



HFIA HIGH FREQUENCY INDUSTRY ASSOCIATION

Wideband HF Channel Availability Working Group

**Convention Center
San Diego, California, USA
February 17, 2016**

THIS INFORMATION IS NOT EXPORT CONTROLLED

THIS INFORMATION IS APPROVED FOR RELEASE WITHOUT EXPORT RESTRICTIONS IN ACCORDANCE WITH A REVIEW OF THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR), 22CFR 120-130, AND THE EXPORT ADMINISTRATION REGULATIONS (EAR) 15 CFR 730-774.

Goals

- Under the auspices of the HF Industry Association (HFIA), collaboratively field a substantial number of HF wideband channel availability measurement stations in diverse locations worldwide (as far as possible)
- Use common hardware, (SDR and antenna), collection software, and analysis software so that results can be easily and accurately compared between all sites
- Share the collected data and analysis results among all members of the HFIA

Agenda

- **0900 - Introductions / sign in**
- **Review of September 2015 meeting**
- **Current Software Distribution**
- **Presentations**
 - Measurement campaign status - Rockwell
 - Measurements comparing different sampling techniques - Thales
 - Availability profiles – Rhode and Schwarz
 - Break
 - Cumulative Man-Made Noise, An Observation - TNO
 - Effect of measurement approach on channel availability metrics - Harris
 - Simultaneous channel availability measurements for two different antennas – Harris
 - Break
- **General Discussion / Issues**
- **Plans moving forward**

Review of September 2015 Meeting

- Some members in group to inspect source code provided in June and evaluate new noise floor algorithm
- Identify what spectrum availability information Frequency Managers would like to see
- Subset of group to contact/visit Frequency Management Groups to begin dialogue
- Understand impact of antennas on spectrum availability measurements
- Some members to compare Perseus results to higher fidelity measurement devices
- Investigate participation in ITU World Radiocommunication Conferences (WRC)
- Continue measurements campaigns

Current Software Distribution Unchanged Distribution06302015

- **Collection Software**
 - WBHF_Channel_Availability_Measurement_06302015.exe
 - WBHF_Channel_Availability_Measurement_06302015.c, FFT2.Cpp, FFT2.H

- **Channel Availability Processing**
 - Analysis/Availability/process06302015.c
 - Analysis/Availability/r06302015.bat
 - Analysis/Availability/run06302015.bat
 - Analysis/Availability/WBHFCHAV_Template_06302015.XLS
 - Analysis/Availability/WBHFCHAV_Template_06302015.XLSM

- **Python Utility to plot individual collection files**
 - Analysis/Python/HFSpectrum06302015.py

- **Matlab (and C) processing to create video**
 - Analysis/Matlab/convert06302015.c
 - Analysis/Matlab/video06302015.m

- **Contact Bill Furman for software distribution zip file wfurman@harris.com**

Member Presentations

- Measurement campaign status - Rockwell
- Measurements comparing different sampling techniques - Thales
- Availability profiles – Rhode and Schwarz
- Cumulative Man-Made Noise, An Observation TNO
- Effect of measurement approach on channel availability metrics - Harris
- Simultaneous channel availability measurements for two different antennas - Harris

General Discussion / Issues

Plans Moving Forward

**Next meeting:
Will be announced via email
and HFIndustry.com**