

Abstract Session 4 Spectrum Monitoring

Spectrum Monitoring as a Key Function in the Spectrum Management System

Spectrum monitoring serves as the eyes and ears of the spectrum management process and supports its functions through verification of planning. Theoretical planning is not by itself sufficient. Knowledge of the actual use of the spectrum is needed before good decisions can be made on frequency assignments or allotments.

Monitoring supports the overall spectrum management effort by practical measurements of channel and band usage, so that channel availability statistics may be derived, and the effectiveness of spectrum management procedures can be assessed. With this data, comparison can be made between the theoretical planning and actual use. This comparison can be used to adjust planning.

Monitoring is also used to support the enforcement function. In providing data on actual use, the enforcement activity can use this data to approach an interference-free and properly authorised, harmonized use of the spectrum.

Monitoring is closely associated with inspection and compliance functions in that it enables the identification and measurement of interference sources, the verification of proper technical and operational characteristics of radiated signals, and detection/identification of illegal transmitters.

Monitoring information is necessary in practice because, in the real world, authorised use of the spectrum does not ensure that it is being used as intended. This may be due to the complexity of the equipment, interaction with other equipment, a malfunction of equipment, or deliberate misuse.