Defense Spectrum Organization
SPECTRUM CAPABILITIES

DSO Implementation, Integration & Improvement of Spectrum Management Services

The DSO develops, maintains and makes available an operational Joint spectrum management system and supporting spectrum engineering data for combat operations. DSO develops, maintains and distributes an operational SM system (such as SPECTRUM XXI and Global Electromagnetic Spectrum Information System (GEMSIS)) and supporting spectrum engineering data for combat operations (Joint Spectrum Data Repository (JSDR)), with access through the JSC Data Access Web-server (JDAWS)).

GEMSIS

GEMSIS is the Department of Defense (DoD) Joint program of record that is transforming spectrum operations from a pre-planned and static frequency assignment into a dynamic, responsive, and agile capability. GEMSIS provides Spectrum Management capabilities to further enhance the ease of use, efficiency and effectiveness of Spectrum Management capabilities. GEMSIS currently provides the following spectrum services and capabilities:

Tool: HNSWDO

The Host Nation Spectrum Worldwide Database Online (HNSWDO) is a web application that facilitates Warfighter deployment and communications by providing worldwide visibility of host nation radio frequency (RF) spectrum dependent equipment's supportability. It automates distribution of host nation coordination requests and Combatant Command submission of host nation supportability comments, reducing the time required to manage the process. It enables managers to determine the historical supportability of similar system's RF spectrum. This provides informed design decision-making concerning frequency bands, thereby mitigating the risk of acquiring potentially unsupportable RF dependant systems. The HNSWDO application provides the user with near real time updates and dramatic reductions in process lag from years to months. HNSWDO provides up-to-date online access to host nation coordination papers, national and international allocation tables, and platform data.

Tool: Stepstone

The Stepstone capability supports the DoD's equipment spectrum certification process. It provides a mechanism for the Services, Programs, and industry to complete an Application for Equipment Frequency Allocation (DD Form 1494), including compliance checks to assure data quality, ease of use, collaboration and workflow capabilities, and certification process metrics. Access this tool at: https://www.StepstoneEditor.com.

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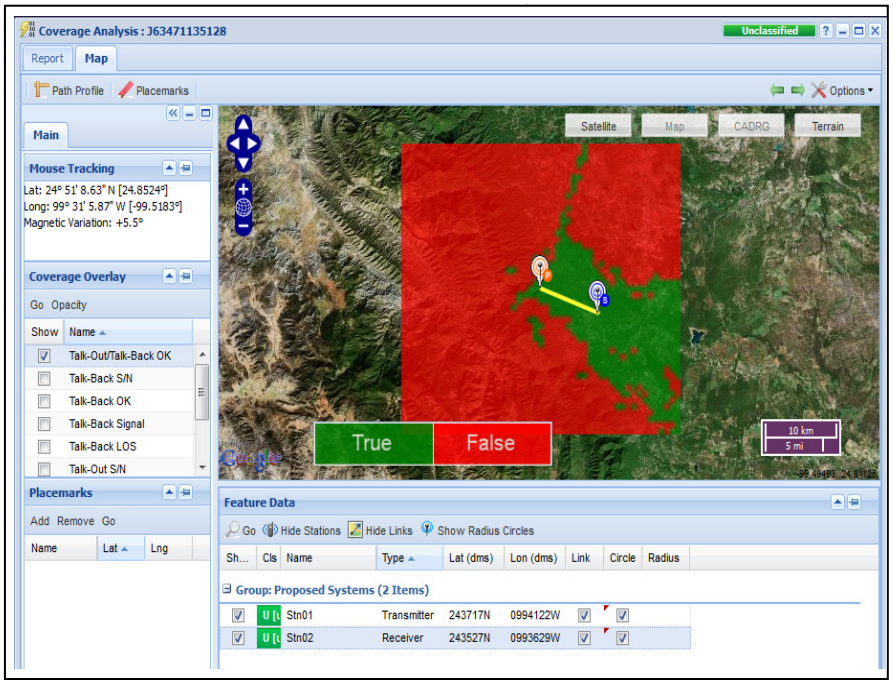
Tool: SPECTRUM XXI Online

SXXIO is a web-based version of the DoD standard Spectrum Management tool (SXXI) for automating all levels of frequency management from sustaining base operations to supporting the Warfighter in Joint Task Force operations. The graphical user interface (as shown to the right) provides a comprehensive suite of features that enable spectrum managers, at all levels of skill and experience, to easily create, review and track their frequency assignments from initial proposals to final authorization.



Data: JSDR

One of the capabilities to be integrated in GEMSIS Increment 2 is the Joint Spectrum data Repository (JSDR), a capability that will provide the DoD spectrum management community streamlined access to spectrum management information.

The JSDR will support DoD-wide spectrum management related tasks with ready access to frequency assignments, spectrum certifications, interference reports, and detailed engineering characteristics and employment information. Enhancements in the coming years will provide additional data sources, Stepstone, data quality assessments, universal query of organic and federated data sources. JSDR will be accessible on both the NIPRNET and SIPRNET through attribute-based access controls.

Data: MCEB Pub 8

MCEB Pub 8 Standard Spectrum Resource Format (SSRF) is the US counterpart to NATO's Spectrum Management Automated Data Exchange Format. SSRF is the mechanism by which US and NATO spectrum management systems will exchange data in the future. While SSRF has been under development for many years, actual implementations, such as SXXIO and JSDR, have identified the need to streamline and update the standard. A joint effort of US and NATO developers is currently revising the standard to insure future operational requirements are met along with providing support for legacy data standards and repositories.

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