



Investigating Dynamic Spectrum Management for NATO

Briefing to the 2022 Working Group Frequency Management Civil/Military meeting

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Introduction

| Background - Why conduct the study? The main drivers

Constant pressure to be efficient and share more – internal (military) and external (civil)

Increasing demand for bandwidth and the specificities of the military environment

Long lead procurement times and regulatory evolution – investigation of new paradigms

| Aim of the presentation

Present the work undertaken and the way forward

Introduction

| Purpose

Develop concepts and proposals for DSM in the military communities of NATO

Develop Policy and Procedural proposals to facilitate DSM in NATO

| Approach

Assess NATO's spectrum management (SM) framework and the “state of the art” in DSM

Develop concepts that could be used to improve NATO SM

Develop proposals and a road map

Dynamic Spectrum Management (DSM) in a Military Context

- | Qualities of speed, flexibility, adaptability, and responsiveness
- | Aims to achieve more efficient and effective use of spectrum resources
- | More efficient utilization and re-use of spectrum to increase capacity and quality of services
- | In a NATO context, this is to increase sharing between military users or to increase sharing between civil and military users

Key Findings

- | The existing NATO SM framework does not currently support DSM
- | To satisfy the increasing demand for spectrum, implementing DSM techniques and tools is a positive response
- | To lay the foundation for change, NATO needs a DSM vision, policies, descriptions and definitions

Main Study Proposals

- | Update NATO's SM framework: development of a DSM vision, goals and high-level policies, descriptions and definitions
- | Benefit
 - Support the development of plans to implement more efficient DSM methods, techniques and technology
 - An enabler for spectrum sharing, re-use and increases in the overall spectrum available for operational use
- | Impact
 - Relatively low cost and achievable in the short-term
 - A catalyst for changes in training, personnel, culture, information, doctrine and concepts

Next Steps

- | Identify potential scenarios and candidate bands
- | Develop high-level solution architectures
- | Estimate organizational impact on different Lines of Development
- | Conduct a cost versus benefit analysis
- | Recommend and prioritize future work

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