

DHS Science and Technology Directorate

Lost Person Locator: Locating Missing Persons in Wilderness, Rural and Urban Locations

Standardizing search and rescue protocols

On any given day across the United States, as many as 1,773 missing person cases are reported daily that result in 100,000 of searches yearly. The missing include people from all ages, walks of life and geographic regions.

Steps taken at the very start of the search, in those precious first minutes, are critical to achieving positive outcomes. Search efforts, usually coordinated among multiple agencies and volunteers, can easily go awry as responders first on the scene may not have access to authoritative, comprehensive guidelines to conduct lost person searches. The Department of Homeland Security Science and Technology Directorate (S&T) has a solution that puts decades of actual case data in the palms of searchers' hands.

S&T's First Responders Group (FRG) and dbS Productions—S&T's partner for search and rescue (SAR) research, publications and training—are enhancing a suite of tools that display historical, geographical and statistical search data in easy-to-use formats.

Using decades of SAR expertise

The Lost Person Locator project was initiated via the Small Business Innovation Research program. Through the course of this effort, dbS Productions developed: an Initial Response Search Wheel, Lost Person Behavior App, FIND software, Search and Rescue Collection Analysis Tool (SARCAT) and entered field operations guidelines into the International Search and Rescue Incident Database (ISRID), which details approximately 150,000 local, state, federal and international SAR cases compiled over 30 years.

The Initial Response Search Wheel (IRSW) is a waterproof plastic guide for initial response and contains the seven most common subject categories (hiker, children, dementia, hunter, climber and mountain biker).

The Lost Person Behavior app provides step-by-step search guidance, investigative questions and statistics and behavioral profiles for more than 41 subject types—including lost hikers, children and dementia patients. It also identifies high probability areas where an individual may be found and has filters for ecoregion and terrain. For responders with limited SAR experience, the app offers knowledge gained from similar searches.

It is now available for download on Apple iTunes, Google Play and Amazon.com.

The FIND software integrates mapping, GIS, search theory and incident management. It predicts the likely locations of the subject, suggests the best deployment of teams, tracks teams and personnel and manages clues. Once a team debriefs, FIND updates all relevant information using GPS tracks and search theory, which can be fed into SARCAT.

SARCAT is a web-hosted application that simplifies the collection and analysis of search and rescue data. SARCAT integrates FIND data at the end of a search; all of the search data is automatically collected from FIND and placed into the SARCAT format to allow the search manager or incident commander to print out a detailed incident report.

The current ISRID statistics are fed into the Lost Person Behavior app and FIND, which helps first responders determine where to search and what questions to ask when they first arrive at the search scene. In addition, post search statistical data can be entered into ISRID for further use.



The Lost Person Behavior app and IRSW allows those first on scene to rapidly initiate searches using step-by-step checklists, behavior profiles and investigative questions.

On the horizon in 2018

In coming months, FRG and dbS Productions will continue to refine the Lost Person Locator suite of SAR products through user testing and evaluation.

In addition, dbS Productions will continue to deliver training sessions and demonstrate the Lost Person Locator suite of tools to SAR communities. These outreach activities will provide dbS with feedback that will enhance the suite of tools.



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To learn more about the Lost Person Locator, contact
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