

PROBLEM TITLE

Control and Operate in a Contested Electro-Magnetic Spectrum

CHALLENGE

The Joint Staff Innovation Group needs a way to enable military operators to effectively complete their mission in communication compromised environments

BACKGROUND

A recently published Joint Military Net Assessment illustrates that the United States military advantage over its near-peer competitors is eroding. Concurrently, as nation-states rely more on data, access and/or denial are rapidly becoming the future of warfare and a principal determinant in a successful mission or campaign. In the past several years, near peer-competitors Russia and China have heavily prioritized electronic warfare (EW). They have invested in EW assets, primarily software-defined radios, that allows them the ability to use the electromagnetic spectrum (EMS) – signals such as radio, infrared, or radar – to sense and communicate. Furthermore, they have distributed these capabilities down to the tactical level, enabling even small units EW capabilities.

The Joint Staff Innovation Group (JSIG) is embedded within the Force Structure, Resources, and Assessment Directorate of the Joint Staff at the Pentagon and strives to identify solutions for future Joint Force hard problems in the development of “leap-ahead” capabilities. The JSIG would like to examine current and emerging technologies that could be used to enable the Joint Force to win the future fight in a data-contested environment. For this reason, the JSIG needs a way to enable military operators to effectively complete their mission in communication compromised environments.

OPERATIONAL CONSTRAINTS

- JSIG is interested in technology that can be adapted in 2030+

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