

ASYMMETRIC THREAT SYMPOSIUM XIII

Cyber, Electronic Warfare, and Spectrum Operations: Critical Capabilities for Protecting America

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The Electromagnetic Spectrum – The Decisive Ground

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The United States military has proved it is capable of winning physical kinetic fights with its traditional tools of military power – on land, at sea, and in the air. But the 21st century battlefield has revealed itself to be far different from that of the 20th century. While physical military overmatch will still be important in the conflicts of the future, the “decisive ground” upon which the U.S. will either triumph or fail in protecting or advancing its national security interests isn’t “ground” at all. Instead, the decisive arena increasingly will be found within the electromagnetic spectrum (EMS), and this new and complex reality will only become larger, stronger, and more strategically vital in coming years.

This should not come as a surprise, especially when we consider how much of our daily lives, our pursuits, our interests, and our struggles are occurring by, with, or through the dazzling and unrelenting advances in high-technology capabilities that exist within – or are dependent on – the EMS. No area of the U.S. national security enterprise today is completely prepared, sufficiently trained and educated, adequately resourced, effectively organized and integrated, or sufficiently risk-tolerant to accommodate this new reality. The U.S. Government and industry are aware of these needs and are making efforts to address them. But collectively, these efforts are insufficient to match this new EMS-defined reality as well, or as quickly, as we should.

Dazzling technologies (and the convergence between them) such as 5G, artificial intelligence

and machine learning, robotics, photonics, quantum computing, increasingly affordable space-based capabilities, and ever more powerful mobile devices are completely remaking how nations and non-state entities pursue their security, prosperity, and interests. The logical outcome of these trends is that U.S. competition and conflict will be increasingly decided in activities that relate to EMS more so than any other domain.

As debates about America’s national security continue across the U.S. Government, we must more effectively grasp the central challenge that now confronts everyone from tactical practitioners to our most senior policymakers: How effectively are we considering, seeking to understand, investing in, and ultimately deciding and acting to effectively compete, and if necessary fight and win, in the EMS?

To be sure, there are many other national security concerns that require attention. Among them are the health of the armed services and the strength of their traditional warfighting capabilities, as well as the traditional intelligence-related needs and activities of our Intelligence Community, and similar requirements across other parts of the national security enterprise.

But, preeminent among all these things should be the questions of how strong, how resilient, how risk-tolerant and innovative, how adaptable, how skilled, and how successful the U.S. will be in the EMS. This is where our national security fate will be decided. ■