

LAND WARRIOR



Army ACAT II Program

Total Number of Systems:	34,000
Total Program Cost (TY\$):	\$2028M
Average Unit Cost (TY\$):	\$56K
Full-rate production:	3QFY03

Prime Contractor

Raytheon

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Land Warrior is a first generation integrated fighting system for dismounted combat soldiers. It is intended to enhance the lethality, command and control, survivability, mobility, and sustainment of individual soldiers and infantry units. Its capabilities contribute to the *Joint Vision 2010* operational concept of *dominant maneuver* by dismounted forces.

The Land Warrior consists of five subsystems:

- Computer/radio subsystem including a computer, soldier radio, squad radio, and Global Positioning System.
- Software subsystem.

- Integrated helmet assembly subsystem, including a helmet-mounted display and a day/night image intensifier.
- Weapon subsystem with currently fielded M16A2 or M4 rifles, thermal weapons sight, close combat optic, and infrared aiming light.
- Protective clothing and individual equipment subsystem including body armor, Nuclear, Biological, Chemical protective clothing, and load bearing equipment.

Land Warrior integrates a combination of Land Warrior developed equipment, equipment that has already been fielded, and other items under development provided to the Land Warrior program as government furnished equipment. Land Warrior is intended to be fully interoperable with the digital command and control of other platforms.

BACKGROUND INFORMATION

Land Warrior began EMD in January 1996. An Early Operational Experiment was conducted in October-December 1996 at Ft. Benning, GA, with ten surrogate prototypes. This Early Operational Experiment provided human factors information, principally in regards to the form, fit, and function of the helmet/load-bearing equipment supporting system design reviews. Additionally, the Early Operational Experiment was used to aid in the development of tactics, techniques, and procedures. Land Warrior was originally scheduled to begin OT in 3QFY98. However, due to hardware problems encountered during April 1998 technical testing, the program manager halted further system development pending an overall program review and subsequent program restructuring. Land Warrior was placed under OSD T&E oversight in April 1998.

TEST & EVALUATION ACTIVITY

Operational testing has not occurred to date. The focus of the program effort this year has been on completing the program review and restructuring. The key changes, which have been implemented as a result of this effort, include: (1) the Land Warrior program office assuming the system integration function from the prime contractor; (2) efforts to develop Land Warrior-unique load carrying equipment and body armor, which have been replaced with Government-Off-The-Shelf systems, specifically the joint service Modular Lightweight Load-Carrying Equipment and Interceptor Body Armor; and (3) increased reliance upon Commercial-Off-The-Shelf computer technology and software to minimize the development of Land Warrior-unique hardware and software.

OT efforts have been devoted to ongoing development of the OT strategy. The Land Warrior TEMP is under development and has not been submitted to the Director for approval.

TEST & EVALUATION ASSESSMENT

The restructured Land Warrior program is a positive development and is based upon a more realistic assessment of the technical challenges facing the program. Increased reliance on Commercial-Off-The-Shelf (COTS)/Government-Off-The-Shelf (GOTS) subsystem technology and programs, as well as reduced reliance on Land Warrior-unique components, is intended to decrease technical development

and system integration problems and improve interoperability with other ground combat systems. However, in practice, so-called COTS technologies often require extensive development and special effort to be successfully integrated with other systems and subsystems. The technical areas that will require the most effort and continue to present the highest risk include: (1) overall system integration of the subsystems by the program office; (2) batteries and power management; (3) system ruggedness and weight; and (4) software. Of particular interest will be Land Warrior's capability to provide system battery power sufficient to meet the needs of sustained ground combat without overburdening a dismounted infantry unit's logistics system. Also of interest will be the program's effort to ensure digital interoperability with the Force XXI Battle Command, Brigade and Below system.

