgesetz – TKG) of 22 June 2004, as last amended on 30 October 2017, any exercise of German rights to orbit and frequency usage requires the prior assignment of these rights by the Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen (Bundesnetzagentur). Such assignment presupposes the advance publication, coordination and notification (filing) of the satellite network with the Radiocommunication Bureau of the International Telecommunication Union (ITU).

A satellite network filing procedure can only be initiated by the telecommunications administration of an ITU Member State. The Bundesnetzagentur is the notifying administration for the Federal Republic of Germany, and submits satellite network filings to the ITU upon application.

This document describes the procedures for assigning orbit and frequency usage rights and submitting satellite network filings, with the aim of establishing and ensuring consistent administrative practice.

The procedures also apply *mutatis mutandis* to existing German entries in the Plans, unused orbit and frequency usage rights, and existing satellite network filings submitted to the ITU, according to their status.

The procedures replace the "Procedure for filing satellite systems with the International Telecommunication Union and assigning German orbit and frequency usage rights", published under Order No 8/2005 in RegTP Official Gazette No 205, page 239.

## **2. Terms and definitions**

The terms used are as defined in particular in the Telecommunications Act, the Frequency Plan and the ITU's Radio Regulations, as amended.

## **3. Submission of applications for satellite network filings**

Satellite network filings for Germany are submitted to the ITU upon application. Applications must be submitted to the Bundesnetzagentur in writing by post, email or fax. Applications must meet the national requirements (see Part B of this document) and the ITU's provisions.

## **4. Rights through German satellite network filings and assignment of usage rights**

Under the ITU's Constitution and Convention (transposed into national law by the Notification of the amendment of the Constitution and Convention of the International Telecommunication Union published on 8 October 2001, Federal Law Gazette 2001 Part II No 33) and the Radio Regulations, a satellite network filing by the Bundesnetzagentur leads to usage rights for Germany.

Under section 56 TKG, the Bundesnetzagentur assigns to the applicant the orbit and frequency usage rights derived from the filing. The Bundesnetzagentur does not cede the rights, but transfers them to the rights holder for exercise (authorisation to use the rights, comparable to the assignment of frequencies under section 55 TKG). The assignment of orbit and frequency usage rights presupposes that the preconditions of section 56(2) third sentence TKG are met.

## **5. Costs**

### **5.1 Administrative costs**

Fees are charged for submitting satellite network filings and assigning orbit and frequency usage rights, and for rejecting applications under certain conditions. The fees are calculated in accordance with the German Telecommunications Fees Ordinance (Telekommunikationsgebührenverordnung – TKGebV), as amended. Holders of assigned orbit and frequency usage rights must also pay annual contributions. These contributions are calculated in accordance with the German Ordinance concerning Contributions for the Protection of Interference-Free Frequency Usage (Frequenzschutzbeitragsverordnung – FSBeitrV), as amended.

### **5.2 ITU costs**

In accordance with the provisions of Council Decision 482 ("Implementation of cost recovery for satellite network filings"), the ITU also charges fees for processing satellite network filings.

## **6. Fixed receivers of the Bundesnetzagentur's radio monitoring and inspection service**

Frequency usages must not cause interference to the fixed receivers operated by the Bundesnetzagentur's radio monitoring and inspection service. Frequency assignment holders must therefore comply with certain maximum permissible field strengths applicable at the monitoring sites to protect the receivers, in particular at shared antenna sites. The maximum permissible field strengths depend on the receivers used at the sites and on the frequency range. Frequency assignment holders are notified individually of the maximum permissible field strengths applicable for their particular frequency range at the monitoring sites.

Frequency usages, in particular transmitters operated within the protection zones, may need to be restricted to ensure compliance with the maximum permissible field strengths.

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# Detailed procedures

## **1. Principles**

Natural persons and legal entities residing or having their headquarters in Germany are required to notify the Bundesnetzagentur of satellite projects as early as possible and, if the satellite network filing is not to be submitted by the Bundesnetzagentur, provide evidence of initiation of the filing procedure by another telecommunications administration. Such persons and entities not providing such evidence are subject to the provisions of section 56(2) TKG.

## **2 Requirements**

### **2.1 Efficient and interference-free use of frequency and orbital positions**

A satellite network filing with the ITU through the Bundesnetzagentur presupposes the efficient and interference-free use of the frequency and orbital positions.

To fulfil the aims and purpose of sections 1 and 2 TKG – and Germany's international obligations – Article 44 of the ITU's Constitution and Nos 0.2 and 0.3 of the Preamble to the Radio Regulations (RR) – a satellite network filing must ensure rational use of the radio spectrum as a limited natural resource, in addition to compatibility with other radio applications. A filing may therefore only include the frequency and orbital positions that are demonstrably required for the intended services and markets. A filing must also be consistent with the provisions of the Frequency Ordinance and the Frequency Plan.

Applicants must demonstrate in their applications that they will achieve efficient and interference-free use of the frequency and orbital positions.

### **2.2 Compliance with the provisions of the ITU's Constitution and Convention, Radio Regulations and Recommendations**

Germany has committed under international law to observing the provisions of the ITU. Under Article 6 of the ITU's Constitution, the Member States are bound to ensure, in their territory, observance of the provisions of the ITU's Constitution and Convention and the Radio Regulations.

Thus the ITU's provisions, including the relevant Recommendations, applicable to satellite network filings must be observed by filing applicants and operators in the area of application of the TKG.

## **3 Submission of applications for satellite network filings**

### **3.1 Filing procedure, application criteria**

The Bundesnetzagentur carries out the advance publication, coordination and notification of frequency and orbital positions for satellite networks upon application if the preconditions of section 56(2) third sentence TKG are met or are expected to be met, as appropriate, at the time of application, during the notification and coordination phase, and throughout the expected operational life. The filing procedure is also based on the principles set out in section 1.

Applicants must provide the filing documents in writing and, additionally, in the format required by the ITU (usually electronic format) (see RR, inter alia Appendix 4). This applies not only to the advance publication information (API) and coordination request (CRC), but also to any modifications and to the prescribed notifications, due diligence procedures and other internationally required submissions. If deadlines apply, applicants must submit their drafts to the Bundesnetzagentur at least six weeks before the expiry of the international deadline, so as to enable the documents to be examined, modified (if necessary, and as agreed between the Bundesnetzagentur and the applicant) and forwarded to the ITU's Radiocommunication Bureau by the deadline.

Applicants must inform the Bundesnetzagentur without delay of any changes during the filing procedure, in particular with respect to the applicant and the bringing into use of the satellite network.

Applicants must be in a position, at the beginning of the coordination period, to raise the necessary financial resources for the ITU's filing procedures and the coordination activities, taking into account the need for qualified staff to participate in negotiations in other countries as well. Applicants must provide suitable evidence of the availability of the required resources and qualified staff.

Applicants must report at least every six months, on their own initiative, on the progress of operator-to-operator coordination.

### **3.2 Application details**

Applicants must provide the following information:

- a) applicant's details (name, address, legal form, participating interests);
- b) fully completed ITU forms in paper form and in electronic format, and all necessary supporting data;
- c) details of public interest in the filing, including a statement as to whether the project is being supported by public funds or a public guarantee, or such support has been applied for, stating the level of support and the source;
- d) details of how coordination will be achieved (basic procedure, evidence of the availability of qualified staff and financial resources, name of a contact person and deputy for international coordination, evidence of the availability of the required ITU resources, in particular the ITU's International Frequency Information Circulars);
- e) an undertaking that the applicant will comply with the ITU's provisions;
- f) evidence of a trust account or bank guarantee for the ITU's cost-recovery charges, and an undertaking that the applicant will pay the Bundesnetzagentur's costs;
- g) a business plan (in particular, details of the satellite network and type of services and markets, evidence supporting the need for the frequency and orbital resources, and details of efficient and interference-free use);

In cases where the ITU requires a coordination request, applicants must submit the required advance publication information and coordination request in accordance with b) when they submit the filing application to the Bundesnetzagentur.

## 4 Assignment of orbit and frequency usage rights

### 4.1 Operator-to-operator coordination and protection of filings

The ITU's advance publication and coordination procedures (RR Articles 9 and 11) require applicants to configure their satellite networks in such a way that the rights of existing ITU filings are protected ("first come, first served basis").

The results of coordination have a considerable effect on the detailed satellite network design, the operation of the satellite network, and economic aspects. Weighing up these factors can only be done by the applicants.

Applicants submitting satellite network filings through the Bundesnetzagentur are therefore responsible for actively effecting operator-to-operator coordination for their satellite networks, including dealing with RR Article 9 comments, drafting operator-to-operator coordination agreements, and protecting their filings from later filings.

The Bundesnetzagentur will assist the applicants in effecting international coordination, in so far as they are not entitled to initiate such activities on account of their private-law status. In particular, the Bundesnetzagentur will forward the applicants' technical/substantive responses to formal comments (from other administrations on the German filing) "in the name of Germany" to the other administrations. The initiative to resolve technical difficulties must come from the applicants. This includes carrying out compatibility studies (to support their arguments). The Bundesnetzagentur provides advice to the applicants with respect to their activities, and checks the documents submitted by the applicants for plausibility, conformity with the ITU's provisions, and consistency with the public interest (section 56(2) third sentence para 3 TKG).

Priority rights derived from ITU filings may become void by virtue of provisions of RR Articles 9 and 11. Applicants are therefore required to ensure protection for their filings against later filings.

This means, in particular, that the applicants themselves must regularly check the ITU's International Frequency Information Circulars (IFICs) and request the Bundesnetzagentur to submit comments (under RR Article 9) on new filings that may jeopardise their rights. Applicants must submit such requests to the Bundesnetzagentur at least six weeks before the expiry of the deadline, so that the comments can be checked before being forwarded to the relevant telecommunications administration.

Comments must be supported by compatibility calculations. The Bundesnetzagentur can refuse to forward comments to the ITU if there are no clear objective reasons for the comments, for procedural reasons, or if forwarding the comments is not consistent with the public interest (section 56(2) third sentence para 3 TKG).

Applicants must play a constructive role in clarifying radio compatibility issues. This applies in connection with coordination requests from other telecommunications administrations, even in the case of subordinate filing rights. Applicants must take an active part in international coordination negotiations, as far as this is required by the ITU's provisions or to protect filing rights.

## **4.2 Further award proceedings**

Under section 56(3) TKG, award proceedings based on conditions set by the Bundesnetzagentur may be conducted for existing German entries in the Plans and other unused orbit and frequency usage rights with the ITU. The aim of such award proceedings is to ensure efficient and interference-free frequency use. Award proceedings may also be conducted if:

- it is clear that an applicant is not pursuing a project further;
- or
- an applicant has stated that the plans for a project are being dropped.

In both cases, the Bundesnetzagentur may decide to maintain the filing and conduct award proceedings, taking account of the seven-year regulatory period in accordance with the ITU's provisions, and the status of coordination. If the resources to be awarded (orbital positions/frequency usage rights) concern in particular strategic aspects of satellite frequency regulation, priority can be given in the award proceedings to federal offices (eg the Federal Ministry of Defence).

## **4.3 Participation in European and international bodies**

Applicants submitting satellite network filings through the Bundesnetzagentur are generally expected to participate in and support German activities in the area of satellite communications at European and international level (eg CEPT, ITU).

## **4.4 National coordination**

A national coordination procedure and not the formal ITU coordination procedure is followed to achieve radio compatibility with other German satellite network filings and radiocommunication services. National coordination activities are undertaken to achieve radio compatibility.

Coordination between new satellite network filings and existing German filings and, if necessary, with terrestrial radiocommunication services and the radio astronomy service is effected solely at national level between the parties concerned and the Bundesnetzagentur, without the involvement of the ITU.

The Bundesnetzagentur will take decisions on national comments on the basis of the ITU procedures. National coordination is effected at the same time as international coordination. As with international coordination, the applicants themselves are responsible for carrying out studies on compatibility between the satellite networks and with other (terrestrial) radiocommunication services in Germany, as appropriate. Any necessary changes are, if appropriate, taken into account as modifications to the ITU filing.

## **4.5 National due diligence procedure**

To implement the regulatory aims (in particular efficient and interference-free frequency use) on a long-term basis, the Bundesnetzagentur applies an administrative due diligence procedure to all satellite network filings, including those satellite services not subject to the ITU's administrative due diligence procedure (Resolution 49 of the World Radiocommunication Conference), in the period up to the bringing into use of the satellite network.

Applicants must therefore provide evidence of the spacecraft manufacturer (name, date of execution of the contract, contractual delivery window, number of satellites procured) and launch services provider (name, date of execution of the contract, launch/in-orbit delivery window, name of the launch vehicle, name and location of the launch facility) well in advance of the bringing into use of the satellite network. The Bundesnetzagentur may request additional information as evidence that a satellite network can be realised.

#### **4.6 Fees, contribution charges and costs for satellite network filings and orbit and frequency usage rights**

In accordance with the provisions of sections 142 et seq TKG, satellite network filings and orbit and frequency usage right assignments are subject to fees and contribution charges.

The fees are payable upon receipt by the Bundesnetzagentur of the application.

Applicants are also required to pay any additional costs incurred by the Bundesnetzagentur in connection with the satellite network filing, in particular the costs of any necessary participation in operator-to-operator coordination negotiations.

The fee payable in accordance with the German Frequency Fee Ordinance (Frequenzgebührenverordnung – FGebV) does not include the ITU's cost-recovery charges for satellite network filings in accordance with Council Decision 482 ("Implementation of cost recovery for satellite network filings"). These charges are payable upon receipt by the ITU of the filing and must be paid by the applicant. The Bundesnetzagentur requires securities to guarantee that these costs will be paid by the applicants and will not burden public finances. Applicants must therefore provide evidence of a trust account or bank guarantee for the expected ITU cost-recovery charge when they submit their filing applications.

Applicants must pay the cost-recovery charges directly to the ITU and provide the Bundesnetzagentur with evidence that payment has been made. If payment is not made, the Bundesnetzagentur will reject the filing application, and a rejection fee will be charged. If an applicant does not pay these costs, the Bundesnetzagentur will use the security (trust account/bank guarantee) to pay the costs, and will decide on maintaining and re-awarding the filing.

Contribution charges are payable upon assignment of the usage rights in accordance with section 143 TKG.

#### **4.7 Use of Germany's free entitlement**

Under ITU Council Decision 482, each Member State is entitled to one free satellite network filing each year.

The following conditions apply to the use of Germany's free entitlement:

- The Bundesnetzagentur can decide *ex officio* to apply Germany's free entitlement to a filing for certain resources (orbital positions/frequency usage rights), in particular to implement strategic aspects of satellite frequency regulation.
- If Germany's free entitlement is not used for an *ex officio* filing, its use for other federal offices (eg the Federal Ministry of Defence) can be considered. In this case, the Bundesnetzagentur will only consider projects that are financed from federal funds.
- If more than one public project is eligible for the free entitlement in the same ITU accounting year, the Bundesnetzagentur will decide which project will benefit from the free entitlement, taking into account the anticipated savings in ITU charges for the federal budget (depending on the filing's category and scope).

Satellite network filings that are submitted to the ITU through the Bundesnetzagentur by private companies are not eligible for the free entitlement. Private applicants must pay the full cost-recovery charges to the ITU.

It is not possible to use Germany's free entitlement for filings from private applicants because of the adverse financial effect on the federal budget, given the non-recovery of the ITU's costs (and Germany's high level of contributions to the ITU's budget). The Bundesnetzagentur will therefore only use Germany's annual free entitlement for certain public projects, so as not to jeopardise the aim of maximum cost recovery.

## **5 Assignment of orbit and frequency usage rights**

Applicants must notify the Bundesnetzagentur of the planned bringing into use of the satellite network one year in advance of the planned launch, and must state which measures will be taken during the construction and operation of the satellite network to ensure compliance with the conditions set out below. If a satellite network is not subject to the ITU's administrative due diligence procedure (Resolution 49), the applicant must provide the Bundesnetzagentur with the information required for the national due diligence procedure in accordance with section 4.5.

Applications for the assignment of the orbital position and frequency usage rights in accordance with section 56 TKG must be submitted to the Bundesnetzagentur no later than three months before the planned launch. Applicants must state the exact launch date and name of the launch vehicle and confirm the name and location of the launch facility under the ITU administrative due diligence or national due diligence procedure, as appropriate.

Applicants must provide the Bundesnetzagentur with evidence of how the stations on board the satellites will be designed so as to prevent interference (see sections 5.2, 5.3, 5.4 and 5.5), at the latest when they apply for the assignment of usage rights.

The assignment of orbit and frequency usage rights by the Bundesnetzagentur presupposes that the preconditions of section 56(2) third sentence TKG are met. The usage rights are assigned to the satellite network filing applicants (rights holders) solely to the extent to which rights are derived from international and national coordination.

If the ITU notification information is not complete when an applicant applies for usage rights, the rights holder must supply the complete information before (or immediately after, as instructed by the Bundesnetzagentur) the bringing into use of the satellite network. The information must, however, be received by the ITU before the expiry of the seven-year regulatory period, otherwise the satellite network filing with the ITU will be cancelled.

Rights holders must inform the Bundesnetzagentur immediately of any delays to the launch. Rights holders must inform the Bundesnetzagentur immediately of the progress of the launch and the actual orbital parameters.

### **5.1 Proper operation and notification requirements**

Rights holders must ensure proper operation of the satellite network by deploying qualified staff. Rights holders must inform the Bundesnetzagentur without delay when radio stations on board satellites (including components that influence the occupancy of the sub-bands) are brought into or taken out of use, and of any changes to the operational characteristics, where this is relevant with respect to implementing RR Article 11 and Resolution 49, or applying section 56(4) TKG.

Under the ITU's provisions, a satellite network is not considered as having been brought into use until satellite transmitting and receiving equipment has been operated in the notified frequency bands for a continuous period of 90 days.

The Bundesnetzagentur will inform the ITU of the bringing into use of the satellite network within 30 days from the end of this 90-day period.

## **5.2 Prevention of interference, technical design of satellite networks**

Rights holders must comply with the RR provisions concerning the prevention of harmful interference. If interference is caused to other satellite networks or other radiocommunication services as a result of non-compliance with the provisions, the Bundesnetzagentur can restrict or prohibit operation or revoke assignment of the orbit and frequency usage rights. In such cases, rights holders must follow the Bundesnetzagentur's instructions without delay.

## **5.3 Spectral purity, other RR requirements**

Rights holders must comply with RR Appendix 2 (Table of transmitter frequency tolerances) and Appendix 3 (Maximum permitted power levels for unwanted emissions in the spurious domain) and the special provisions in the footnotes to RR Article 5 (Frequency allocation) and in RR Articles 21 and 22 (Space services). This applies even when the Bundesnetzagentur does not require any special evidence of compliance.

## **5.4 Arrangements to cease emissions**

Radio stations on board satellites must be designed to enable immediate cessation of their radio emissions in accordance with RR Article 22.1 if and when, in the event of interference, the rights holder is instructed to do so by the Bundesnetzagentur. Substitute components (redundancy) or safety devices (fail-safe systems, watchdog circuits) must be in place to prevent unwanted frequency occupancy by uncontrolled space station emissions in the event that part of the network should fail.

## **5.5 Station keeping and pointing accuracy**

Radio stations on board satellites must comply with the restrictions on emissions in certain directions or (in the case of non-geostationary satellites) from certain orbital locations. In particular, rights holders must ensure that radio stations on board geostationary satellites comply with the provisions concerning station keeping and pointing accuracy; radio stations on board satellites may only deviate from the limits in RR Article 22 after the end of the satellites' operational life if the possibility of interference to adjacent satellite networks or other radiocommunication services can be ruled out and the Bundesnetzagentur has given its consent.

Radio stations deviating from the limits must cease emissions immediately if interference is caused.

## **5.6 Suspension of use**

Rights holders must inform the Bundesnetzagentur without delay when radio stations on board satellites (or components that influence the occupancy of the sub-bands) are taken out of use, and of any changes to the operational characteristics. In accordance with the ITU's provisions (RR Article 11.49), the Bundesnetzagentur will inform the ITU within six months from the date on which the stations or components were taken out of use. Use may be suspended for a period of three years from this date. If no new satellite is brought into use within this period, the filing with the ITU will be cancelled and the assignment of the orbit and frequency usage rights will be revoked.

## **5.7 End-of-life operation**

Satellites must be operated until the end of their operational life in such a way to ensure sufficient reserves (of energy, fuel and functionality) for end-of-life manoeuvres in accordance with international standards. Particular attention is drawn to the obligations of rights holders to change from a geostationary operational orbit to a safe graveyard orbit in order to protect other satellite networks, and to take account, in planning, of re-entry scenarios for larger space objects in low (non-geostationary) earth orbits.

Rights holders may be required to comply with certain operational requirements to implement international space debris mitigation standards. The Bundesnetzagentur may give the user instructions with respect to operation at the end of a satellite's life in order to enforce compliance with these international standards.

## **6 Time-limited rights assignment**

The assignment of the usage rights is limited in time to the expected operational life of the satellite network. Rights holders must apply for any extension of the rights well in advance of the expiry of the time limit.

## **7 Rights assignment before the completion of international coordination**

If a satellite with the notified technical characteristics (eg an older satellite from a fleet) is available before international coordination has been completed, the orbit and frequency usage rights can be assigned in advance, provided that 75% of the required coordination has been completed. The rights are assigned on a non-interference basis, ie the satellite may not cause interference and must tolerate interference from other networks. The assignment will be time-limited accordingly. Rights holders must inform the Bundesnetzagentur immediately of the progress and results of coordination. As soon as coordination has been completed, the time limit on the assignment of the orbit and frequency usage rights will be adjusted in accordance with section 6.

## **8 Address for applications**

Applications for German satellite network filings with the ITU must be submitted in writing (by post, email or fax) to the following address:

Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen  
Referat 223  
Canisiusstrasse 21  
55122 Mainz  
Fax +49 6131 18-5614  
Email: [Satsystems@BNetzA.de](mailto:Satsystems@BNetzA.de)

## **9. Notes**

### **9.1 Earth stations**

The assignment of orbit and frequency usage rights in accordance with these procedures does not provide direct entitlement to frequency usage by earth stations. Frequency usage by earth stations is subject to the national provisions applicable in the territory in which an earth station is located. In Germany, each frequency usage by earth stations requires prior assignment in accordance with section 55 TKG. Since earth stations are frequently operated by third parties, the frequency assignment holder need not necessarily be the holder of the orbit and frequency usage rights.

## **9.2 International treaties and conventions**

The provisions of the Outer Space Treaty of 27 January 1967 (effective on 10 October 1967, Federal Law Gazette II 1969, page 1968), the Liability Convention of 29 March 1972 (transposed into national law by the Act of 29 August 1975, Federal Law Gazette II, page 1209) and the Registration Convention of 14 January 1975 (transposed into national law by the Act of 1 June 1979, Federal Law Gazette II, page 650) remain unaffected by these procedures and must be observed.

## **9.3 Registration Convention**

Rights holders must have their space objects registered in accordance with the Registration Convention immediately after the successful launch, and must provide the Bundesnetzagentur with evidence of registration.