

United States Coast Guard Research & Development Center (CG RDC)



The CG RDC is the Coast Guard's sole facility performing research, development, and test and evaluation in support of the Coast Guard's major missions:

- [Ports, waterways, and coastal security](#)
- [Drug interdiction](#)
- [Aids to navigation](#)
- [Search and rescue](#)
- [Living marine resources](#)
- [Marine safety](#)
- [Defense readiness](#)
- [Migrant interdiction](#)
- [Marine environmental protection](#)
- [Ice operations](#)
- [Other law enforcement](#)

Our goals are to enhance acquisition and mission execution by pursuing and applying new scientific technologies for the maritime environment and to provide incremental improvements that strategically transform the way the Coast Guard does business.

(The missions above are listed in order of percentage of CG operating expenses – see <http://www.uscg.mil/top/missions/>)

Coast Guard RDC
1 Chelsea Street
New London, CT 06320
<http://www.uscg.mil/hq/cg9/rdc/>

The CG RDC facility is located in the historic Fort Trumbull area of New London. Convenient to the [Coast Guard Academy](#), [Naval Submarine-base](#), and [Old Mystic Village](#). The RDC sits along the shore of the Thames River, adjacent to [Coast Guard Station New London](#) and [Barque Eagle](#).

The site primarily contains office areas including a Photonics lab, AIS lab, Modeling and Simulations Center of Expertise, and dedicated computer workstations.

The CG RDC conducts field tests in an operational field environment at the Joint Maritime Test Detachment in Mobile, Alabama.



The CG RDC works on more than 80 projects that support Coast Guard requirements across all CG mission areas that are grouped into main program areas:

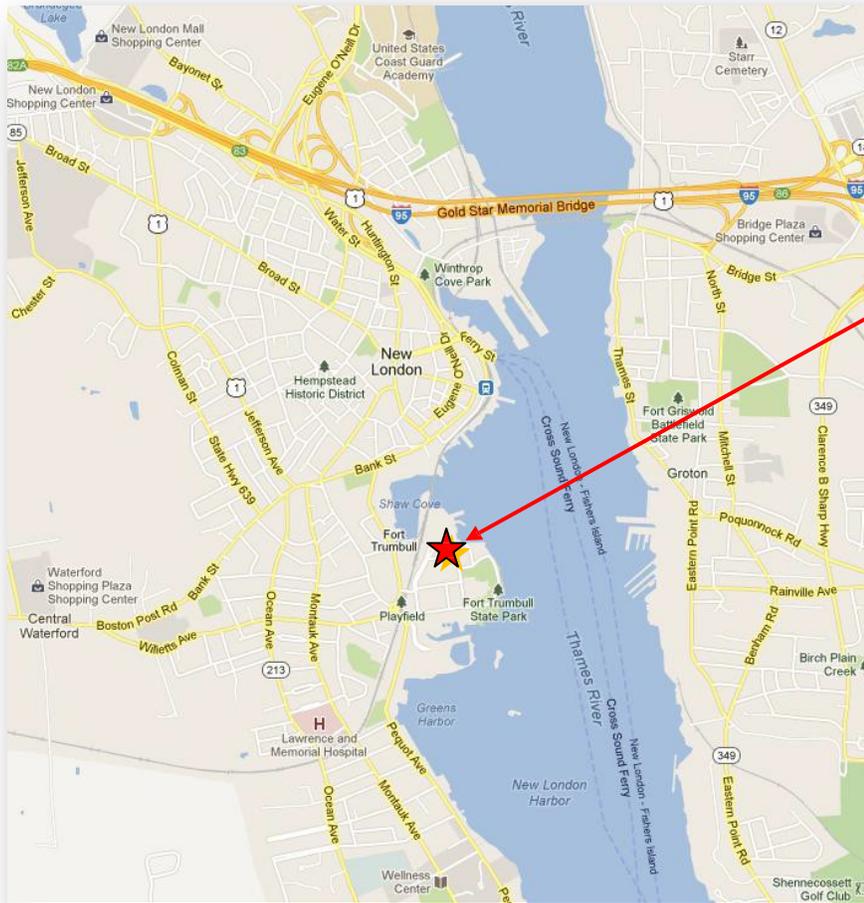
- [Acquisition Support and Analysis](#)
- [Aviation](#)
- [C4ISR](#)
- [Environment and Waterways](#)
- [Modeling and Simulation Center of Expertise](#)
- [Surface](#)

(The Program Areas above are listed in alphabetical sequence.)

CG RDC in Context

Employees and Interns are provided with a variety of opportunities to meet co-workers at RDC All-Hands meetings, MWR (Morale, Welfare, and Recreation) luncheons, CGA (Coast Guard Academy) lectures, and at DHS PDS (Professional Development Seminars) that are held in RDC conference rooms.

Housing with dining facilities available through Connecticut College by contacting Marilyn L. Burnett, Event Coordinator, mlbur@conncoll.edu, 860-514-7316



CG RDC

General Information about the area:

- <http://ci.new-london.ct.us/>
- <http://www.groton-ct.gov/>
- www.mysticchamber.org/

Transportation

Air:

- [Providence, R.I./T.F. Green Airport](#) is approximately 50 miles from the RDC.
 - Livery Limited offers sedan service for a fee; call (860) 599-8840.
- [Hartford, CT.-Springfield, MA./Bradley International Airport](#) is approximately 63 miles from the RDC.
 - Livery Limited offers sedan service for a fee; call (860) 599-8840.
- [Groton-New London Airport](#) is approximately 6 miles from the RDC. Private planes and charter services utilize this airport. There are no commercial airline services at this facility.
 - Taxi fare is about \$15 each way.

Bus/Train:

- New London's bus and train station is approximately 1 mile from the RDC. Taxi fare is about \$5 each way.
 - [Greyhound](#) provides bus service to New London: (800) 231-2222.
 - [Amtrak](#) provides train service to New London: (800) 872-7245.

Ferry:

- The Cross Sound Ferry Orient Point Ferry Terminal is approximately 1 mile from the RDC. Service between Orient Point on Long Island and New London is available year round.
 - Taxi fare is about \$5 each way.

Taxi:

- Local New London area taxi services include:
 - Yellow Cab: (860) 443-4321
 - Port City Taxi: (860) 444-9222
 - Livery Limited: (860) 599-8840
 - Harry's Taxi: (860) 442-4054
 - Red & White Taxi LLC: (860) 443-2255

Public Transportation:

- [SEAT](#) (Southeast Area Transit) services New London, Norwich, Groton, and surrounding towns. (860) 886-2631.

Security

- The RDC is a controlled-access facility; prior arrangements must be coordinated with an RDC point of contact before access may be granted.
- Visitors are required to check in at the front desk, located on the fourth floor of the building.
- Visitors will not be admitted without proper photo identification.
- Visits by foreign national required special processing. For more information, contact the RDC Administrators Office at (860) 271-2600.
- To carry, receive, or discuss classified information during a visit to the RDC, contact the RDC Security Officer at (860) 271-2755 or 271-2892.

ASA

Acquisition Support and Analysis Branch

Utilize Modeling and Simulation to address specific *Analysis Questions* with *Skilled Analysts* armed with the right tools to produce *Analysis Products* for CG decision-makers.

- Requirements, Mission, & Alternatives Analyses
- Human Systems Integration
- Modeling & Simulation
- Risk Analysis



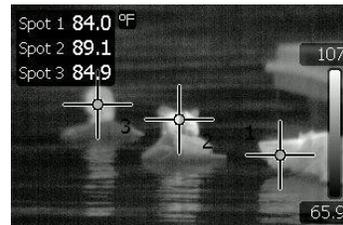
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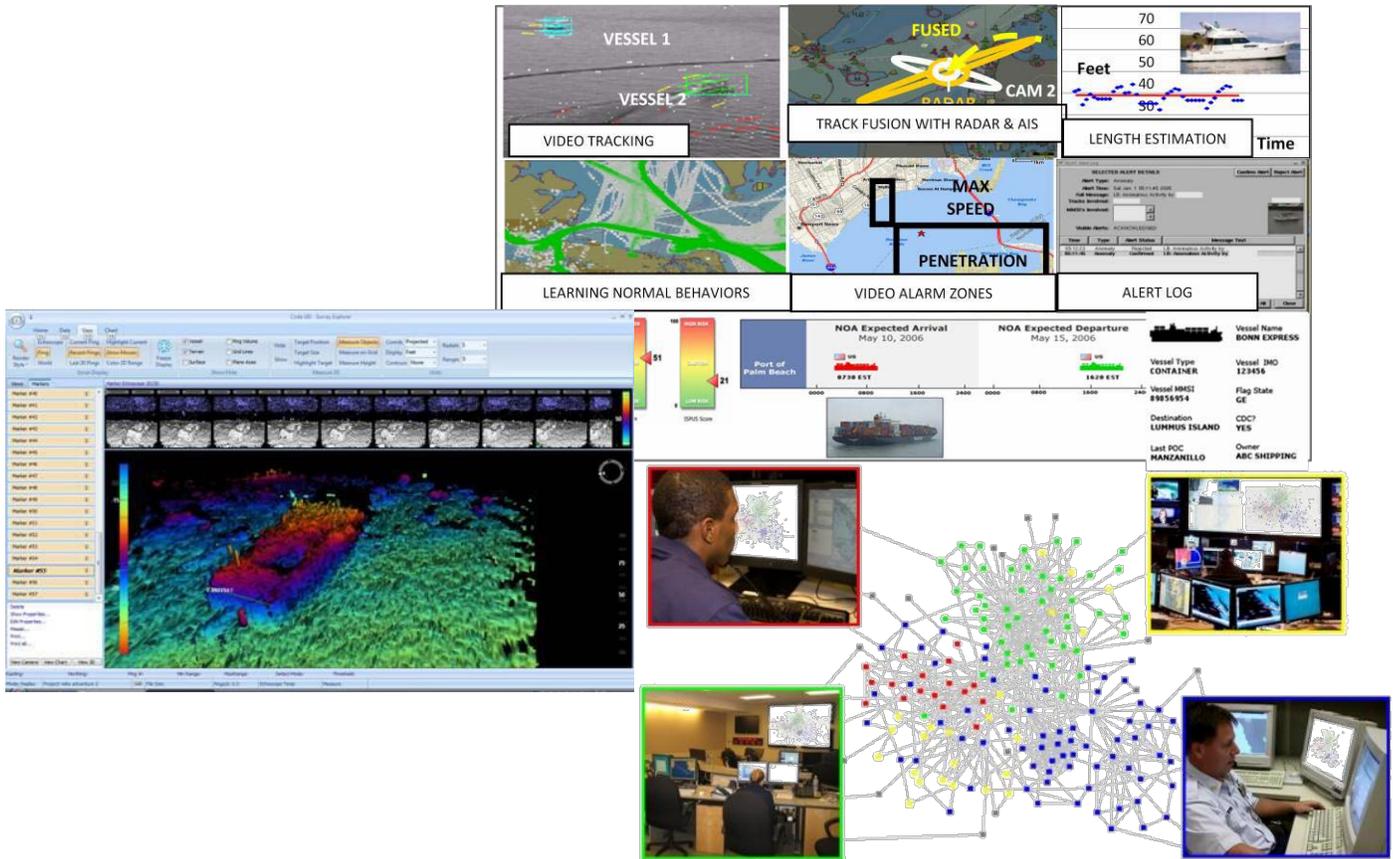
Aviation

Develop, maintain and apply competencies in mission-relevant test & evaluation, sensor & airborne platform technologies, performance measurement & analysis, performance model validation, and aids to navigation (ATON)

- Sensor Technologies
- Analysis of Test Data
- Operational Performance Testing
- Photonics Laboratory Testing and ATON
- Unmanned Aircraft Systems and Airspace
- Performance Model Validation and Tuning



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C4ISR Communications, Intelligence, Surveillance, and Reconnaissance

Support the *identification, analysis, assessment, and integration* of technologies, devices, and systems that *improve* the Coast Guard's capability to conduct *intelligence, surveillance, and reconnaissance* on contacts and targets of interest to meet mission needs

- Maritime Domain Awareness
- Command & Control Efficacies
- Sensor Optimization and Physics-based modeling
- Tactical Communications (P2P)
- Communication System Analyses
- Intelligence, Surveillance & Reconnaissance



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E & W Environmental and Waterways

Provide technical expertise in the areas of *Aids to Navigation*, *Pollution Prevention and Response*, *Non-Indigenous Species*, and the *Automatic Identification System (AIS)*

- Navigation
- Environmental Protection
- Arctic Operations



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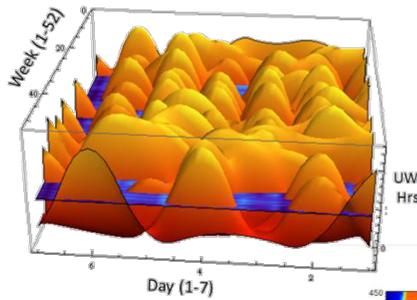


MSCOE

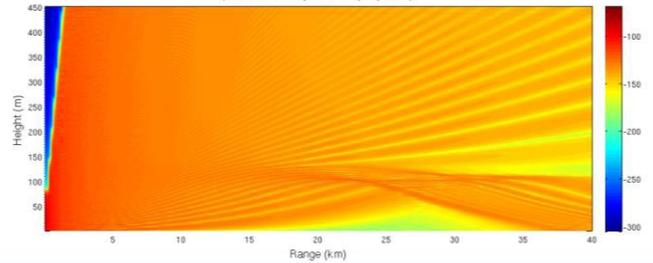
Modeling and Simulation Center of Expertise

Provides Coast Guard program managers and operational commanders with access to modeling and simulation analysis to meet life cycle and mission needs for Acquisition, Strategy, Operations and Tactics.

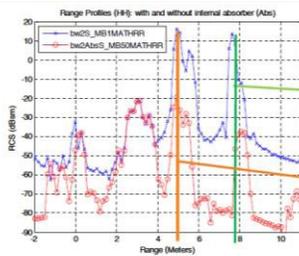
UW Hrs KBFF11



X-Band One-Way Propagation Pattern Attenuation (dB)
(7.7 m/s windspeed, 0.4 μs pulse)

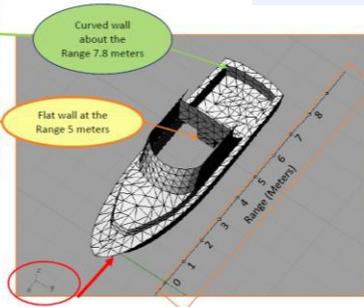


High Resolution Return (HRR) 0° Azimuth, 0° Elevation Multi-bounce - Compare Absorber vs No Absorber



The plot contains two curves:

- Interior ray absorber
- x— No ray absorber



Azimuth at 0°
HRR Nose-on

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Surface

Support the *identification, monitoring, and assessment* of *surface force mission areas* related technologies

- Boarding Team Tools
- Compel Compliance
- Sector and Port Security Tools
- WMD Countermeasures
- Alternative Energy
- Naval Architecture



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