



Proposed

Rules for Space Station Applications in the W-Band

presented to the
Republic of Southern Sudan

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Part A – General

§01 Basis and Scope

The purpose of these **Rules for Space Station Applications in the W-Band** is to prescribe the manner in which matters relating to communications by satellites using the W-band electromagnetic frequency spectrum.

§02 Station Authorisation Required

No person shall use or operate apparatus for the transmission of energy or communications or signals by space or earth stations in the W-band electromagnetic frequency spectrum except under, and in accordance with, an appropriate authorisation granted by the Republic of Southern Sudan.

§03 Definitions

- a) Active satellite. An earth satellite carrying a station intended to transmit or re-transmit radiocommunication signals.
- b) Allocated Bandwidth. The entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services under specified conditions.
- c) Authorized Carrier. A communications common carrier which is authorized to provide services by means of communications satellites.
- d) Communication Satellite Earth Station Complex. Transmitters, receivers, and communications antennas at the earth station site together with the interconnecting terrestrial facilities (cables, lines, or microwave facilities) and modulating and demodulating equipment necessary for processing of traffic received from the terrestrial distribution system(s) prior to transmission via satellite and of traffic received from the satellite prior to transfer of channels of communication to terrestrial distribution system(s).
- e) Communication Satellite Earth Station Complex Functions. The communication-satellite earth station complex interconnects with terminal equipment of common carriers or authorized entities at the interface; accepts traffic from such entities at the interface, processes for transmission via satellite and performs the transmission function; receives traffic from a satellite or satellites, processes it in a form necessary to deliver channels of communication to terrestrial common carriers or such other authorized entities and delivers the processed traffic to such entities at the interface.
- f) Communications Common Carrier. Any entity engaged as a common carrier for hire, in communication by wire or radio or in radio transmission of energy, and entity which owns or controls, directly or indirectly, or is under direct or indirect common control with, any such carrier.
- g) Earth station. A station located either on the Earth's surface or within the major portion of the Earth's atmosphere intended for communication with one or more space stations or with one or more stations of the same kind by means of one or more satellites.

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§03 Definitions

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- h) Fixed earth station. An earth station intended to be used at a specified fixed point.
- i) Fixed-Satellite Service. A radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the fixed-satellite service may also include feeder links of other space radiocommunication services.
- j) Frequency Assignment. The authorisation given by the Republic of Southern Sudan to use a radio frequency or radio frequency channel under specified conditions.
- k) Geostationary satellite. A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth.
- l) Mobile earth station. An earth station intended to be used while in motion or during halts at unspecified points.
- m) Mobile-Satellite Service. A radiocommunication service between mobile earth stations and one or more space stations, between space stations used by this service, or between mobile earth stations, by means of one or more space stations, including feeder links necessary for its operation.
- n) Satellite Digital Audio Radio Service ("DARS"). A radiocommunication service in which audio programming is digitally transmitted by one or more space stations directly to fixed, mobile, and/or portable stations, and which may involve complementary repeating terrestrial transmitters, telemetry, tracking and control facilities.
- o) Satellite Service. A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public, whether such reception encompasses individual reception and/or community reception.
- p) Satellite System. A space system using one or more artificial satellites.
- q) Service Provider. Any licensee who operates a Satellite Service pursuant to these Rules for Space Station Applications in the W-Band.
- r) Spacecraft. A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere.
- s) Space operation service. A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand. These functions will normally be provided within the service in which the space station is operating.
- t) Space radiocommunication. Any radiocommunication involving the use of one or more space stations.
- u) Space station. A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.
- v) Space system. Any group of cooperating earth stations and/or space stations employing space radiocommunication for specific purposes.

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§04 Preemption of Local Zoning

§05 Competitive Bidding Prohibited

- w) Space telecommand. The use of radiocommunication for the transmission of signals to a space station to initiate, modify or terminate function of the equipment on a space object, including the space station itself.
- x) Space telemetering. The use of telemetering for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.
- y) Space tracking. Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination for the purpose of following its movement.

§04 Preemption of Local Zoning

- a) Any local zoning, land-use, building, or similar regulation that materially limits transmission or reception by satellite earth station antennas, or imposes more than minimal costs on users of such antennas, is preempted unless the promulgating authority can demonstrate that such regulation:
 - 1) Has a clearly defined health, safety, or aesthetic objective that is stated in the text of the regulation itself; and
 - 2) Furthers the stated health, safety or aesthetic objective without unnecessarily burdening access to satellite services and in promoting fair and effective competition among competing communications service providers.
- b) Any local zoning, land-use, building, or similar regulation that affects the installation, maintenance, or use of a satellite earth station antenna that is two meters or less in diameter and is located or proposed to be located in any area where commercial or industrial uses are generally permitted shall be presumed unreasonable and is therefore preempted.

Part B – Applications and Licenses

§05 Competitive Bidding Prohibited

- a) No application for operations in the W-band shall be subject to competitive bidding procedures or auctions for any of the following:
 - 1) Assignment of electromagnetic frequencies,
 - 2) Assignment of orbital allocations,
 - 3) Launch authorisations (including authorisations for launch of on-orbit spare satellites), or
 - 4) Licenses to operate a space station, or
 - 5) Licenses for operation by a service provider's end user customers of earth stations that utilize radiocommunication services provided by a space station authorized to operate in the W-band.
 - 6) Licenses to operate beyond the borders of the Republic of Southern Sudan.

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§06 Non-Revenue Authorisations

§07 Construction Permits Not Required

§06 Non-Revenue Authorisations

- a) Applications for authorisation in the W-band may be granted on a non-revenue basis for:
 - 1) Assignments to use of specific electromagnetic frequencies,
 - 2) Assignments to use of specific geosynchronous orbital slots,
 - 3) Launch authorisations, including launch authorisations for delivery to storing orbits,
 - 4) Licenses to operate space stations,
 - 5) Licenses on behalf of the applicant's customers to operate bi-directional mobile earth stations,
 - 6) Licenses to operate beyond the borders of the Republic of Southern Sudan, provided that applicants shall remain compliant with the broadcasting regulations of all nations whose territories lie beyond the borders of the Republic of Southern Sudan to the extent that these broadcasting regulations do not conflict with these **Rules for Space Station Applications in the W-Band**.
- b) Applications for authorisation shall be granted on a non-revenue basis if and only if the applicant agrees to provide its services to at least one telecommunication services provider located in the Republic of Southern Sudan and operated by citizens of the Republic of Southern Sudan on a wholesale, re-branded basis for the life of the requested licenses and all future license renewals thereto for all subscriber accounts operated by the Applicant.
- c) If the applicant agrees to provide services for the life of the requested licenses and all future license renewals thereto for the end user customer accounts described in Paragraph B, above, then operational licenses and/or authorisations shall be exempted from taxation or other monetary levies by the Republic of Southern Sudan, including, but not limited to exemption from national, regional, local, or municipal user fees, taxes, or other tariffs of any kind for the life of the requested authorizations and for all renewals thereof.

§07 Construction Permits Not Required

- a) Construction permits shall not be required:
 - 1) For space stations intended to operate under a license issued pursuant to these **Rules for Space Station Applications in the W-Band**; or
 - 2) For satellite earth stations intended to operate with licensed space stations under these **Rules for Space Station Applications in the W-Band**.
- b) An applicant for license authorisations may proceed with construction of its space stations or earth stations at its own risk prior to grant of a license if the applicant notifies the Republic of Southern Sudan of its plan to begin construction at its own risk, provided, however, that the Republic of Southern Sudan shall be held liable by an applicant for losses sustained by an applicant that proceeds to construct at its own risk by reason of the denial of any such application filed under these **Rules for Space Station Applications in the W-Band**.

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§08 Licenses, Terms, and Renewals

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- c) All entities granted authorisations under these **Rules for Space Station Applications in the W-Band** shall proceed with due diligence in construction, unless otherwise determined by the Republic of Southern Sudan upon proper showing in any particular case.

§08 Licenses, Terms, and Renewals

- a) Authorisation for operation of a space station in the W-band shall not be granted in the W-band frequency for operation with a transponder wattage of less than 100,000 watts.
- b) A launch authorization shall be applied for and granted before a space station may be launched and operated in orbit.
 - 1) A request for operational electromagnetic frequencies and assignment to specific geosynchronous orbital slots may be included in an application for space station license.
 - 2) A request for launch authorisation may be included in an application for space station license.
 - 3) A request for launch authorisation for an in-orbit spare may be included in an application for space station license.
 - 4) An application for authority to launch and operate an on-orbit spare satellite may be included in an application for a space station license.
 - 5) Simultaneous application for a station license may be made for all earth station facilities governed by this part at the same time an application for launch authorisation and license to operate a space station is filed. In those cases where an applicant is filing a number of essentially similar applications, showings of a general nature applicable to all of the proposed stations may be submitted in the initial application and incorporated by reference in subsequent applications.
- c) Licenses for both broadcast and non-broadcast facilities governed by these **Rules for Space Station Applications in the W-Band** shall be issued for a period of twenty-five (25) years.
 - 1) The Republic of Southern Sudan may grant or renew station licenses for less than 25 years if, in its judgment, the public interest, convenience and necessity will be served by such action.
 - 2) The license term will begin at 12:00 a.m. Greenwich Mean Time (GMT) on the date the licensee certifies to the Republic of Southern Sudan that the satellite has been successfully placed into orbit and that the operations of the satellite fully conform to the terms and conditions of the space station radio authorisation.
 - 3) All space stations launched and brought into service during the license term shall operate pursuant to the system authorisation, and the operating authority for all space stations will terminate upon the expiration of the system license.
- d) Applications for renewals of earth station licenses shall be submitted no earlier than 180 days, and no later than 90 days, before the expiration date of the license. Applications for space station system replacement authorisation for non-geostationary orbit satellites shall

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§09 Protection of Proprietary Information

§11 Filing of Applications, Number of Copies

be filed no earlier than 180 days, and no later than 90 days, prior to the end of the final year of the existing license term.

- e) Permittees shall place their space stations into operation within ten years of the grant of a license authorisation.
- f) An applicant found to be qualified may be initially assigned up to three orbital locations (plus a fourth sparing orbital location) for each frequency band proposed.

§09 Protection of Proprietary Information

- a) Any applicant may request that the Republic of Southern Sudan protect from public disclosure certain information that is deemed by the applicant to be proprietary, including, but not limited to:
 - 1) Specific details concerning costs of design, construction, and launch of space stations applied for under these rules.
 - 2) Specific details concerning engineering plans, designs, models, or other specifications that are proprietary to the applicant or to its vendors.
 - 3) Any information that, were it to be disclosed to third parties, might lead to a restraint of trade, unfair competition against the applicant, or appropriation of an applicant's proprietary technology.
- b) Information deemed by the applicant to be proprietary shall be identified by the applicant as being **PROPRIETARY INFORMATION SUBJECT TO NON-DISCLOSURE PROTECTION** and placed in a separate exhibit to any application filed under these **Rules for Space Station Applications in the W-Band**.
- c) No exhibit to an application filed pursuant to these *Rules for Space Station Applications in the W-Band* that bears an indicia claiming to be PROPRIETARY INFORMATION SUBJECT TO NON-DISCLOSURE PROTECTION shall be placed in any public inspection file or otherwise released to any party other than authorized agents of the Republic of Southern Sudan without the expressed, written authorization of the applicant who claims that such information is subject to non-disclosure protection.

§10 Other Protections and Immunities

The W-band telecommunications payload of any Space Station licensed hereunder shall be subject to that certain same, unique, and Special Status protection and immunity from search and trespass (the "Consular Protection") that is customarily extended to and claimed by the foreign embassies and consulates of sovereign nations of the earth, including exemption from search, blockage, interference, interdiction, interception, decryption, and/or seizure of data transmission to and from the telecommunications payloads of such Space Stations.

§11 Filing of Applications, Number of Copies

- a) An original application filed with the Republic of Southern Sudan may consist of an electronic filing in the Public Document Format (PDF) standard established by Adobe

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§12 Contents of Applications

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Acrobat, provided the application contains a digital signature affixed thereto by the individual making the filing.

- b) All applications shall be on paper 8 by 11½ inches with left hand margin not less than 1½ inches wide. The impression shall be on one side of the paper only and shall be double spaced. All applications and accompanying papers, except charts, shall be typewritten or prepared by mechanical processing methods. All copies must be clearly legible.
- c) The Republic of Southern Sudan may request from any party at any time additional information concerning any application, or any other submission or pleading regarding an application, filed under this part.
- d) Applicants, permittees and licensees shall provide the Republic of Southern Sudan with all information it requires for the advance publication, coordination and notification of international frequency assignments. No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless coordination procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorisation for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments with other Administrations.

§12 Contents of Applications

- a) Each application shall contain full and complete disclosures with regard to the real party or parties in interest and as to all matters and things required to be disclosed in the application.
 - 1) A comprehensive proposal shall be submitted for each proposed space station, together along with attached exhibits as described in this section. If an applicant is proposing more than one space station, information common to all space stations may be submitted in a consolidated system proposal.
 - 2) Each application for a new or modified space station authorisation must constitute a concrete proposal for Republic of Southern Sudan evaluation, although the applicant may propose alternatives that increase flexibility in accommodating the satellite in orbit.
 - 3) The technical information for a proposed satellite system need not be filed on any prescribed form but should be complete in all pertinent details.
 - 4) General description of overall system facilities, operations, and services, including a showing describing the type of service that will be provided, the technology that will be employed, and all other pertinent information.
 - 5) Type of authorisation requested (e.g., launch authority, station license, modification of authorisation);
- b) If applicant is a corporation, the following general information in narrative form shall be contained in each application:
 - 1) The name, address, telephone number, fax number, and email address (if an email address is maintained) of the applicant.
 - 2) Place of incorporation.

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- 3) Names and addresses of directors and principal officers of applicant and percentage of stock of applicant owned by each.
 - 4) Name, address, telephone number, fax number, and email address (if an email address is maintained) of the person(s), including counsel, to whom inquiries or correspondence should be directed.
- c) If applicant is an individual or business organization other than a corporation, the following general information in narrative form shall be contained in each application:
- 1) The name, address, telephone number, fax number, and email address (if an email address is maintained) of the applicant.
 - 2) Name and address of each person having a financial interest in the entity and a description of the nature and extent of such interest.
 - 3) Name, address, telephone number, fax number, and email address (if an email address is maintained) of the person(s), including counsel, to whom inquiries or correspondence should be directed.
- d) The following additional information in narrative form shall be contained in each application:
- 1) Information demonstrating the financial qualifications of the applicant to construct and launch the proposed satellites.
 - 2) A clear and detailed statement of whether the space station is to be operated on a common carrier basis, or whether non-common carrier transactions are proposed. If non-common carrier transactions are proposed, describe the nature of the transactions and specify the number of transponders to be offered on a non-common carrier basis;
 - 3) Dates by which construction will be commenced and completed, launch date, and estimated date of placement into service;
 - 4) Public interest considerations in support of grant in the form of a statement why the applicant believes a grant of its application will be consistent with the public interest, convenience, and necessity.
 - 5) A certification statement that it is legally, financially, technically, and otherwise qualified to proceed expeditiously with the construction, launch and/or operation of each proposed space station facility immediately upon grant of the requested authorisation.
 - 6) The estimated costs of proposed construction and/or launch, and any other initial expenses for the space station(s).
 - 7) Estimated operating expenses for one year after launch of the proposed space station(s).
 - 8) Whatever other information or details the Republic of Southern Sudan may require with regard to a specific application or applicant.
- e) The applicant shall submit a Technology Readiness Assessment document to the Republic of Southern Sudan concerning the proposed satellite system. following technical information

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§12 Contents of Applications

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in narrative form shall be contained in each application or submitted within 120 days of approval of requested orbital assignments and electromagnetic frequency allocations:

- 1) Radio frequencies and polarization plan (including beacon, telemetry, and telecommand functions), center frequency and polarization of transponders (both receiving and transmitting frequencies), emission designators and allocated bandwidth of emission, final amplifier output power (identify any net losses between output of final amplifier and input of antenna and specify the maximum EIRP for each antenna beam), identification of which antenna beams are connected or switchable to each transponder and TT&C function, receiving system noise temperature, the relationship between satellite receive antenna gain pattern and gain-to-temperature ratio and saturation flux density for each antenna beam (may be indicated on antenna gain plot), the gain of each transponder channel (between output of receiving antenna and input of transmitting antenna) including any adjustable gain step capabilities, and predicted receiver and transmitter channel filter response characteristics;
- 2) Applications for satellites that are intended to be placed in geostationary orbit shall include information on orbital location, or locations if alternatives are proposed, requested for the satellite, the factors that support such an orbital assignment, the range of orbital locations from which adequate service can be provided and the basis for determining that range of orbital locations, and a detailed explanation of all factors that would limit the orbital arc over which the satellite could adequately serve its expected users;
- 3) Predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. These contour(s) should be plotted on an area map at 2 Db intervals down to 10 dB below the peak value of the parameter and at 5 dB intervals between 10 dB and 20 dB below the peak values, with the peak value and sense of polarization clearly specified on each plotted contour;
- 4) A description of the types of services to be provided, and the areas to be served, including a description of the transmission characteristics and performance objectives for each type of proposed service, details of the link noise budget, typical or baseline earth station parameters, modulation parameters, and overall link performance analysis (including an analysis of the effects of each contributing noise and interference source);
- 5) For satellites in geostationary-satellite orbit, accuracy with which the orbital inclination, the antenna axis attitude, and longitudinal drift will be maintained;
- 6) Calculation of power flux density levels within each coverage area and of the energy dispersal, if any;
- 7) Arrangement for tracking, telemetry, and control;
- 8) Physical characteristics of the space station including weight and dimensions of spacecraft, detailed mass (on ground and in-orbit) and power (beginning and end of life) budgets, and estimated operational lifetime and reliability of the space station and the basis for that estimate;
- 9) An interference analysis to demonstrate the compatibility of its proposed system 2 degrees from any authorized space station. An applicant should provide details of its

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§13 Signing of Applications

§15 Public Notice Period

proposed RF carriers which it believes should be taken into account in this analysis. At a minimum, the applicant must include, for each type of RF carrier, the link noise budget, modulation parameters, and overall link performance analysis.

- f) Applicants may request specific frequencies and orbital positions. The Republic of Southern Sudan shall generally consider all frequencies and orbital positions to be of equal value, and conflicting requests for frequencies and orbital positions will not necessarily give rise to comparative hearing rights as long as unassigned frequencies and orbital slots remain.
- g) Because technical information required to be submitted by the applicant pursuant to subsection (e) of this section of these **Rules for Space Station Applications in the W-Band** may be dependent upon grant of specific orbital assignments and electromagnetic frequency assignments, an applicant may delay providing the technical information required by this section of these **Rules for Space Station Applications in the W-Band** until 120 days following award of specific orbital assignments and electromagnetic frequency assignments.

§13 Signing of Applications

- a) The original copy of the application and any future amendments filed shall be personally signed (or digitally signed in the case of electronic copies) by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association.
- b) Applications and amendments thereto need not be signed under oath; however, willful false statements made therein are punishable by refusal or revocation of authorization or by dismissal of the application.

§14 Receipt of Applications

Applications received by the Republic of Southern Sudan shall be given a file number for administrative convenience. Neither the assignment of a file number nor the placement of the application on public notice as received for filing shall be interpreted that the application has been found acceptable for filing or precludes the subsequent return or dismissal of the application if it is found to be defective or not in accordance with the Republic of Southern Sudan's rules.

§15 Public Notice Period

- a) Each application for a direct broadcast satellite system shall be placed on public notice for 10 days, during which time interested parties may file comments and petitions related to the application.
 - 1) No application filed will be granted by the Republic of Southern Sudan earlier than 10 days following issuance of public notice by the Republic of Southern Sudan of the acceptance for filing of such application or any substantial amendment thereto.
 - 2) No application that has appeared on public notice shall be granted until the expiration of a period of ten days following the issuance of the public notice listing the application, or any major amendment thereto.

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§16 Dismissal and Return of Applications

§17 Defective Applications

- 3) Any comments or petitions shall be delivered to the Republic of Southern Sudan by that date.
 - 4) Any interested party may file comments with respect to the application (or amendment thereto) within this 10-day period. Such comments must also be served on the applicant who shall be afforded 10 additional days in which to file reply comments.
 - 5) If upon examination of any such application (or amendment thereto) together with any comments filed with respect thereto the Republic of Southern Sudan is unable to make a finding that a grant of authorisation will be consistent with the public interest, convenience, and necessity, it will deny the application or institute such further proceedings as in its discretion appear appropriate.
- b) Applications submitted for consideration under these **Rules for Space Station Applications in the W-Band** shall be considered on a first-come, first-served basis. Additional competing applications shall be considered only after applications that have been previously filed have been considered and acted upon by the Republic of Southern Sudan.
 - c) After the public comment period and staff review, each application for a direct broadcast satellite system shall be acted upon by the Republic of Southern Sudan in the order received to determine if authorisation of the proposed system is in the public interest. Because applications shall be considered on a first-come, first-served basis, the fact that a competing application may have been filed before the Republic of Southern Sudan shall not be considered as a valid reason for the rejection of a previously filed application.
 - d) A public notice need not and will not normally be issued for receipt of any of the following applications:
 - 1) For authorisation of a minor technical change in the facilities of an authorized station;
 - 2) For temporary authorisations;
 - 3) For consent to an involuntary assignment or transfer of control;
 - 4) For consent to an assignment or transfer of control of a space station authorisation or a transmitting earth station authorisation, where the assignment or transfer does not involve a substantial change in ownership or control.

§16 Dismissal and Return of Applications

- a) Any application may be dismissed without prejudice as a matter of right if the applicant requests its dismissal prior to final Republic of Southern Sudan action.
- b) The Republic of Southern Sudan will dismiss an application for failure to prosecute or for failure to respond substantially within a specified time period to official correspondence or requests for additional information.

§17 Defective Applications

- a) Applications not in accordance with these **Rules for Space Station Applications in the W-Band** may be deemed defective and returned by the Republic of Southern Sudan.

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§18 Oppositions to Applications

§18 Oppositions to Applications

- 1) Notices that an application has been dismissed as defective shall be accompanied by a list of reasons why the application has been dismissed. Any applicant whose application has been dismissed may resubmit its application at a later date, provided the applicant submits a filing that contains proof that the defects have been cured.
 - 2) Applications that have been dismissed as defective shall not lose their place in consideration on a first-come, first-served basis, provided, however, that competing applications previously received may continue to be considered and acted upon by the Republic of Southern Sudan.
 - 3) If an application that has been rejected as defective by the Republic of Southern Sudan is later refiled with its defects cured, and in the mean time other competing applications are filed between the time of rejection and its refiling, the refiled application shall be considered and acted upon before such other competing applications are considered and acted upon.
 - 4) Dismissal of rejected applications will be without prejudice.
- b) An application may be accepted for filing, and the applicant noticed that omissions or discrepancies need to be corrected before it is considered for grant if:
- 1) The application is defective with respect to completeness of answers to questions, informational showings, internal inconsistencies, execution, or other matters of a formal character; or
 - 2) The application does not substantially comply with these **Rules for Space Station Applications in the W-Band** or with specific requests for additional information made by the Republic of Southern Sudan, or other requirements.
 - 3) The application is accompanied by a request which sets forth the reasons in support of a waiver of (or an exception to), in whole or in part, any specific rule, regulation, or requirement with which the application is in conflict;
 - 4) The Republic of Southern Sudan, upon its own motion, waives (or allows an exception to), in whole or in part, any rule, regulation or requirement.
- c) If an applicant is requested by the Republic of Southern Sudan to file any additional information or any supplementary or explanatory information not specifically required in the prescribed application form or these rules, a failure to comply with the request within 30 days will be deemed to render the application defective and will subject it to dismissal without prejudice.

§18 Oppositions to Applications

- a) Petitions to deny, petitions for other forms of relief, and other objections or comments shall:
- 1) Identify the application or applications (including applicant's name and Republic of Southern Sudan file numbers) with which it is concerned;
 - 2) Be filed within 10 days after the date of public notice announcing the acceptance for filing of the application or major amendment thereto (unless the Republic of Southern Sudan otherwise extends the filing deadline);

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§19 Consideration of Applications

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- 3) Be filed in accordance with the pleading limitations, periods and other applicable provisions of these ***Rules for Space Station Applications in the W-Band***;
 - 4) Contain specific allegations of fact to support the specific relief requested, which shall be supported by affidavit of a person or persons with personal knowledge thereof, and which shall be sufficient to demonstrate that the petitioner (or respondent) is a party of interest and that a grant of, or other Republic of Southern Sudan action regarding, the application would be *prima facie* inconsistent with the public interest; and
 - 5) Contain a certificate of service showing that a copy of it has been received by the applicant no later than the date the pleading is filed with the Republic of Southern Sudan.
 - 6) Be filed under penalty of perjury and punishable by a fine or imprisonment as determined by a court of competent jurisdiction.
- b) The Republic of Southern Sudan will classify as informal objections:
- 1) Any pleading not filed in accordance with this section;
 - 2) Any pleading to which the 10 day public notice period does not apply; or
 - 3) Any objections to the grant of an application when the objections do not conform to either this section or to other Republic of Southern Sudan rules and requirements.
- c) Oppositions to petitions to deny an application or responses to comments and informal objections regarding an application may be filed within 14 days after the petition, comment, or objection is filed and shall be filed in accordance with other applicable provisions of this chapter.
- d) Reply comments by the party that filed the original petition may be filed with respect to pleadings filed pursuant to this section within 10 days after the time for filing oppositions has expired unless the Republic of Southern Sudan otherwise extends the filing deadline and shall be in accordance with other applicable provisions of this chapter.

§19 Consideration of Applications

- a) Applications for an authorisation, or for modification or renewal of an authorisation, shall be granted if, upon examination of the application, any pleadings or objections filed, and upon consideration of such other matters as it may officially notice, the Republic of Southern Sudan finds that the applicant is legally, technically, and otherwise qualified, that the proposed facilities and operations comply with all applicable rules, regulations, and policies, and that grant of the application will serve the public interest, convenience and necessity.
- b) Whenever the Republic of Southern Sudan grants any application in part, or subject to any terms or conditions other than those routinely applied to applications of the same type, the grant shall be considered final.

Rules for Space Station Applications in the W-Band

§20 Special Temporary Authorisations

§21 Amendments to Applications

Part C – Amendments, Modifications, and Transfers

§20 Special Temporary Authorisations

- a) In circumstances requiring immediate or temporary use of facilities, request may be made for special temporary authority to install and/or operate new or modified equipment. The request must contain the full particulars of the proposed operation including all facts sufficient to justify the temporary authority sought and the public interest therein. No request for temporary authority will be considered unless it is received by the Republic of Southern Sudan at least 3 working days prior to the date of proposed construction or operation or, where an extension is sought, the expiration date of the existing temporary authorisation. A request received within less than 3 working days may be accepted only upon due showing of extraordinary reasons for the delay in submitting the request which could not have been earlier foreseen by the applicant.
- b) The Republic of Southern Sudan may grant a temporary authorisation for a period not to exceed 180 days, with additional periods not exceeding 180 days, upon a finding that there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of these temporary operations would seriously prejudice the public interest. Convenience to the applicant, such as marketing considerations of meeting scheduled customer in-service dates may be deemed sufficient for this purpose.

§21 Amendments to Applications

- a) The Republic of Southern Sudan may at any time order or require the applicant to amend his application so as to make it more definite and certain or to submit such additional documents, or statements, as in the judgment of the Republic of Southern Sudan may be necessary.
- b) Unless otherwise specified, any pending application may be amended until designated for hearing, a public notice is issued stating that a substantive disposition of the application is to be considered at a forthcoming Republic of Southern Sudan meeting, or a final order disposing of the matter is adopted by the Republic of Southern Sudan.
- c) Major amendments submitted shall be subject to public notice requirements. An amendment will be deemed to be a major amendment under the following circumstances:
 - 1) If the amendment increases the potential for interference, or changes the proposed frequencies or orbital locations to be used.
 - 2) If the amendment specifies a substantial change in beneficial ownership or control (de jure or de facto) of an applicant.
 - 3) If the amendment, or the cumulative effect of the amendment, is determined by the Republic of Southern Sudan otherwise to be substantial.
 - 4) Any application will not be considered to be a newly filed application under the following circumstances:
 - i) The amendment resolves frequency conflicts with authorized stations or other pending applications but does not create new or increased frequency conflicts;

Rules for Space Station Applications in the W-Band

§22 Modifications of Station License

§22 Modifications of Station License

- ii) The amendment reflects only a change in ownership or control found by the Republic of Southern Sudan to be in the public interest and, for which a requested exemption from a “cut-off” date is granted;
 - iii) The amendment corrects typographical, transcription, or similar clerical errors which are clearly demonstrated to be mistakes by reference to other parts of the application, and whose discovery does not create new or increased frequency conflicts; or
 - iv) The amendment does not create new or increased frequency conflicts, and is demonstrably necessitated by events which the applicant could not have reasonably foreseen at the time of filing.
- d) Any amendment to an application shall be signed and submitted in the same manner, and with the same number of copies, as was the original application.

§22 Modifications of Station License

- a) Except as provided for in this section, no modification of a radio station governed by this part which affects the parameters or terms and conditions of the station authorisation shall be made except upon application to and grant of such application by the Republic of Southern Sudan. No license modification will be required if the licensee seeks to access another licensed fixed satellite provided the operators of the licensed systems have received specific authorisation to provide the services to the proposed locations.
- b) Applications for modification of an earth station license to add, change or replace transmitters or antenna facilities will be considered to be minor modifications if the particulars of operations remain unchanged and frequency coordination is not required, provided however, that the maximum power and power density delivered into any antenna at the earth station site shall not exceed the values calculated by subtracting the maximum antenna gain specified in the license from the maximum authorized EIRP and EIRP density values.
- c) Any application for extension of time must include a verified statement from the applicant:
 - 1) That states the additional time is required due to unforeseeable circumstances beyond the applicant's control, describes these circumstances with specificity, and justifies the precise extension period requested; or
 - 2) That states there are unique and overriding public interest concerns that justify an extension, identifies these interests and justifies a precise extension period.
- d) Equipment in an authorized earth station may be replaced without prior authorisation or prior notification if the new equipment is electrically identical to the existing equipment.
- e) Licensees may make changes to their authorized earth stations without obtaining prior Republic of Southern Sudan authorisation if frequency coordination procedures, as necessary, are complied with and the modification does not involve:
 - 1) An increase in EIRP or EIRP density (both main lobe and side lobe);
 - 2) An increase in transmitted power;

Rules for Space Station Applications in the W-Band

§23 Transfers of Control

§23 Transfers of Control

- 3) An addition to an antenna facility, including hub earth stations and remote terminals, that is already licensed, except for VSAT remote terminals.
- f) Licensees shall notify the Republic of Southern Sudan within 30 days after the modification is completed.

§23 Transfers of Control

- a) No station licenses, nor any rights thereunder, shall be transferred, assigned, or disposed of in any manner, voluntarily or involuntarily, directly or indirectly, or by transfer of control of any corporation or any other entity holding such license, to any person except upon application to the Republic of Southern Sudan and upon finding by the Republic of Southern Sudan that the public interest, convenience and necessity will be served thereby, except:

- 1) If such a transfer of control is from a corporation not domiciled in the Republic of Southern Sudan to a corporation that is domiciled in the Republic of Southern Sudan; **and**,
- 2) If all of the share holders of the transferor are identical in identity, number, and proportionate ownership as are the shareholders of the transferee,

then the transferor need only provide a written notice to the Republic of Southern Sudan within ten days after completion of the transfer that such a transfer has been completed, along with a statement that contains the information required in §11(c)(1)-(3) of these **Rules for Space Station Applications in the W-Band**.

- b) Transfers of control requiring Republic of Southern Sudan approval shall include any and all transactions that:
 - 1) Change the party controlling the affairs of the licensee, or
 - 2) Affect any change in a controlling interest in the ownership of the licensee, including changes in legal or equitable ownership.
- c) Assignment of license applications shall be submitted to assign voluntarily (as by, for example, contract or other agreement) or involuntarily (as by, for example, death, bankruptcy, or legal disability) the authorisation. In the case of involuntary assignment, the application should be filed within 10 days of the event causing the assignment.
- d) Applications for transfer of control of corporation holding license shall be submitted in order to transfer voluntarily or involuntarily (de jure or de facto) control of a corporation holding any licenses. In the case of involuntary transfer of control, the applications shall be filed within 10 days of the event causing the transfer of control.
- e) Assignments and transfers of control shall be completed within 60 days from the date of authorisation. Within 30 days of consummation, the Republic of Southern Sudan shall be notified by letter of the date of consummation and the file numbers of the applications involved in the transaction.
- f) Transfer of control of any authorisations granted pursuant to these **Rules for Space Station Applications in the W-Band** shall be permitted at any time, provided that if the proposed transfer occurs before the applicant places its space stations into operation, the transferee

Rules for Space Station Applications in the W-Band

§24 Termination, Reinstatement

§24 Termination, Reinstatement

shall continue to be bound by the original due diligence restrictions set forth in these ***Rules for Space Station Applications in the W-Band***.

- g) At the discretion of the Republic of Southern Sudan, a pending transfer of control may be considered to justify extension of the due diligence deadlines set forth within these ***Rules for Space Station Applications in the W-Band***.
- h) Any entity that seeks to transfer its authorisations shall file, together with an application for consent to the transfer, copies of all contracts for sale, option agreements, management agreements, or other documents disclosing the total consideration received in return for the transfer of its license. The information submitted shall include not only a monetary purchase price, but also any future, contingent, in-kind, or other consideration.
- i) If the original license pertaining to an application for consent to transfer control that has been filed under these ***Rules for Space Station Applications in the W-Band*** was granted on a non-revenue basis, then the conditions upon which that original grant were made shall remain binding and in full force and effect for the applicant into whose control the transfer has been requested.

§24 Termination, Reinstatement

- a) Where any person to whom an authorisation has been issued pursuant to this subpart has willfully failed to make a complete disclosure with regard to the real party or parties in interest or as to all matters and things required to be disclosed in the application, the Republic of Southern Sudan at any time may order such person to show cause why such authorisation should not be revoked. Such person will be given reasonable opportunity to respond in writing to the order to show cause. Upon consideration of the response, the Republic of Southern Sudan will determine whether an order of revocation should issue or whether further proceedings, as may be appropriate, should be instituted.
- b) A forfeiture or revocation may be imposed for:
 - 1) Failure to operate in conformance with these Rules for Space Station Applications in the W-Band;
 - 2) Failure to operate in conformance with any license specifications, or any conditions imposed on an authorization;
 - 3) Failure to operate in conformance with any of the Republic of Southern Sudan's rules and regulations;
 - 4) Failure to comply with Republic of Southern Sudan requests for information needed to complete international coordination;
 - 5) Failure to cooperate in Republic of Southern Sudan investigations with respect to international coordination;
 - 6) Malicious transmissions of any signal that causes harmful interference with any other radio communications or signals.

Rules for Space Station Applications in the W-Band

§25 Transmitting Earth Stations

§26 Receive-only Earth Stations

- c) A license may be revoked for any repeated and willful violation of the kind set forth in this section, provided, however, that sanctions specified in this section will be imposed only after the licensee has been provided an opportunity to be heard.
- d) Authorisation shall be automatically terminated in whole or in part without further notice to the licensee upon:
 - 1) The expiration of the required date of completion of construction or other required action specified in the authorisation, or after any additional time authorized by the Republic of Southern Sudan, if a certification of completion of the required action has not been filed with the Republic of Southern Sudan unless a request for an extension of time has been filed with the Republic of Southern Sudan but has not been acted on;
 - 2) The expiration of the license period, unless an application for renewal of the license has been filed with the Republic of Southern Sudan; or
 - 3) The removal or modification of the facilities which renders the station not operational for more than 90 days, unless specific authority is requested.
- e) Any authorisation terminated in whole or in part under these Rules may be reinstated if the Republic of Southern Sudan, in its discretion, determines that reinstatement would best serve the public interest, convenience, and necessity. Petitions for reinstatement will be considered if:
 - 1) The petition is filed within 30 days after the expiration date set forth;
 - 2) The petition explains the failure to file a timely notification or renewal application; and
 - 3) The petition sets forth with specificity the procedures which have been established to insure timely filings in the future.
- f) A special temporary authorisation shall automatically terminate upon the expiration date specified therein, or upon failure of the grantee to comply with any special terms or conditions set forth in the authorisation. Temporary operation may be extended beyond the termination date only upon application to the Republic of Southern Sudan.

Part D – Technical Standards and Operations

§25 *Transmitting Earth Stations*

Transmissions of signals or programming to internationally-licensed satellites may be subject to restrictions as a result of international agreements or treaties. The Republic of Southern Sudan will maintain public information on the status of any such agreements.

§26 *Receive-only Earth Stations*

Reception of signals or programming from internationally-licensed satellites may be subject to restrictions as a result of international agreements or treaties. The Republic of Southern Sudan will maintain public information on the status of any such agreements.

Rules for Space Station Applications in the W-Band

§27 Construction Certification

§29 Choice of Sites and Frequencies

§27 Construction Certification

- a) Each license for an earth station governed by this part shall specify as a condition therein the period in which construction of facilities must be completed and station operation commenced. Construction of the earth station must be completed and the station must be brought into regular operation within 12 months from the date of the construction permit and/or license grant except as may be otherwise determined by the Republic of Southern Sudan for any particular application.
- b) If the facility does not meet required technical parameters, a request for a waiver shall be submitted and approved by the Republic of Southern Sudan before operations may commence.
- c) Each receiving earth station licensed shall be constructed and placed into service within 6 months after coordination has been completed. Each licensee or registrant shall file with the Republic of Southern Sudan a certification that the facility is completed and operating, with the exception of certification of antenna patterns.

§28 Frequencies and Tolerances

- a) Orbital locations assigned to space stations licensed by the Republic of Southern Sudan are subject to change by summary order of the Republic of Southern Sudan on 30 days notice. An authorisation to construct and/or to launch a space station becomes null and void if the construction is not begun or is not completed, or if the space station is not launched and positioned at its assigned orbital location and operations commenced in accordance with the station authorisation, by the respective date(s) specified in the authorisation.
- b) The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.
- c) The carrier frequency of each space station transmitter authorized in these services shall be maintained within 0.002 percent of the reference frequency.
- d) The mean power of emissions shall be attenuated below the mean output power of the transmitter in any event when an emission outside of the authorized bandwidth causes harmful interference.
- e) Telemetry, tracking, and telecommand functions shall be conducted at either or both edges of the allocated band(s). Frequencies, polarization and coding shall be selected to minimize interference into other satellite networks and within their own satellite system.

§29 Choice of Sites and Frequencies

- a) Sites and frequencies for earth stations, operating in frequency bands shared with equal rights between terrestrial and space services, shall be selected, to the extent practicable, in areas where the surrounding terrain and existing frequency usage are such as to minimize the possibility of harmful interference between the sharing services.
- b) An applicant for an earth station authorisation in a frequency band shared with equal rights with terrestrial microwave services shall compute the great circle coordination distance contour(s) for the proposed station, submitting with the application a map or maps drawn to

Rules for Space Station Applications in the W-Band

§29 Choice of Sites and Frequencies

§29 Choice of Sites and Frequencies

appropriate scale and in a form suitable for reproduction indicating the location of the proposed station and these contours.

- 1) These maps, together with the pertinent data on which the computation of these contours is based, including all relevant transmitting and/or receiving parameters of the proposed station that might be useful in assessing the likelihood of interference, an appropriately scaled plot of the elevation of the local horizon as a function of azimuth, and the electrical characteristics of the earth station antenna(s), shall be submitted by the applicant in a single exhibit to the application.
 - 2) The coordination distance contour plot(s), horizon elevation plot, and antenna horizon gain plot(s) required by this section may also be submitted in tabular numerical format at 5 deg. azimuthal increments instead of graphical format.
 - 3) At a minimum, this exhibit shall include the information listed in paragraph (c)(2) of this section.
 - 4) An earth station applicant shall also include in the application relevant technical details (both theoretical calculations and/or actual measurements) of any special techniques, such as the use of artificial site shielding, or operating procedures or restrictions at the proposed earth station which are to be employed to reduce the likelihood of interference, or of any particular characteristics of the earth station site which could have an effect on the calculation of the coordination distance.
- c) Prior to the filing of his application, an earth station applicant shall coordinate the proposed frequency usage with existing terrestrial users and with applicants for terrestrial station authorisations with previously filed applications in accordance with the following procedure:
- 1) An applicant for an earth station authorisation shall perform an interference analysis for each terrestrial station, for which a license or construction permit has been granted or for which an application has been accepted for filing, which is or is to be operated in a shared frequency band to be used by the proposed earth station and which is located within the great circle coordination distance contour(s) of the proposed earth station.
 - 2) The earth station applicant shall provide each such terrestrial station licensee, permittee, and prior filed applicant with the technical details of the proposed earth station and the relevant interference analyses that were made. At a minimum, the earth station applicant shall provide the terrestrial user with the following technical information:
 - i) The geographical coordinates of the proposed earth station antenna(s),
 - ii) Proposed operating frequency band(s) and emission(s),
 - iii) Antenna center height above ground and ground elevation above mean sea level,
 - iv) Antenna gain pattern(s) in the plane of the main beam,
 - v) Longitude range of geostationary satellites at which antenna may be pointed,
 - vi) Horizon elevation plot,

Rules for Space Station Applications in the W-Band

§30 Minimum Angle of Antenna Elevation

§30 Minimum Angle of Antenna Elevation

- vii) Antenna horizon gain plot(s) for satellite longitude range, taking into account earth stations operating with non-geostationary satellites.
 - viii) Minimum elevation angle,
 - ix) Maximum effective isotropically radiated power (EIRP) in any 4 kHz band in the main beam, (dBW/4 kHz),
 - x) Maximum available RF transmit power in any 1 MHz band and in any 4 kHz band at the input terminals of the antenna(s),
 - xi) Maximum permissible RF interference power level for all applicable percentages of time, and
 - xii) A plot of great circle coordination distance contour(s) and rain scatter coordination distance contour(s).
- 3) The 30-day period allowed for response to a request for coordination may be increased to a maximum of 45 days by consent of the Republic of Southern Sudan.
- 4) Where technical problems are resolved by an agreement or operating arrangement between the parties that would require special procedures be taken to reduce the likelihood of harmful interference (such as the use of artificial site shielding) or would result in lessened quality or capacity of either system, the details thereof shall be contained in the application.
- 5) The Republic of Southern Sudan may, in the course of examining any application, require the submission of additional showings, complete with pertinent data and calculations, showing that harmful interference is not likely to result from the proposed operation.
- d) An applicant for an earth station authorisation shall also ascertain whether the great circle coordination distance contours and rain scatter coordination distance contours for international coordination, cross the boundaries of another administration. In this case, the applicant shall furnish the Republic of Southern Sudan copies of these contours on maps drawn to appropriate scale for use by the Republic of Southern Sudan in effecting coordination of the proposed earth station with the administration(s) affected.
- e) An applicant for an earth station that will operate with a geostationary satellite or non-geostationary satellite in a shared frequency band in which the non-geostationary system is (or is proposed to be) licensed for feeder links, shall demonstrate in its applications that its proposed earth station will not cause unacceptable interference to any other satellite network that is authorized to operate in the same frequency band, or certify that the operations of its earth station shall conform to established coordination agreements between the operator(s) of the space station(s) with which the earth station is to communicate and the operator(s) of any other space station licensed to use the band.

§30 Minimum Angle of Antenna Elevation

Earth station antennas shall not normally be authorized for transmission at angles less than 5 deg. measured from the horizontal plane to the direction of maximum radiation. However, upon a showing that the transmission path will be seaward and away from land masses or upon

Rules for Space Station Applications in the W-Band

§31 Cessation of Emissions

§32 Fixed Satellite Space Stations

special showing of need for lower angles by the applicant, the Republic of Southern Sudan will consider authorizing transmissions at angles between 3 deg. and 5 deg. in the pertinent directions. In certain instances, it may be necessary to specify minimum angles greater than 5 deg. because of interference considerations.

§31 Cessation of Emissions

Space stations shall be made capable of ceasing radio emissions by the use of appropriate devices (battery life, timing devices, ground command, etc.) that will ensure definite cessation of emissions.

§32 Fixed Satellite Space Stations

- a) All space stations in the Fixed-Satellite Service shall be designed to derive the maximum capacity feasible from the assigned orbital location. In particular, space stations in the Fixed-Satellite Service are required to employ state-of-the-art full frequency re-use using both horizontal and vertical polarization, including re-use of the frequency bands by polarization discrimination in both the uplink and downlink directions using state-of-the-art equipment and techniques. Furthermore, satellites must employ polarization discrimination so that, through the use of dual polarization, they shall be able to reuse both the uplink and downlink frequency band assignments.
- b) Space stations to be operated in the geostationary satellite orbit shall be:
 - 1) Designed with the capability of being maintained in orbit within 0.05 deg. of their assigned orbital longitude,
 - 2) Maintained in orbit at their assigned orbital longitude within the longitudinal tolerance specified by the Republic of Southern Sudan, and
 - 3) The Republic of Southern Sudan may authorize operations at assigned orbital longitudes offset by 0.05 deg. or multiples thereof from the nominal orbital location specified in the station authorisations.
- c) All operators of space stations shall, on June 30 of each year, file a report with the Republic of Southern Sudan containing the following information current as of May 31 of that year:
 - 1) Status of satellite construction and anticipated launch dates, including any major problems or delays encountered;
 - 2) A listing of any non-scheduled transponder outages for more than thirty minutes and the cause(s) of such outages;
 - 3) A detailed description of the utilization made of each transponder on each of the in-orbit satellites. This description should identify the total capacity or the percentage of time each transponder is actually used for transmission, and the amount of unused system capacity in the transponder. This information is not required for those transponders that are sold on a non-common carrier basis. In that case, operators should indicate the number of transponders sold on each in- satellite orbit.

Rules for Space Station Applications in the W-Band

§33 Control of Transmitting Stations

§34 Inter-system Coordination

- 4) Identification of any transponders not available for service or otherwise not performing to specifications, the cause of these difficulties, and the date any transponder was taken out of service or the malfunction identified.

§33 Control of Transmitting Stations

- a) The licensee of a facility licensed under this part is responsible for the proper operation and maintenance of the station.
- b) The licensee of a transmitting earth station licensed under this part shall ensure that a trained operator is present on the earth station site, or at a designated remote control point for the earth station, at all times, that transmissions are being conducted. No operator's license is required for a person to operate or perform maintenance on facilities authorized under this part.
- c) Authority will be granted to operate a transmitting earth station by remote control only on the conditions that:
 - 1) The parameters of the transmissions of the remote station monitored at the control point, and the operational functions of the remote earth stations that can be controlled by the operator at the control point, are sufficient to insure that the operations of the remote station(s) are at times in full compliance with the remote station authorisation(s);
 - 2) The earth station facilities are protected by appropriate security measures to prevent unauthorized entry or operations;
 - 3) Upon detection by the license, or upon notification from the Republic of Southern Sudan of a deviation or upon notification by another licensee of harmful interference, the operation of the remote station shall be immediately suspended by the operator at the control point until the deviation or interference is corrected, except that transmissions concerning the immediate safety of life or property may be conducted for the duration of the emergency; and
 - 4) The licensee shall have available at all times the technical personnel necessary to perform expeditiously the technical servicing and maintenance of the remote stations.
- d) The licensee shall insure that the licensed facilities are properly secured against unauthorized access or use whenever an operator is not present at the transmitter.

§34 Inter-system Coordination

- a) Each space station licensee shall establish a satellite network control center which will have the responsibility to monitor space-to-Earth transmissions in its system. This would indirectly monitor uplink earth station transmissions in its system and to coordinate transmissions in its satellite system with those of other systems to prevent harmful interference incidents or, in the event of a harmful interference incident, to identify the source of the interference and correct the problem promptly.
- b) Each space station licensee shall maintain on file with the Republic of Southern Sudan a current listing of the names, titles, addresses, and telephone numbers of the points of contact for resolution of interference problems. Contact personnel should include those

Rules for Space Station Applications in the W-Band

§35 Space Communications Transmissions

§35 Space Communications Transmissions

responsible for resolution of short term, immediate interference problems at the system control center, and those responsible for long term engineering and technical design issues.

- c) The transmitting earth station licensee shall provide the operator(s) of the satellites, on which the licensee is authorized to transmit, contact telephone numbers for the control center of the earth station and emergency telephone numbers for key personnel; a current file of these contacts shall be maintained at each satellite system control center.
- d) An earth station licensee shall ensure that each of its authorized earth stations complies with the following:
 - 1) The earth station licensee shall ensure that there is continuously available means of communications between the satellite network control center and the earth station operator or its remote control point as designated by the licensee.
 - 2) The earth station operator shall notify the satellite network control center and receive permission from the control center before transmitting to the satellite or changing the basic characteristics of a transmission.
 - 3) The earth station operator shall keep the space station licensee informed of all actual and planned usage.
 - 4) Upon approval of the satellite network control center, the earth station operator may radiate an RF carrier into the designated transponder. Should improper illumination of the transponder or undue adjacent transponder interference be observed by the satellite network control center, the earth station operator shall immediately take whatever measures are needed to eliminate the problem.
 - 5) The space station licensee may delegate the responsibility and duties of the satellite network control center to a technically qualified user or group of users, but the space station licensee shall remain ultimately responsible for the performance of those duties.

§35 Space Communications Transmissions

- a) No person shall transmit to a satellite unless the specific transmission is first authorized by the satellite network control center; conduct transmissions over a transponder unless the operator is authorized by the satellite licensee or the satellite licensee's successor in interest to transmit at that time; or transmit in any manner that causes unacceptable interference to the authorized transmission of another licensee.
- b) Satellite operators shall provide upon request by the Republic of Southern Sudan and by earth station licensees authorized to transmit on their satellites relevant information needed to avoid unacceptable interference to other users, including the polarization angles for proper illumination of a given transponder.
- c) Space station licensees are responsible for maintaining complete and accurate technical details of current and planned transmissions over their satellites, and shall require that authorized users of transponders on their satellites, whether by tariff or contract, provide any necessary technical information in this regard. Based on this information, space station licensees shall exchange among themselves general technical information concerning

Rules for Space Station Applications in the W-Band

§36 Harmful Interference

§37 Particulars of Operation

current and planned transmission parameters as needed to identify and promptly resolve any potential cases of unacceptable interference between their satellite systems.

§36 Harmful Interference

- a) The earth station operator whose transmission is suffering harmful interference shall first check the earth station equipment to ensure that the equipment is functioning properly.
- b) The earth station operator shall then check all other earth stations in the licensee's network that could be causing the harmful interference to ensure that none of the licensee's earth stations are the source of the interference and to verify that the source of interference is not from a local terrestrial source.
- c) After the earth station operator has determined that the source of the interference is not another earth station operating in the same network or from a terrestrial source, the earth station operator shall contact the satellite system control center and advise the satellite operator of the problem. The control center operator shall observe the interference incident and make reasonable efforts to determine the source of the problem. A record shall be maintained by the control center operator and the earth station operator of all harmful interference incidents and their resolution. These records shall be made available to the Republic of Southern Sudan on request.
- d) Where the suspected source of the interference incident is the operation of an earth station licensed to operate on one or more of the satellites in the satellite operator's system, the control center operator shall advise the offending earth station of the harmful interference incident and assist in the resolution of the problem where reasonably possible.
- e) The earth station licensee whose operations are suspected of causing harmful interference to the operations of another earth station shall take reasonable measures to determine whether its operations are the source of the harmful interference problem. Where the operations of the suspect earth station are the source of the interference, the licensee of that earth station shall take all measures necessary to eliminate the interference.
- f) At any point, the system control center operator may contact the Ministry of Communications and Postal Services to assist in resolving the matter. This office specializes in the resolution of satellite interference problems. All licensees are required to cooperate fully with the Republic of Southern Sudan in any investigation of interference problems.
- g) Where the earth station suspected of causing interference to the operations of another earth station cannot be identified or is identified as an earth station operating on a satellite system other than the one on which the earth station suffering undue interference is operating, it is the responsibility of a representative of the earth station suffering harmful interference to contact the control center of other satellite systems.

§37 Particulars of Operation

- a) Radio station authorisations issued hereunder shall normally specify only the frequency bands authorized for transmission and/or reception of the station.
- b) When authorized frequency bands are specified in the station authorisation, the licensee is authorized to transmit any number of RF carriers on any discrete frequencies within an

Rules for Space Station Applications in the W-Band

§38 Points of Communication

§39 Temporary Fixed Earth Station Operations

authorized frequency band in accordance with the other terms and conditions of the authorisation and the requirements of this part. Specific RF carrier frequencies within the authorized frequency band shall be selected by the licensee to avoid unacceptable levels of interference being caused to other earth, space, or terrestrial stations. Any coordination agreements, both domestic and international, concerning specific frequency usage constraints, including non-use of any particular frequencies within the frequency bands listed in the station authorisation, are considered to be conditions of the station authorisation.

- c) A license for a transmitting earth station will normally specify only the RF carriers having the highest EIRP density, the narrowest bandwidth, and the largest bandwidth authorized for transmission from that station. Unless otherwise specified in the station authorisation, the licensee is authorized to transmit any other type of carrier not specifically listed which does not exceed the highest EIRP, EIRP density, and bandwidth prescribed for any listed emission.
- d) Only the most sensitive emission(s) for which protection is being afforded from interference in the authorized receive frequency band(s) will be specified in the station authorisation.

§38 Points of Communication

- a) Unless otherwise specified in the station authorisation, an earth station is authorized to transmit to any space station in the same radio service provided that permission has been received from the space station operator to access that space station.
- b) Space stations licensed under this part are authorized to provide service to earth stations located within the specified service area. Coastal waters within the outer continental shelf shall be considered to be included within the service area specified by the named land mass.

§39 Temporary Fixed Earth Station Operations

- a) When an earth station in the Fixed-Satellite Service is to remain at a single location for fewer than 6 months, the location may be considered to be temporary fixed. Services provided at a single location which are initially known to be of longer than six months' duration shall not be provided under a temporary fixed authorisation.
- b) When a station, authorized as a temporary fixed earth station, is to remain at a single location for more than six months, application for a regular station authorisation at that location shall be filed at least 30 days prior to the expiration of the six-month period.
- c) The licensee of an earth station which is authorized to conduct temporary fixed operations in bands shared co-equally with terrestrial fixed stations shall provide the following information to the Republic of Southern Sudan before beginning transmissions:
 - 1) The name of the person operating the station and the telephone number at which the operator can be reached directly;
 - 2) The exact frequency or frequencies used and the type of emissions and power levels to be transmitted; and
 - 3) The commencement and anticipated termination dates of operation from each location.

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§39 Temporary Fixed Earth Station Operations §39 Temporary Fixed Earth Station Operations

- d) Transmissions may not be commenced until all affected terrestrial licensees have been notified and the earth station operator has confirmed that unacceptable interference will not be caused to such terrestrial stations.
- e) Operations of temporary fixed earth stations shall cease immediately upon notice of harmful interference from the Republic of Southern Sudan or the affected licensee.