



RFI-EUI

Best Practices, Documentation, & Technology

Paul Cohen

VP, Satellite Engineering

Fox Networks, Engineering and Operations

May 30, 2012

NABA ISOG 2012



Interference can come from
anywhere!

Why Interference

The background is a solid blue color. Overlaid on this is a white grid pattern that resembles a radar screen or a coordinate system. The grid consists of concentric circles and radial lines. In the center of the grid, there is a small, dark blue circular shape. A thin white line extends from the center of the grid towards the top right, ending in a small, dark blue, rounded rectangular shape that looks like a stylized antenna or a probe.

- ◆ Because people are human
- ◆ Most interference is caused by human error!!!
- ◆ How do we stop it?
- ◆ Training and routines

Best Practices

- ◆ New Universal Access Procedure
 - ITU Recommendation SNG 1710
 - Submitted to the ITU
 - ◆ Under the US delegation Study Group 4B
 - ◆ Under discussion this week
 - Submitted to the NABA Technical Committee
 - Going to be submitted to the WBU Technical Committee soon

Best Practices



- ◆ New Universal Access Procedure
 - New Tri Fold Uplink Handout
 - ◆ Produced by Intelsat, SES, Crystal Solutions

Bringing Carrier Down

When ready to bring the carrier down, contact the access center and provide the satellite, transponder, frequency, and polarity of the carrier whose transmissions you are terminating. The access center will verify that you have stopped the transmission and that the space is clear. Exchange names (or initials) with the access center.

ANTENNA POINTING

Do not move the antenna while the antenna is transmitting a signal unless instructed to do so by the access center.

For permanent services, the antenna should be pointed when the satellite is in the center of the box. Satellite operators have tools on their websites to estimate the time of day for a center of the box event.

It is recommended to point the antenna using a spectrum analyzer to measure the received satellite signals levels.

Make sure you calculated the azimuth and elevation angle of the antenna for the antenna location.

Set the elevation, and then move the antenna on the azimuth axis around the calculated azimuth. Once signals appear on the spectrum analyzer, verify that you are pointing to the correct satellite. If not on the correct satellite, keep moving the antenna on the azimuth axis.

Once on the correct satellite, verify that the satellite is on the main lobe of the antenna and not a side lobe, by moving on the

azimuth axis until you find the maximum signal strength. Then move on the elevation axis to maximize the received signal strength.

For linear polarization systems, proceed to align the polarizer of the antenna (rotate the feed) to maximize the received signal level.

ADDITIONAL INFORMATION

Power Levels. The required transmit power level is calculated using a link budget analysis. Make sure that you have sufficient power for your transmission.

Time of Day. The time of day for occasional use services is given in GMT/UTC time. Make sure you know the conversion factor for your local time.

Inclined Orbit Satellites. Special antenna tracking equipment is required for transmission to inclined orbit satellites.

Transportable Earth Stations and Fly Aways. Make sure that the antenna is properly secured and not on a platform that could move (e.g., long bridge, windy, unanchored truck, etc.)

Comms on the Move Earth Stations. It is important that the terminal stops transmission to the satellite if it loses tracking to the assigned satellite.

VSATs. For additional information on access procedures for VSATs, visit www.qvf.org.



UNIVERSAL ACCESS PROCEDURES (UAP) for Satellites

*Your guide for an interference free
satellite users community.*



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Best Practices - Direction



- ◆ Currently reviewing earth station maintenance practices
- ◆ Looking for more members

Members

- ◆ Paul Cohen – Fox - Chair
- ◆ Michael Keeler – Intelsat – Secretary
- ◆ Howard Fine – Pac TV
- ◆ Roger Franklin – Crystal Solutions
- ◆ Ron Gnidziejko – NBCU
- ◆ Rob Lingle – NBCU
- ◆ Mark McKibben – Cinedigm
- ◆ Ramiro Reinoso – SES
- ◆ Karl Rossiter – Technology Editor, Asia Pacific Broadcasting Magazine
- ◆ Shannon Schaar – ESPN
- ◆ Mike Seery – Inmarsat
- ◆ Steve Smith – SES
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- ◆ Rich Wolf – ABC – Co-chair



**STOP
INTERFERENCE
NOW**

Thank You