

14 September 2006

IPG Meeting Minutes

Attendees:

Carla Beaudet, John Ford, Frank Ghigo, Randy McCullough, Roger Norrod, Wesley Sizemore, Dave Woody, and Paulette Woody

Minutes of the 08/08/2006 meeting was read and approved.

- Zone 1 progress
 - Spectrum Summary talk at GBT Instrumentation workshop pointed to tools we need to develop:
 - GBT RFI Tracking program to be run during RCO's. Archival storage of resulting plots.
 - Overlay program like "molecule" in GBTIDL for displaying interference (in connection w/ RFI database).

Could possibly use the GBT to track and document sources.

DISCUSSION:

- The GBT scan will be easy to do to get raw data.
 - Display of the information to a usable form is expected to be challenging.
 - Use of the Oasis software and a Spectrum Analyzer is a possible solution.
 - The evaluation process needs to be automated for quick results.
 - Work could be performed by a summer or co-op student.
 - The GBTIDL molecule can list frequencies, but it would be necessary for the RFI results to produce details regarding of the frequency of occurrence as well as operating frequency.
 - G. Langston could be a good resource.
- 43m telescope servo system testing in progress
Tim and Bill assisting
 - GBT Actuator Controller Covers
 - (10) out of (52) completed. Work continuing on GBT access days.
Good progress on this project. Actually have 11 completed as of today.
 - 3.6m Dish Mount and Az El controller
 - Motor covers need design modification (in progress).

ACTION ITEM: C. Beaudet. Modification - fabrication.

- GBT RFI Monitoring Station
 - Az/EI calibration issue solved
Optical isolators were reconfigured. Modification resolved design issue.
 - Still to be done:
 - Positional final check and calibration
To be completed within the week.
 - Pressurize damper bearing
Shafts have corrosion. The shop is manufacturing new shafts with different metals. Replacement units ready for installation after bearings complete.
 - Complete system check-out

- Zone 2

- Call to replace screening on Time-O-Matic sign due to concerns about visual clarity. Sample materials procured from 2 companies.
Carla passed around two sample materials for examination.

DISCUSSION:

Concerning glare, the amount of shielding, installation issues and cost. The discussion then turned to the possible replacement of the RFI screen, as an alternative.

- Zones 3, and 4:

- No RFI group/ EPO group /Business Office meetings have been called since last IPG meeting. Have sought straight answer from Richard WRT direct contact with the public. Pending reply.

DISCUSSION:

- Frontier has indicated they will look into replacing the wireless modems with wired modems.
- Concern was expressed about local users looking into alternative replacements available through retail outlets.
- Upper management is still working on procedures to handle the issue.
- Concern was expressed about the involvement of Corporations whom would choose to not want to be proactive in addressing RFI issues should NRAO choose to do nothing about the proliferation of electronic devices by consumers.
- The IPG Group needs to continue to be proactive in response to RFI issues.
- Decision concerning policy has been removed from the IPG Group and placed

in upper management.

- Zone 5 (NRQZ):
 - Met with new CO of sugar grove.
 - Had meetings and provided “grand tours” of the GB facility to the new CO of the Sugar Grove Research Station as well as the Ward Room staff and Enlisted.
 - TAP Issues?
 - We have issues with the HDPath module and technical support. We were advised that we are out of technical support hours. The current subscription expires in 2007.
 - Softwright will be contacted to get a better understanding as to how technical support hours are charged against our agreement.
 - Additional hours are at near \$192 per two hours GSA pricing.
 - Propagation Model Campaign Progress
 - Looking at GPS instrumentation
 - A Garmon receiver has been permanently transferred to GB
 - Discussions have been held on setting up of the path modeling.
 - Elevation data is the main concern.
 - Post processing of data will use the USGS OPUS (Online Positioning User Service (<http://www.ngs.noaa.gov/OPUS/>))
 - Trimble and Thales International: Seeking product information on survey grade GPS systems with 3 cm accuracy.
 - Concern was expressed for funding deadlines.
 - A couple of SpecAn’s were received from Sugar Grove
 - Oasis software has been updated
 - Test plan – who will develop?
 - Test plan is not complete.
 - The grad student, Dan Davis, providing assistance is back in class now.
 - Ernest “Punk” Chilton is working on the test plan development.
 - There has been no Propagation Study meeting since July.
 - ***ACTION ITEM:*** C. Beaudet, W. Sizemore, Ernest “Punk” Chilton and Dan Davis. Implementation development.
 - Myteck amplifiers are on order. They are to provide test data on temperature control issues.

DISCUSSION:

- § Placement of transmitters and possible blanking out of the transmission pulse to minimize interference.
- § Length of test plan is at least one year, however, may go longer.
- § Potential sites include Horse Ridge, WV and Warm Springs, VA

- § Additional paths pending testing of initial paths.
- § Frequencies for initial studies will utilize Amateur beacon bands.
- § GPS timing of transmissions.
- § Rental of tower space.
- § Possible manpower assistance through the NWSG

- Other issues?

- Education and Public Outreach

- Chamber testing of quiet skies project

The project is interfering with itself.

ACTION ITEM: C. Beaudet. Further testing of LO is required.

- Other

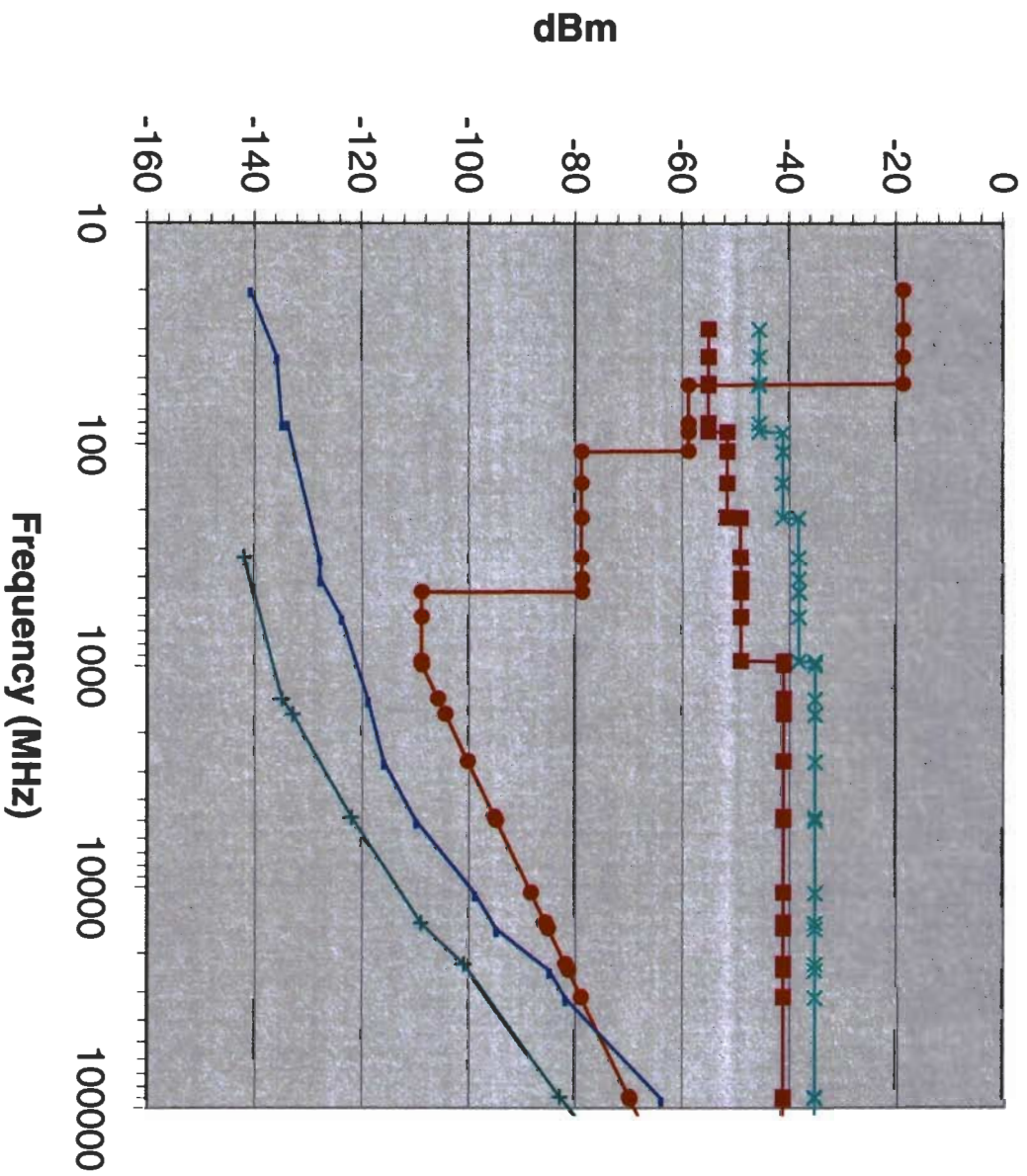
- Limits comparison

Device has passed FCC Class B limits (chart below). The limits are calculated differently, but are not of issue. Distance is a factor.

Next scheduled meeting: 10 October 2006

Minutes prepared by P. Woody

Limits Comparison



- FCC Class B Limit EIRP (dBm)
- ×— FCC Class A Limit EIRP (dBm)
- NRQZ Limit @ 10m EIRP (dBm)
- +— ITU-R RA.769 Line Limit @ 10m EIRP (dBm)
- ▲— ITU-R RA.769 Continuum Limit @ 10m EIRP (dBm)