

Proposed target session: session 4: Spectrum management automation

Abstract:

The presentation will come back on some recent events, which have an impact on spectrum management and monitoring activities (last WRC resolutions, next WRC agenda items, ITU-R Study group 1 recent recommendations, digital dividend, white space concept etc).

In a very prospective part, the presentation will provide results of a research project done by a consortium led by Thales in the frame of dynamic spectrum management in relation with cognitive radio technology. The "Urban Planning for Radiocommunications" project has studied dynamic spectrum assignment, dynamic spectrum access and cognitive radio based systems in dense urban environment. Its objective was to define adapted spectrum management and monitoring solutions to ensure both optimization and security in the usage of the spectrum. Concepts like "static management versus dynamic management" and "disseminated urban sensing" will be presented

In a more actual part, practical architectures of spectrum management and monitoring systems will be presented including interaction between management and monitoring.

The ESMERALDA XE station will be presented with a dedicated focus on some advanced techniques for spectrum monitoring of last generation signals (UMTS / DVB / WIMAX). Very operational implementations will be presented such as mobility, multy usage stations ...

The presentation will finally describe in detail the interaction between management and monitoring through operational examples like "spectrum cleaning, regular check, spectrum optimization, complaints... and will highlight benefits of spectrum monitoring automated missions in the management/monitoring process.