EW ENVIRONMENT MODELING AND SIMULATION

SRC brings **intel-driven threat simulation** to the modeling and simulation, reprogramming and test and evaluation communities through NEWEG

THE PROBLEM

Intelligence Mission Data (IMD) is crucial to keeping our warfighters safe. But when programmers in labs around the country manually interpret and code our defense systems, they can interpret data differently, resulting in systems that might react in unexpected ways.

Creating and maintaining RF stimulator libraries can be a highly manual and time-consuming process. This limits the speed of getting updates to the field to protect our warfighters when threat changes are detected. These complications make developing, testing, and training across the military a real challenge, putting our warfighters in real danger.

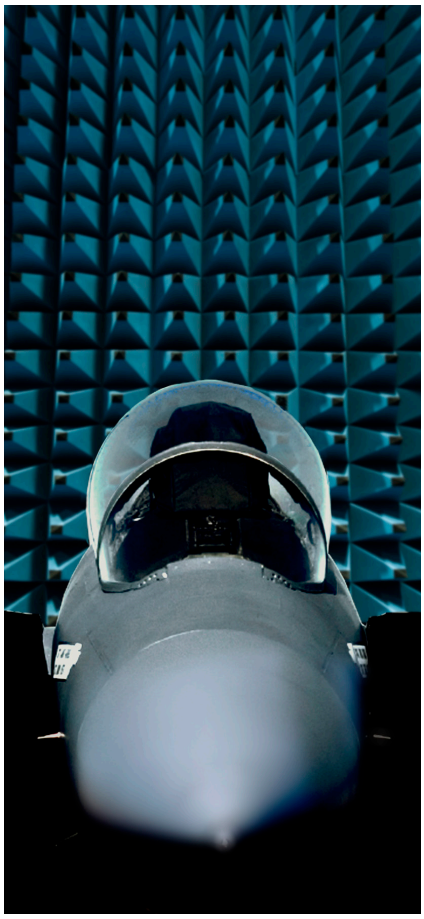
THE SOLUTION

For more than 40 years, SRC engineers and analysts have provided practical and operational support for IMD, including data mining, engineering analysis, and innovative technology development. SRC has injected IMD from validated sources directly into the Next Generation Electronic Warfare Environment Generator (NEWEG) architecture with the intel-enabled Digital Generator (DGEN).

SRC's EW modeling and simulation (M&S) capability now gives the test and evaluation (T&E), simulation and stimulation (Sim/Stim), and EW developer communities the ability to test their systems in real-time with validated intelligence mission data (IMD) models. SRC's EW modeling and simulation solution interfaces directly with IMD, leveraging SRC's Keystone software for real-time simulation. This makes SRC's solution the simplest, most effective way to translate validated IMD models into RF simulation or stimulation data.

SRC's DGEN hardware is capable of processing large amounts of data simultaneously to provide a complex RF picture, simulating more than 4,000 validated threats at 8 million pulses per second. This real-time threat simulation picture is crucial to reducing the reprogramming timeline — getting data to the warfighter in time to make actionable decisions.

NEWEG GIVES T&E USERS THE ABILITY TO REPLICATE BEHAVIORAL THREAT FIDELITY THAT IS NOT POSSIBLE WITH LEGACY SOLUTIONS



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SRC's extensive knowledge of IMD, combined with our software expertise, industry partnerships and Keystone software simulation engine, make us your key ally in developing a custom solution for your EW testing needs.

APPLICATIONS

- **Test and evaluation**
  Provides validated IMD
- **Modeling and simulation**
  Uses validated IMD directly from threat profiles to simulate threats for systems under test
- **Live virtual constructive (LVC)**
  Helps to build LVC simulations by simulating and stimulating both friendly and hostile systems using validated IMD
- **Simulation and stimulation**
  Provides real-time access to IMD for more realistic threat replication

BENEFITS

- Creates more realistic EW threat simulations
- Eliminates traditional RF stimulator programming – taking the man out of the loop
- Reduces errors by using validated IMD
- Laboratory, chamber, and open air range configurations
- Helps to reduce the reprogramming timeline from months and years to minutes and days

FEATURES

- Simulates up to 4000 threats and 8 MPPS
- Direct utilization of IMD models
- Realistic RF environment effects
  - Doppler
  - Path loss
  - Antenna patterns
  - Angle of arrival
  - Weather
  - Multipath
  - Ducting
- Interfaces to LVC distributed simulations and RF stimulator equipment

BELOW: SRC's DGEN system can simulate more than 4,000 threats at 8MPPS.

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