

Focus Project – Fusion '06

One of the most promising and head-turning innovations from the EDGE thus far is the FUSION project. Using the EDGE process, General Dynamics collaborated with Computer Sciences Corporation (CSC) to deliver a candidate subsystem of consolidated body-worn components that demonstrate significant reductions in size and weight for potential insertion in the U.S. Army Land Warrior program.

Driven by user and customer feedback from PEO Soldier, FUSION combined four soldier-worn

components on the current Land Warrior system into one. These included the Soldier Control Unit (SCU), the Computer Sub-System (CSS), the Navigation Unit, and the Helmet Interface Adapter (HIA). By integrating four existing subsystems into one, FUSION achieves a 4-to-1 size reduction and a 3-to-1 weight reduction. FUSION is a strong example of how collaborative innovations can continue to improve warfighter systems as they progress forward.

“PEO Soldier supports the innovations we’ve seen from the EDGE to date and look forward to continuous innovations in the future based on Soldiers’ feedback from the field.” - Col. Richard Hansen, director of Project Manager Soldier Warrior.

Component	Weight	Volume
Computer Sub-System (CSS)	4.2 Pounds	125 Cubic Inches
Navigation Unit (NAV)		
Helmet Interface Adapter (HIA)		
Soldier Control Unit (SCU)		
FUSION 1.0	1.5 Pounds	31 Cubic Inches

EDGE **CSC**
GENERAL DYNAMICS
C4 Systems



THE VIEW FROM THE EDGE

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A Note From The Sponsor

By Richard Coupland, General Dynamics C4 Systems

WARRIOR INNOVATIONS

“ We are happy to participate in the EDGE to continue the early benefits we have seen for collaboration that assist the Future Force Warrior program. ”

Phil Brandler,
 Director, U.S. Army Soldier System Center at Natick, Mass.

The culmination of customer feedback, industry and academia interest and support and a sponsorship from General Dynamics, the EDGE™ has been designed to enhance the delivery cycle of warfighter technology and capabilities through partnerships with government, industry and academia. After 10 months of planning and execution, the EDGE made its public announcement at AUSA National on October 9 and will have its formal ribbon-cutting ceremony in Scottsdale in early November.

The EDGE is based on a simple premise. Each year, industry and academia invest significant dollars in research and development aimed at meeting the user and customer needs in the dismounted soldier market. The EDGE provides an environment where technology developers and innovators are openly informed of user capability needs and architectural interfaces and details. This knowledge enables them to apply their internal research funds to innovation projects that can meet customer and user needs, allow customers to view and assess these innovations and then rapidly insert new technology into programs.

A Note From The Sponsor (continued)

Conceived and sponsored by General Dynamics C4 Systems in Scottsdale, Arizona, the EDGE enables open sharing of information and assistance across its membership to foster innovation at faster cycle times than currently possible on funded programs. Early briefings to key customers have shown recognition that the opportunity to foster innovation in the EDGE will provide them with multiple advantages:

- assisting in creating and maintaining the list of top-requested and desired capabilities;
- influencing where industry and academia place their annual internal research funding;
- monitoring EDGE projects and innovations for technologies ripe for adoption and insertion into funded programs.

The EDGE complements the mission of the U.S. Army Soldier Systems Center and other

government and industry research labs by providing researchers with opportunities to demonstrate their innovations as candidate technologies for program evaluation and adoption. To date, the EDGE has already achieved early deliveries of capability prototypes to the Army for its warfighter technology programs including consolidated body-worn components to make significant size, weight and power improvements on Land Warrior and development of a capability for the Future Force Warrior ATD that will provide future soldiers in small combat units with critical sensor data from unmanned air and ground vehicles.

General Dynamics is extremely excited to grow the EDGE to bring value and significant return on investment to our customers and users around the world.

WARRIOR INNOVATIONS

Membership Update

In the few short months since the EDGE membership drive was initiated, the response from industry and academia has been very positive. The EDGE has attracted early interest from industry, government and academia and has already delivered innovations to the U.S. Army for its Land Warrior program and Future Force Warrior Advanced Technology Demonstration (ATD).

The EDGE has supported 10 technology initiatives so far and organizers are finalizing agreements with seven member candidates. Government program management participants include PEO Soldier at Ft. Belvoir, VA.; the U.S. Army Soldier

Systems Center at Natick, MA.; and the Training and Doctrine (TRADOC) Capabilities Manager-Soldier at Ft. Benning, GA. EDGE member candidates include Arizona State University of Tempe, AZ., including its Flexible Display Center; Armor Holdings, Inc. of Jacksonville, FL.; Computer Sciences Corporation of El Segundo, CA.; DRS Technologies of Parsippany, NJ; EFW Inc. of Ft. Worth, TX.; PEMSTAR, Inc. of Rochester, MN; and Rockwell Collins of Cedar Rapids, IA.

If you are interested in finding out more about the EDGE or becoming an EDGE member, visit us at www.edgewarrior.com.



WHERE THE CUTTING EDGE MEETS THE TACTICAL EDGE

❖ Welcome to the EDGE

The EDGE is an unprecedented collaboration initiative, which has been designed to enhance the delivery cycle of warfighter technology and capabilities. Located in Scottsdale, Ariz., the EDGE is sponsored by General Dynamics, which is providing the laboratory for developing and testing new and emerging technologies. The EDGE contains nearly 8,000 square feet of laboratories, meeting space and a demonstration venue. Member labs may be reserved by EDGE members to integrate with the warrior systems or to collect information comparing emerging technologies with current baseline capabilities. The EDGE also contains a main integration lab, where the current warrior programs complete integration and test of their subsystems before progressing to field evaluations or production.

At the core of the facility is an immersive theater. This theater provides the ability to simulate relationships between higher echelon commands and the dismounted soldier, as well incorporating the use of unmanned ground vehicles and

unmanned air vehicles. Using the theater, soldiers and engineers can carry out mission scenarios to demonstrate interoperability, in addition to the dissemination and presentation of data at the various echelons from the core of the command center down to the individual soldier at the edge of the battlefield.

General Dynamics has co-located its warrior engineering personnel in contiguous space within the EDGE, enabling stronger collaboration across programs and easy subject matter expert access for EDGE members collaborating on projects.

Complementing the EDGE's physical environment is a virtual environment that is accessible by all members. It provides a repository that includes project information, customer feedback and recommended development items that can be used as the basis for emerging EDGE projects. As projects become more defined between members of the EDGE, team members will have access to virtual space allocated specifically for their projects.