Tutorial: IEEE 1900.5.2 “Draft Standard for Method for Modeling Spectrum Consumption”

Abstract: The first draft of the IEEE 1900.5.2 standard will be completed in July and a ballot pool is forming.

“This standard defines a vendor-independent generalized method for modeling spectrum consumption of any type of use of RF spectrum and the attendant computations for arbitrating the compatibility among models. The methods of modeling are chosen to support the development of tractable algorithms for determining the compatibility between models and for performing various spectrum management tasks that operate on a plurality of models. The modeling methods are exclusively focused on capturing spectrum use but are defined in a schema that can be joined with other schemata related to spectrum management.”

This standard may have multiple roles in 3.5 GHz spectrum management. The most likely role is as a data standard for a SAS administrator to convey the spectrum use of their clients to other SAS administrators for the collaborative purpose of managing aggregate interference. Spectrum consumption models (SCMs) may be used to define incumbent or PAL use of spectrum. These SCMs can be designed to replicate the function of protection zones or to provide a representation of use that allows the effect on aggregate interference to be the criteria of admission. Finally, SCMs may be used as a generalized method to define spectrum availability.

The purpose of this tutorial is to provide an overview of spectrum consumption modeling as defined in the current version of the standard so that students can understand the role modeling can play in the SAS and so that students can participate in subsequent activities to finalize the standard. Please contact [Mat Sherman](mailto:matthew.sherman@baesystems.com) for information on joining the ballot pool.

When: 5 August 2015

Where: MITRE 1 (Room 1H300)  
7525 Colshire Drive  
McLean, VA 22102

Agenda

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| --- | --- |
| 8:30 – 9:00 | Sign-in |
| 9:00 – 9:45 | Introduction |
| 9:45 – 10:30 | The Modeling Constructs |
| 10:30 – 10:45 | Break |
| 10:45 – 12:15 | Fundamental Compatibility Computations |
| 12:15 – 1:15 | Lunch |
| 1:15 – 1:45 | Determining Constraining Points |
| 1:45 – 2:45 | Determining Aggregate Interference |
| 2:45 – 3:00 | Break |
| 3:00 – 3:30 | Using the Confidence Element |
| 3:30 – 4:00 | Assessing Compatibility |
| 4:00 – 4:30 | The Art of Modeling |