

## Aviation Inflatable Maintenance Shelter

### PHASE III IMPACT

- \$2,974,236 in Government/DoD and non-DoD Research and Development funds.
- As a result of the AIMS prototype, other U.S. allies are evaluating the AIMS for their deployment needs.
- Smaller versions of this high pressure air beam have now been developed and distribution began in September 2002.



The Army must support military forces anywhere in the world with shelters that can be rapidly deployed with existing soldier skills and require a minimum of airlift. Vertigo, Inc. demonstrated that very large, lightweight, rapidly deploying shelters are possible. This project was a technology demonstration of the use of large diameter air beams to fabricate a prototype aircraft maintenance hanger large enough to house a CH-47 helicopter. The Aviation Inflatable Maintenance Shelter (AIMS) is the largest air beam structure ever fabricated and achieved a technology breakthrough in the size and load capacity of inflatable structures.

The shelter can be deployed by eight soldiers, inflates in less than an hour, and can withstand steady winds up to 90 miles per hour and snow loads of 20 pounds per square foot. The shelter has aircraft doors at each end that open or close in less than 3 minutes.

This project was the first use of air beams of this size. Prior to this project, air beam shelters with spans greater than 30 feet were not feasible. The AIMS span of 83 feet is a revolutionary development. Each air beam weighs 500 pounds, but can support over 20,000 pounds, which is an excellent load to weight ratio.