



## HAMMER™ Handheld Apparatus for Mobile Mapping and Expedited Reporting

*ERDC technologies offers an efficient solution to the problem of acquiring and processing multiple streams of critical information in real time*

Researchers with the U.S. Army Engineer Research and Development Center (ERDC) conceived, designed, and developed the HAMMER™—Handheld Apparatus for Mobile Mapping and Expedited Reporting. The instrument integrates a broad spectrum of high resolution, geospatial, and sensor data in an accurate, digital, objective, and consistent manner. This fine-grained data can be seamlessly organized into a relational database for automatic report generation. The HAMMER™ integrates customized technologies for capturing and sharing actionable intelligence in real-time. This intelligence can be shared between users and decision-makers as a “common-operating-picture” to forecast, prevent, and mitigate events proactively.

Under a Cooperative Research and Development Agreement (CRADA), ERDC and industry partner Compass Systems, Inc., developed the HAMMER™ into a commercial product. In 2008 the technology transferred to Compass Systems.



Capabilities of the HAMMER™ include:

- robust computing integrated with a geographical information system
- sophisticated global positioning system enabling stand-off position acquisition
- high definition camera/video
- night vision
- speech recognition, and
- wireless, multi-sensor mesh networks for tagging and tracking assets or events dynamically.

Commercial applications include energy and resource management, real property evaluations, risk and condition assessments, as well as meeting the diverse needs of first responders, construction, real estate, municipality management, fish and wildlife management, forestry, highways, and manufacturing.

The HAMMER™ is also an excellent tool for meeting current and future demands of our nation's civil works and defense programs. For example, another ERDC facility, Coastal Hydraulics Laboratory (CHL), entered into a CRADA in 2008 with Compass Systems to configure HAMMER™ to meet their needs.

Charged with stabilizing and protecting our nation's shorelines, researchers with CHL realized the benefits of this technology for improving and standardizing their inspection procedures. The HAMMER™ hardware/software solution allows the inspector to remotely collect geo-referenced images/media and associate them with specific fields on the forms. The benefit of this system is that it allows multi-perspective, stand-off data collection with increased safety. This allows the inspectors to collect vital information in a measurable, repeatable, and comparable manner; suitable for generating and compiling an accurate condition index, as well as for ranking and prioritizing resources.

SpringBoard is currently working with Campass Systems in their marketing efforts. This technology transition, facilitated by Springboard and TechLink, is a great example of the collaboration within the Department of Defense Partnership Intermediary Network.

**SUCCESS**  
*Stories*

