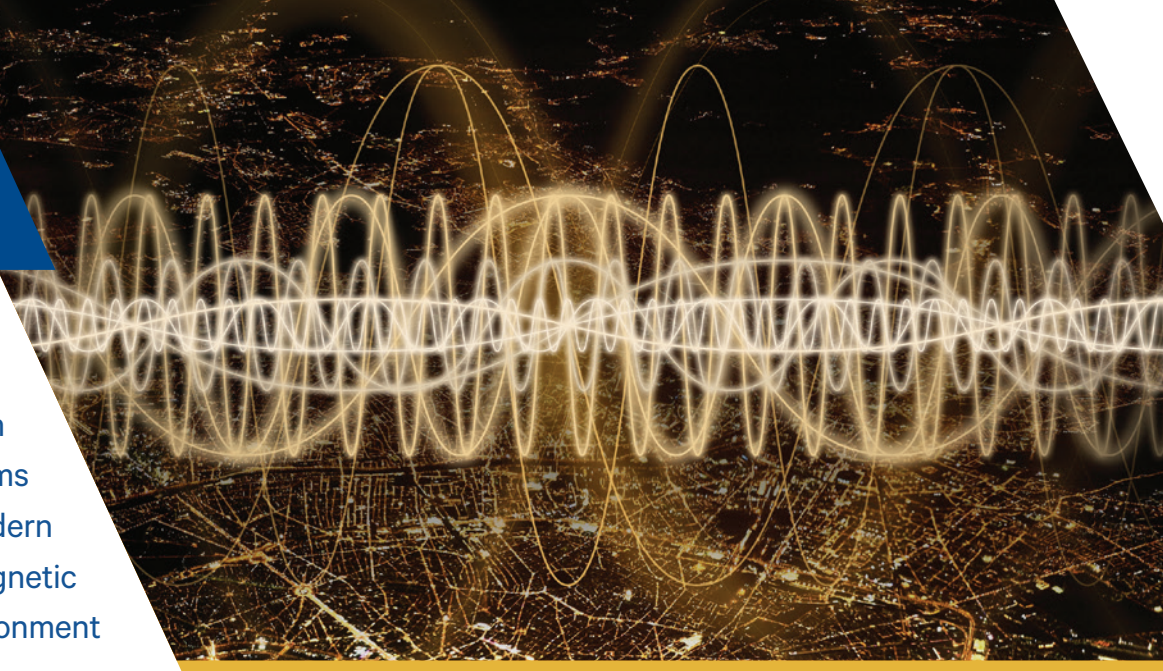


Policy and engineering
support for spectrum
dependent systems
in the modern
electromagnetic
environment



SPECTRUM INSIGHT

Optimizing Spectrum and Electromagnetic Performance

Headquartered in Annapolis Junction, MD, our Radio Frequency, Electromagnetic & Spectrum Engineering Directorate (RESED) provides full range support in the areas of spectrum-dependent system conceptualization, prototyping, design, installation, and operational troubleshooting. Huntington Ingalls Industries (HII) has almost 70 years of experience recognizing, analyzing, and resolving complex system interaction problems from the platform to the test range to the battlefield.

SPECTRUM POLICY EXPERTISE

HII's 200 spectrum engineers and policy experts work closely with the DoD, the intelligence community, the FAA, NOAA, other government agencies, and private companies to analyze, plan, and coordinate critical spectrum management. From certification and usage to spectrum-sharing resolution associated with the introduction of new systems into already heavily congested environments, we support the complete lifecycle of spectrum-dependent systems.

HII has recognized experts in both national and international spectrum policy, planning, and strategy. Our experts support the development of new systems by performing spectrum resource risk assessments, assessing impacts and development of transition plans resulting from spectrum reallocation, and helping navigate the allocation, certification, and licensing processes both here and abroad.

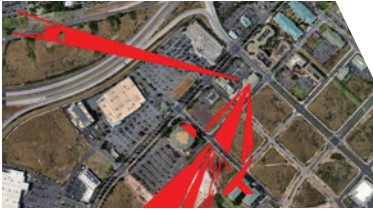
FULL LIFE-CYCLE SYSTEM SUPPORT

Our work with acquisition program managers and commercial providers to ensure that electromagnetic effects are considered in the development of platforms, subsystems, and devices — as well as HII's complementary intelligence, surveillance, and reconnaissance capabilities — make us a perfect partner to provide the insight and agility to guarantee spectrum access in the modern electromagnetic environment.

HII's Spectrum Operations Center includes a Spectrum Sharing Laboratory which uses FPGA technology to focus on algorithm development and RF signal processing to identify, design, and prototype cost-effective upgrades to existing systems, enabling rapid deployment. We characterize operational environments, spectrum occupancy, and spectrum utilization to include real-time monitoring and RF surveys.

HII'S SPECTRUM SOLUTIONS

Our customers rely heavily on spectrum dependent systems to achieve their goals. We support these goals through prediction of propagation conditions, characterization of electromagnetic environments, resolution of operational interference incidents, and spectrum management and electromagnetic engineering training, all tailored to customer requirements in the commercial and Government sectors.



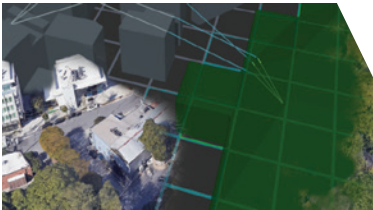
SPECTRUM CONSULTATION

HII experts in national and international spectrum policy perform spectrum resource risk assessments, analyze impacts of transition plans resulting from spectrum reallocation, and help navigate the allocation, certification, and licensing processes both here and abroad.



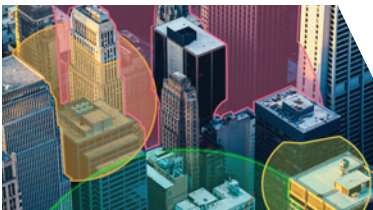
DYNAMIC ALLOCATION

HII has the capabilities and expertise to design and integrate custom 5G configurations, test beds and applications. HII combines monitoring with Ai analysis to provide real-time situational monitoring, learned behavior predications, adaptive control and statistical analysis.



SPECTRUM SYSTEM ENGINEERING

With expertise across a range of domains and technologies, our deep bench of engineers are a force multiplier for agents engaged in the complex activities necessary to ensure both access and effective and efficient use of the RF spectrum around the world.



MODELING & SIMULATION

HII maintains a substantial library of propagation models which we use to design or predict wireless communication system performance, assess spectrum sharing viability, and determine system EMC. Our analysis rests on our repository of sub-meter LiDAR data.



MONITORING, MEASUREMENT, & TESTING

HII customizes spectrum monitoring and automates test and measurement. HII develops tailored solutions for monitoring and test in complex scenarios. We assess EMC, EMI, and environmental effects. We validate certification and specification compliance, and determine antenna performance/parameters and shielding effectiveness.



EMC DESIGN

HII maintains state-of-the-art tools to predict and measure EMI or to evaluate spectrum sharing potential between SDS. We establish exclusion/protection zones, and design interference mitigation strategies, prototyping and testing cost-effective solutions to ensure success before development.

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About Huntington Ingalls Industries, Technical Solutions:

Building on a legacy of more than a century of naval shipbuilding, Huntington Ingalls Industries' Technical Solutions division provides mission-critical national security solutions to a wide variety of government and commercial customers worldwide. Comprising more than 7,000 professionals worldwide, our unique national security services portfolio includes unmanned systems, nuclear and environmental services, intelligence, surveillance and reconnaissance (ISR), cyber and electronic warfare, live, virtual and constructive (LVC) training solutions, and fleet sustainment and logistics. For more information, visit tsd.huntingtoningalls.com.