Combat Tactical Vehicle

At a Glance

What is it?

The CTV-TD is an armored vehicle that incorporates technology specifically designed to survive threats found on today's battlefields, such as improvised explosive devices (IEDs). It carries six personnel and their personal combat equipment.

How does it work?

The CTV-TD is configurable for various mission roles through the addition of a crew-served weapon station, sensors, various communication suites, and other mission-essential equipment up to a payload of 6,000 pounds (including crew).

What will it accomplish?

The CTV-TD has a monocoque (i.e., structural load is supported by the external skin) aluminum-armor based hull that provides an inherent level of protection against mines and IEDs. Pre-designed additional armor kits (B-kits) supplement the integral armor protection for kinetic energy, artillery, or increased mine/IED protection based on the anticipated threat.

Points of Contact

Jeff Bradel
jeff.bradel@navy.mil

The Combat Tactical Vehicle Technology Demonstrator (CTV-TD) is the six-passenger combat variant within the Joint Light Tactical Vehicle (JLTV) family of vehicles. Although the CTV-TD will not be a production vehicle, it does represent the "realm of the possible" for the future family of light tactical vehicles.

In June 2006, the Nevada Automotive Test Center (NATC) completed Phase I requirement reviews, trade studies, concept design, and modeling and simulation for the CTV under contract with the Office of Naval Research. NATC was awarded the Phase II option to design, build, and test a technology demonstrator based on the CTV concept. They have conducted ballistic and blast testing on representative armor recipes to develop the integrated armor/structure solution. Additionally, complete hulls are being blast tested at the Aberdeen Test Center in Aberdeen, Maryland.

The CTV-TD has new automotive technologies and uses innovative solutions for meeting the challenges of new demands for increased crew protection, better mobility, and increased payload. The vehicle does not depend on high-tech, highrisk, future technologies that may be years away from reality; it relies on a unique and effective combination of technology available right now. The government will share lessons learned about designing, building, and testing with industry partners, and use those lessons to help establish realistic and workable requirements as the JLTV acquisition process moves forward. The CTV-TD sets the baseline for future light vehicles; showing that it is possible to use today's technologies to build an affordable, capable, light vehicle system for tomorrow that meets current, and, more importantly, future needs of warfighters.

Research Challenges and Opportunities:

- *Development and fabrication of a tactical wheeled vehicle with increased survivability compared to the Up-Armored HMMWV*
- *Integration of an advanced suspension with ride height adjustment to facilitate survivability to underbody threats and ability to reduce overall vehicle height for naval ship transport*
- *Integration of armor structure as vehicle structure to minimize overall weight yet be survivable and accommodate a "B-Kit" armor appliqué, if needed*