

Spectrum Management Office (SMO)

How to keep our communication channels open in a Contested and Congested Environment

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I. CONTEXT

Modern military communications rely heavily on radio links. Each of these links requires access to radio frequency (RF) spectrum in order to operate effectively. Organising and controlling access to this spectrum is the main responsibility of the Spectrum Management Office (SMO). The SMO ensures that Belgian Defence—and, by extension, its allies—can operate efficiently and without interference.

II. CHALLENGE.

Today, most of the practically usable RF spectrum is already in use, while commercial competition continues to grow. In the past, large portions of the spectrum were reserved for military use. However, due to the so-called “peace dividend,” much of this spectrum has been sold by regulators to commercial actors.

A clear example of this trend is the expansion of mobile telecommunications, which continuously seeks additional spectrum to support growing demand.

In light of recent geopolitical developments and the resulting rearmament efforts, many new military systems are being acquired. All of these systems require access to RF spectrum, which must now be identified within an already congested environment.

In addition, there is increasing use of electronic warfare activities such as jamming, spoofing, and signals intelligence (SIGINT). These activities require careful coordination, which is becoming an important (and growing) responsibility for the SMO.

At the same time, demand for spectrum on the civilian side continues to increase across commercial, governmental, scientific, industrial, and private sectors. These competing requirements often conflict with military needs and usage..

III. SOLUTION

Over the years, the organisation has operated under different names—such as NARFA, COMIXTELEC, and NALLA—which has sometimes led to confusion regarding its roles and responsibilities. To better reflect its mission and evolving tasks, the organisation is now designated as the Spectrum Management Office (SMO), which serves as an umbrella term for all its activities.

Within Belgian Defence, the SMO performs several distinct but closely related functions aimed at addressing current challenges and preparing for the future.

Its primary task is to respond to daily frequency requests in support of exercises, training, and operations. In the NATO context, this activity is conducted under the NARFA framework.

In addition, the SMO monitors regulatory developments and actively participates in negotiations to safeguard military interests and ensure continued access to the RF spectrum. These efforts take place at both national and international levels, including within NATO and the International Telecommunication Union (ITU).

Through these activities, the SMO contributes to protecting Belgian Defence's RF interests and preserving freedom of operation across all types of radio communications. Under the COMIXTELEC framework, the SMO also leads initiatives related to civil-military telecommunications resilience.

Finally, the SMO supports procurement processes by ensuring that newly acquired systems operate in the appropriate frequency bands and that all required licences are obtained.