

LAND WARRIOR



Army ACAT II Program

Total Number of Systems:	41,000
Total Program Cost (TY\$):	\$2028M
Average Unit Cost (TY\$):	\$39K
Full-rate production:	3QFY03

Prime Contractors

Computer Sciences Corporation
Exponent Corporation

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2020

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 2020* operational concept of *dominant maneuver* by dismounted forces.

The Land Warrior consists of five sub-systems:

- Computer/radio sub-system including a computer, squad radio, soldier radio, and GPS.
- Software sub-system.
- Integrated helmet assembly sub-system including a helmet-mounted display and a day/night image intensifier.

- Weapon sub-system with currently fielded M16A2 or M4 rifles, light weight thermal weapons sight, close combat optic, infrared aiming light, laser range finder, and digital compass assembly.
- Protective clothing and individual equipment sub-system including body armor, NBC 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 to be 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 (EOE) was conducted in October-December 1996 at Ft. Benning, GA, with ten surrogate prototypes. This EOE provided human factors information, principally with regards to the form, fit, and function of the helmet and load-bearing equipment, which supported system design reviews. Additionally, the EOE 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 technical testing in April 1998, the program manager halted further system development pending an overall program review and subsequent program restructuring. Land Warrior was placed on OSD T&E oversight in April 1998.

Based upon the program review conducted in FY99, key changes were implemented in the Land Warrior program. These changes included: (1) the Land Warrior program office assumed the system integration function from the prime contractor; (2) efforts to develop Land Warrior-unique load carrying equipment and body armor were eliminated and replaced with GOTS systems, specifically the joint service Modular Lightweight Load-Carrying Equipment and Interceptor Body Armor; and (3) increased reliance was placed upon COTS computer technology and software in order to minimize the development of Land Warrior-unique hardware and software.

TEST & EVALUATION ACTIVITY

No OT has occurred to date.

The major program effort for FY00 was preparing for and participating in the Joint Contingency Forces Advanced Warfighting Experiment (JCF AWE) conducted at Ft. Polk, LA, September 8-20, 2000. An infantry platoon from the 82d Airborne Division equipped with prototype Land Warrior systems participated in this event. While not designed as a T&E event, Land Warrior program efforts in support of the JCF AWE should provide valuable user feedback to the program on ways to improve the system.

The Land Warrior TEMP remains under development and has not yet been submitted to the Director for approval. The TEMP is anticipated to be submitted to DOT&E in May 2001. Government DT is scheduled to begin in 3QFY01, with an IOT&E scheduled to begin in 4QFY02.

TEST & EVALUATION ASSESSMENT

The restructured Land Warrior program has been a positive development and is based upon a more realistic assessment of the technical challenges facing the program. Early indications are that the revamped Land Warrior prototypes are more robust and much improved from the human factors perspective. An increased reliance upon COTS/GOTS sub-system technology instead of Land Warrior-unique components should decrease technical development and system integration problems and improve interoperability with other ground combat systems.

The technical areas which will require the most effort and continue to present the highest risk include: (1) overall system integration by the program; (2) batteries and power management; (3) system ruggedness and weight; and (4) software, particularly digital C² functionality. Of particular interest will be the achievement of Land Warrior digital interoperability with the FBCB2 system. Also of interest will be the capability of Land Warrior to provide system battery power sufficient to meet the needs of sustained ground combat.

