

LOCATING MISSING PERSONS

On any given day across the United States, nearly 2,000 missing person cases are reported that result in hundreds of searches. The missing includes people from all ages, walks of life, disabilities, and geographic regions.

Steps taken at the very start, in those precious first minutes, are critical to achieving positive outcomes. Search efforts, often 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)'s First Responders Group (FRG) and dbS Productions – a leader in search and rescue (SAR) research, publications, software, and training – are developing a suite of tools that display historical, geographical, and statistical search data in easy-to-use formats, including mobile apps and software.

LEVERAGING DECADES OF SAR EXPERTISE

The FIND software integrates mapping, geographic information systems, search theory, artificial intelligence, scenario analysis, and incident management. It then predicts the likely locations of the missing subject, suggests the best deployment of teams, tracks the teams and personnel, manages clues, and then updates all the relevant information using global positioning system tracks and search theory once a team debriefs.

The FIND software leverages data from the International Search and Rescue Incident Database (ISRID), which details more than 150,000 search and rescue incidents. From this data, it was possible to create behavioral profiles for more than 41 subject types – including lost hikers, children, and dementia subjects. This information has been integrated into several other products including: the Lost Person Behavior (LPB) app and training, *Endangered and Vulnerable Adults and Children* publication, Search and Rescue Collection Analysis Tool (SARCAT), and the Initial Response Search Wheel.

SAVING TIME AND LIVES

FIND benefits first responders by finding subjects 50 percent faster, according to a National Science Foundation supported



survey. This reduces costs and saves more lives. FIND uses search theory to optimize tasking. It displays a map showing both potential tasks and the probability of each task locating the subject. It has a simple, intuitive, yet powerful user interface. Little to no set-up is required with quick training, so it is even possible to learn on the job. FIND is a turn-key tactical decision aid that doesn't require an internet connection, provides its own maps, and outputs a single solution.

LATEST ACCOMPLISHMENTS

The FIND software is now commercially available for single users, team use (allows multiple users over intranet), and enterprise options (integrates cloud servers).

ON THE HORIZON

In the coming months, FRG and dbS Productions will continue to refine the suite of SAR products through new research and through additional user testing during Search and Rescue Exercises (SAREXs). A new mobile app called FIND Mobile will allow users to download task assignments, obtain missing subject information, track their tasks, start on the debriefing, and use a Probability of Detection (POD) calculator to obtain an objective estimate of their POD. FIND, FIND Mobile, LPB App and training courses are pending Safety Act certification.

PERFORMERS/PARTNERS

- Project lead: dbS Productions, Charlottesville, VA
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