national spectrum managers association

Recommendation WG 4.90.039

RFI TEST METHODS
MEASUREMENT DATA PRESENTATION

www.nsma.org

Subject: RFI Measurements

Title: Measurement Data Presentation

Background

Measurement data can be useful to assist in clearing predicted or suspected interference cases involving terrestrial microwave and satellite earth stations. The actual usefulness of the data is often dependent upon the way it is presented and the supporting information provided to explain how the data was obtained.

Recommendation

The following guidelines are recommended for presenting RFI measurement data:

1. Presentation of Spectral Photographs/Plots

    For measurement reports, spectral presentations should be included and presented with the following supporting data:

    a.   Interference path
    b.   Licensed modulation and polarization of interfering path
    c.   Test antenna centerline height
    d.   Test antenna polarization
    e.   Identification of the frequency of interest by some visual marking
    f.   Time, date, and weather conditions
    g.   Resolution bandwidth
    h.   Video filter bandwidth
    i.   Frequency span per division
    i.   Center frequency
    k.   Sweep rate
    1.   Azimuth and orientation
    m.   Test antenna elevation if other than zero degrees

2. Block Diagrams

    Block diagrams are necessary and should be used for specific test plans and measurement reports. (See NSMA Recommendations on Test Plans and Calibration) It should be specific, showing all individual components used, and show signal flow from test antennas to test receiver, as well as calibration signal path. Interconnect cables should also be identified as to type and length.

3. Units of Amplitude

    Units of amplitude used must be specified. For satellite earth station analysis, dBW units are preferred; for terrestrial microwave analysis, dBm units are preferred. Exceptions may be made for special applications.

4. Data Correction Factors

       Detail any correction factors applied to the reported data and the reason for the correction, e.g., bandwidth correction factor, frequency shift or offset used, antenna gain, etc.

Recommended: WG4.90.039
Approved: Unknown
To Membership:
Notes: No information available