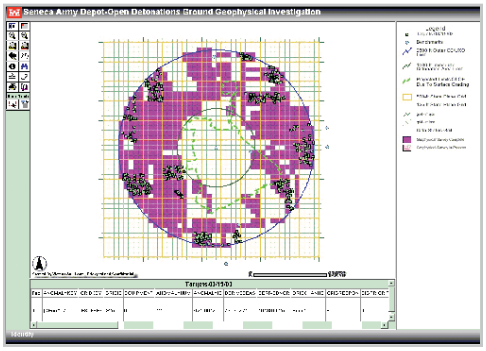
INNOVATIONS

RESPONDFAST℠ WESTON®

TECHNOLOGY FROM WESTON SOLUTIONS, INC.

RESPONDFAST℠ UXO INVESTIGATION



RespondFast℠ UXO Investigation was designed and developed by Weston Solutions, Inc. (WESTON®) to expedite electronic collection of data related to UXO investigation activities, and to allow near real-time access to data in tabular and spatial formats via the Web. The **RespondFast℠** system incorporates both portable PC- and Web-based components to provide ease of use for UXO technicians operating in the field and project managers making decisions in the office.

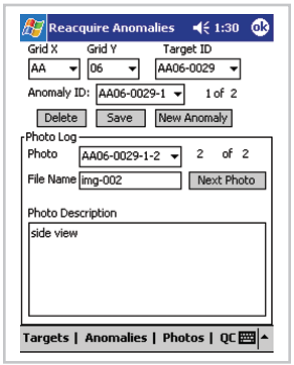
RespondFast℠ UXO Investigation consists of three primary components that use existing hardware and communications services, while integrating secure Web services and GIS software (ArcIMS®). The data collection component runs on Pocket-PC-powered PDAs or Tablet PCs using the Windows CE operating system, enabling users to log UXO-related items encountered during surface sweep activities, reacquire targets identified through geophysical survey, and log anomalies that are excavated for each reacquired target. A GPS receiver can be used with the application to capture the exact coordinates of all items logged. Photo logs can also be created for each photo taken of an item. The data collection application is designed to run on multiple units, so several teams can simultaneously collect data in the field. Once collected, new data are merged with existing data stored in a common SQL Server database that can be run on a local computer or on the Web.

The Web-based component is used to view, edit, and approve data in the SQL Server database and to generate reports that can be viewed in the standard USACE Data Item Description (DID) format or exported to Excel. Direct access to the data is controlled by a secure login. Only users with administrative rights can edit data. Casual users can view data after it has passed an administrative QC review and been approved. The Web application can also be used to enter items that have been recorded on paper forms in the field.

The ArcIMS map interface component consists of a grid status map and an overlay of a geophysical target layer. This application provides a visual method of tracking project progress, including items logged and QC status. Data for selected items or targets can be displayed by selecting the desired targets from the target layer. These data can then be reported in DID format or exported to Excel.

WESTON SOLUTIONS
Restoring Resource Efficiency
an employee-owned company

RespondFast[SM] UXO Investigation provides **flexibility** in UXO removal by:



- **Reducing project costs** through more efficient data retrieval and evaluation.
- **Standardizing nomenclature** used in characterizing UXO-related items.
- **Assisting in planning** field efforts.
- **Providing batch updates of QC records**, saving time.
- **Enabling easy selection of data** through a simple form-based query tool.
- **Allowing multiple UXO teams** to operate in the field at the same time.
- **Producing standardized reports** in minutes.
- I**nterfacing** with GIS applications.
- **Allowing export of electronic deliverables** that meet specific client file structures, content, and format.

HOW DOES IT WORK?

First, WESTON conducts a surface sweep of each grid. All items found on the surface are logged and GPS coordinates are taken. GPS data can be collected in real time in **RespondFast[SM] UXO Investigation** by using a GPS connected to the PDA/Tablet PC or a BlueTooth GPS receiver. If grid extents (max and min) are defined, **RespondFast[SM]** will compare the item's GPS coordinates to the currently selected grid to ensure accurate logging of anomaly position. In addition to UXO-related items, general terrain features may also be logged as part of the surface sweep.

WESTON may also conduct a geophysical survey using ground-penetrating radar to identify targets that are potential UXO. A list of targets, their coordinates, and the response amplitude at which each target was detected is derived from the geophysical survey results and entered into the **RespondFast[SM]** database. These targets are then loaded onto the PDAs or Tablet PCs and are located and reacquired using a GPS unit. In **RespondFast[SM]** on the PDA or Tablet PC, UXO teams first select the grid they are using and then the target to be excavated from the list of targets in that grid. UXO teams then excavate the reacquired target location and log all items found at that target. For a single target, the potential exists to encounter several items at varying depths and offsets, so **RespondFast[SM]** allows multiple items to be logged for a given target location. Item descriptions are logged by selecting values from pre-defined dropdown lists and populating fields defined in the DID (contract document) protocol.

All data collected by UXO teams are then merged into the SQL Server database and are then immediately available on WESTON's secure Web-based project site, TeamLink®. Access to the data editing and QC level alteration functions are limited to specific personnel through a secure login, but all users can view the surface sweep results, original survey results, and reacquisition excavation results in both tabular Excel format and DID format. Additionally, data can be viewed spatially using the ArcIMS application. Using a simple and intuitive interface, these tools provide team leaders and project managers with data in near-real time, enabling them to make timely and informed decisions.

Benefits

- Estimated savings of over 35% by using **RespondFast[SM] UXO Investigation** in comparison to nonautomated, traditional, and paper-based methods.
- Increased project efficiency.
- Standardization of project characterization nomenclature.
- Greater client satisfaction.

CONTACTS

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