

Accelerated Development & Support (ADS) Corporation is a small business headquartered in Arlington, Virginia with a disbursed workforce throughout the United States. As a prime contractor with the Office of Naval Research (ONR) supporting programs such as Directed Energy, Electromagnetic Railgun and Energetic Materials, ADS has become one of the Navy's leading experts in Directed Energy technology. ADS is comprised of highly motivated certified professionals, engineers, scientists and Subject Matter Experts (SMEs). We support Directed and Counter Directed Energy programs that include:

- Counter Directed Energy Weapons (CDEW)
- Solid State Laser Technology Maturation
- Free Electron Laser Innovative Naval Prototype (FEL/INP)
- High Power Radio Frequency and High Power Microwave (HPRF/HPM)

Counter Directed Energy Weapons (CDEW)

ADS supports research programs focused on basic and applied research topics in countering threats from directed energy weapons systems, such as high-power lasers and microwaves. Basic research topics address potential airborne, surface and ground threat environments and focus on providing operational effectiveness in defending against various known and potential future Directed Energy Weapons (DEW) systems. ADS supports programs that execute examinations of new materials, optical and electronic technologies, techniques, tactics and procedures. The research programs examine both material and novel solutions, and their implications to CDEW concepts. Programs include various experimental investigations into and modeling of effects to address concerns for human and systems survivability, as well as total systems integration with existing platforms.



Solid State Laser Technology Maturation (SSL-TM)

The goal of SSL-TM is to produce multiple demonstration-level events with prototype quality systems in a competitive environment which includes the SSL-QRC (Quick Response Capability) a solid state Laser Weapon System (LaWS) that is being deployed on the *USS Ponce*. ADS has supported the recent advancements by the scientific and commercial sectors that discovered the possibility of a potential application on surface and airborne platforms. ADS executes one of the program's key goals: aligning the S&T program thresholds and objectives with future Research & Development (R&D)/acquisition planning processes and requirements while meeting current budgetary constraints.

Free Electron Laser Innovative Naval Prototype (FEL/INP)

ADS supported the Free Electron Laser (FEL) program, which provided naval platforms with a highly effective and affordable defense capability against surface and air threats, future anti-ship cruise missiles and small boat defense. ADS personnel provided technical planning and reviews, system engineering and Test & Evaluation (T&E) support. The FEL program was an investment by ONR to transition the accelerator technology from particle colliders to a future ship self-defense weapon system.

High Power Radio Frequency and High Power Microwave (HPRF/HPM)

ADS supports HPRF/HPM technology development that bridges the full spectrum from the core science, the advanced component research to desired effects. Areas include the development of innovative sources with improved efficacy and development of HPRF/HPM susceptibility/lethality profiles. ADS also supports the investigation and understanding of the basic physics of sensors and electronic faults under intense HPRF/HPM electromagnetic field exposure and programs to more fundamentally characterize the interaction of materials to HPRF/HPM energy. Future Directed Energy systems will benefit from advances in power generation, power conversion, energy storage, microwave and laser source development, advanced IED detection/location/tracking systems, and by more sophisticated and capable robotic platforms.