



Received: 30 March 2004

## **World Broadcasting Unions**

### **PROPOSAL FOR A NEW RECOMMENDATION ITU-R SNG.uap SNG CARRIERS UNIVERSAL ACCESS PROCEDURES**

During their last meeting, Study Group 4B drafted a new Question dealing with unintentional SNG interference (See Annex 21, Chairman's Report).

The ISOG (International Satellite Operations Group) from the WBU (World Broadcasting Unions) has already started to work on this subject, and has drafted a document called Universal Access Procedures. It institutes guidelines for satellite access as recommended by carriers and broadcasters. These are not meant to apply to the commissioning of new Earth stations, but mainly for activation of uplinks from existing earth stations, in order to avoid unintentional access.

This proposal has been unanimously approved during the last ISOG meeting in October 2003.

Similarly, these procedures have been endorsed by the WBU members and also by:

- CASBAA (Cable & Satellite Broadcasting Association of Asia)
- SIA (Satellite Industry Association)
- SUIRG (Satellite Users Interference Reduction Group)
- WTA (World Teleport Association)

Furthermore, the Mutual Recognition Arrangement Working Group of the Global VSAT Forum recognized the WBU-ISOG Universal Access Procedures as consistent with the goals of responsible transponder utilization and minimization of interference, provided it is used in conjunction with the individual satellite operator's access/lineup procedures and equipment approval processes, whenever applicable. To give to these procedures a universal acceptance, the WBU proposes to include these in an ITU Recommendation as suggested in Annex.

**Contact:** CHEVEAU Louis

Tel: +41 22 717 2741

Fax: +41 22 747 4741

Email: [cheveau@ebu.ch](mailto:cheveau@ebu.ch)

## **Annex**

### **PRELIMINARY DRAFT NEW RECOMMENDATION ITU R SNG.uap**

#### **SNG Carriers Universal Access Procedures**

The ITU Radiocommunication Assembly,

*considering*

- a) that Satellite News Gathering (SNG) services are offered on several communication satellites;
- b) that the use of SNG is expanding in all parts of the world;
- c) that the proliferation of the use of SNG stations has caused an increase in unintentional interference to other satellite users;
- d) that all SNG operators do not apply the same procedures to access the satellite,

*recommends*

**1** that the SNG operators in the field should follow the universal access procedures described in Annex 1.

## **Annex 1**

### **Universal access procedures**

#### **FDMA Services**

##### **1 Definitions**

- FDMA = Frequency-Division Multiple Access - the mode of operation where several carriers with different frequencies are loaded onto a single transponder – differentiated from TDMA services which follow their own access procedures.
- ESO = Earth Station Operator
- LOC = space segment Lessee Operating or control Center (either a Broadcasting organization, a Union or Consortium or Broadcasters, a Telecom Operator or any other third party)
- SOOC = Satellite Operator's management/Operations Center
- TES = Transportable Earth Station (a fixed earth station that is not permanently dedicated to an orbital slot, should be treated the same way)
- FES = Fixed Earth Station that is dedicated to an orbital slot (and most of the time with fixed settings for specific carriers).

## **2 Purpose**

This document defines the procedures all ESO must follow in order to access satellites. This document also describes the criteria for obtaining line-up exemptions in specific cases.

### **2.1 Customer access requirements**

All ESO who receive authorization (either directly from the satellite provider or through a third party LOC) to transmit to a satellite must contact the Satellite Operator's Operations Center (SOOC) of that satellite provider prior to access so that the initial uplink can be verified, monitored, and documented by an SOOC controller. However, before calling the SOOC, the ESO should always first call the LOC to verify authorization and check for schedule changes.

English is the universally accepted language. All uplink ESO should be able to communicate and follow instructions given to them in English. Other languages may be used at the discretion of the satellite operator but must be agreed upon with the LOC as a matter of principle.

NOTE – The LOC and the SOOC can be reached by dialing any of the following telephone numbers:

[Space Segment Lessee Control Center's Telephone number here]

[Satellite Provider's Telephone Number here]

#### **2.1.1 Before the satellite access, the ESO must call the LOC in order to check the following:**

- Exchange of earth station identification/registration code and telephone numbers for emergency contacts;
- Confirmation of expected transmission time (due to possible overruns of previous transmissions);
- Satellite, transponder, uplink/downlink frequency, and bandwidth allocations.

**2.1.2 During the satellite access, the SOOC controller must check the following:**

- Earth station registration code;
- Confirmation of correct transmission time (to be in line with the LOC check above);
- Satellite, transponder, and frequency slot allocations;
- Uplink polarization;
- Cross-polarization isolation
- Carrier power level, signal quality, etc.

**2.1.3 During the access procedure, the ESO will be required to:**

- Transmit signals of differing power levels (both modulated and unmodulated);
- Peak the transmit antenna;
- Rotate/adjust the transmit antenna polarizers
- The ESO must call the SOOC with enough time to allow the controller to complete the entire access procedure, including cross-pol verification. Failure to do this may result in access delays.

**2.1.4 The ESO must also inform the SOOC before making any online equipment modifications in real time or before ending a transmission on occasional use capacities (i.e., a *goodnight*).**

Copies of the *Uplink Operator's Checklist* and *Uplink Operator's Procedure* are attached to this policy document.

**3 Access line-up verification exemption**

The SOOC may grant access line-up verification exemption, by way of example,

- When one or several FES for full or part-time access to a satellite is used.
- Between successive uplinks from a TES from the same site, for part-time access to a satellite, provided the TES had not been depointed (i.e. event lasting several days).

This exemption enables the LOC controller to manage third-party accesses without performing cross-pol measurements or adjustments.

**4 Guidelines for exemptions and special authorizations**

All exemptions and special authorizations are granted, and remain in effect, at the sole discretion of the SOOC. When an exemption or authorization is granted, the SOOC shall send written confirmation to the LOC confirming the exemption or authorization and detailing any specific conditions. A copy of all such confirmations shall be kept on file in the SOOC.

An exemption or authorization may be revoked at any time if interference or other problems occur that can be linked to an ESO antenna, service, or space segment management. Although confirmed in writing, all revocations are effective as soon as the customer is notified by phone, fax, e-mail, or other means. A copy of all revocation letters shall be kept on file in the SOOC.

## Attachment 1 Uplink Operator's Checklist

**BEFORE** calling the satellite operator (SOOC), make sure the following table has been completed by cross-checking the space segment allocations with the LOC:

<b>Contact Information:</b>				
<b>Earth station registration code for Operator concerned:</b>				
Your name: _____				
The uplink company: _____				
Uplink phone number: _____				
Dedicated to technical conversations: _____				
Your assigned satellite/transponder/slot: _____				
<b>Type of Call:</b> <input type="checkbox"/> Access <input type="checkbox"/> Interference report <input type="checkbox"/> Goodnight				
<b>Special Cases:</b> <input type="checkbox"/> New Full-time Service <input type="checkbox"/> Cross-pol exempt antenna				
<b>Assigned Frequencies:</b>		Uplink: _____	Downlink: _____	Bandwidth: _____
<b>Type of Ad Hoc Customer:</b> <input type="checkbox"/> Third-party resale <input type="checkbox"/> Ad hoc				
<b>Access Information:</b>				
<b>Actual Downlink EIRP:</b>		<b>Target Downlink EIRP:</b>		<b>Transmit EIRP:</b>
Cross-pol isolation (Leave blank; use this space to record the controller's reading): _____				
Scheduled access time (UTC): _____			To _____	
Actual access time (Leave blank; use to record actual access time): _____				UTC
<b>Signal Quality (Leave blank; use to record the controller's readings as applicable):</b>				
C/N: _____	FEC: _____	Symb/s: _____	BER: _____	CER: _____

2. When you are ready with this information, **BEFORE** calling the satellite provider, make sure your equipment is ready.
  - The transmitter is in standby mode at maximum attenuation. For earth stations performing multiple uplinks through a single uplink chain, please ensure that the modulator is at maximum attenuation.
  - All uplink equipment is warmed, stable, and tuned to the correct frequency with proper sub-carriers, if applicable.
  - The antenna is properly pointed, optimized, and set for the correct polarization. For optimum performance, antenna pointing should be performed during the center of box period for the spacecraft (this information can be provided by the SOOC/LOC).
  - The waveguide switches are configured properly.
  - ATIS is enabled (US domestic analog transmissions only).
3. Follow the Uplink Procedure (Attachment 2).

## Attachment 2

### Uplink Operator's Procedure

1. Before making the call to the SOOC, use the Uplink Checklist (see Attachment 1) to check transmission equipment and to gather necessary information for the access, by crosschecking with the LOC about 10 minutes before the scheduled access time. If necessary, the LOC will then direct you to the SOOC as per 2 hereunder.
2. Contact the SOOC at least 5 minutes before the scheduled access time and provide the SOOC with the information you gathered on the Uplink Checklist (see Attachment 1).
3. When directed, provide the lowest possible power, unmodulated carrier. Tell the controller you have done this as you throw the switch.

**IMPORTANT:** During the access procedure, **DO NOT** change power, frequency, polarization, or antenna aiming without specific direction to do so from the SOOC controller, or the LOC by delegation. If you are instructed to cease transmission, you must comply **IMMEDIATELY** without discussion.

1. Wait for further instruction while the controller checks the cross-pol and frequency of the carrier.
2. At the direction and discretion of the SOOC, modulate and increase power to nominal levels, which will be confirmed by the SOOC. After power levels have been set, verify downlink.
3. Wait for further instructions while your transmission is checked.
4. The transmission should commence only when the SOOC has given confirmation the carrier specifications are correct.
5. The controller will verify your phone number that should be available throughout the transmission/event in case a problem in relation with your uplink has to be solved. The controller will remind you to call the SOOC again just before the end of the transmission (goodnight call for occasional use space segments).
6. It is mandatory to contact the LOC for good-nighting in all circumstances.