



Search & Rescue Model and Response System

SARMAP provides rapid predictions of the movement of drifting objects and missing persons at sea. SARMAP includes the ability to deploy search & rescue units (SRUs) with search patterns and calculate probability of containment (POC), probability of detection (POD), and probability of success (POS).

Applications for SARMAP

- Determine search area for missing vessels, persons or containers
- Identify probable location of an accident site or lost object
- Store home base locations of all available Search & Rescue Units (SRUs)
- SRU Deployment and Search Pattern management
- Floating contraband tracking
- Reverse trajectory calculations

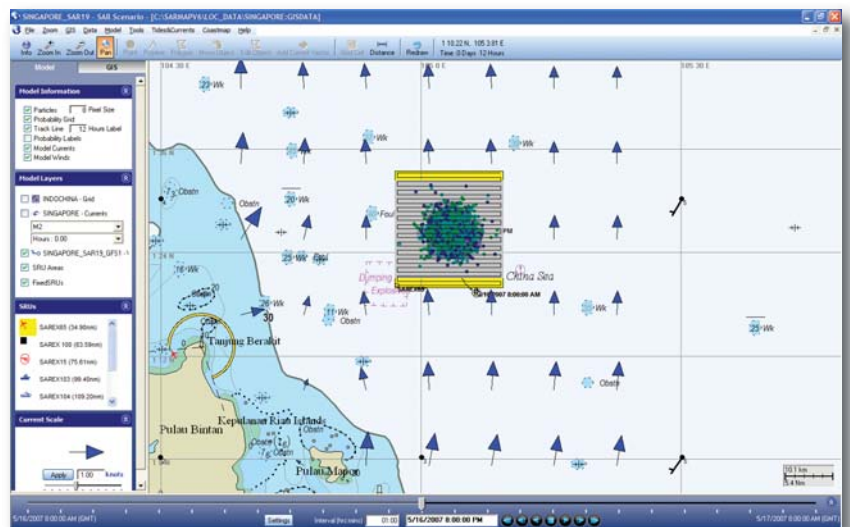
Features

- Uses ASA's own GIS or can be used in other GIS software such as ArcView®
- Contains a database of drift behavior for a variety of objects based on the latest U.S. Coast Guard data
- Easily interpreted visual display of search area over time
- Performs a series of postulated accident sites to develop envelopes of likely search areas
- Real-time data links, integrated with the COASTMAP Environmental Data Server (EDS)
- Online web map and metocean data services
- Links floating debris to find a lost object or an accident site
- Rapid Response Module (RRM) or SARMAP Wizard to very quickly lead through the steps required to calculate a search area
- Supports commercial nautical charts:
 - ▶ BSB NOAA Charts
 - ▶ MapTech Charts
 - ▶ NDI Charts
 - ▶ NOS Charts
 - ▶ British Admiralty (ARCS) Charts
 - ▶ C-MAP Charts



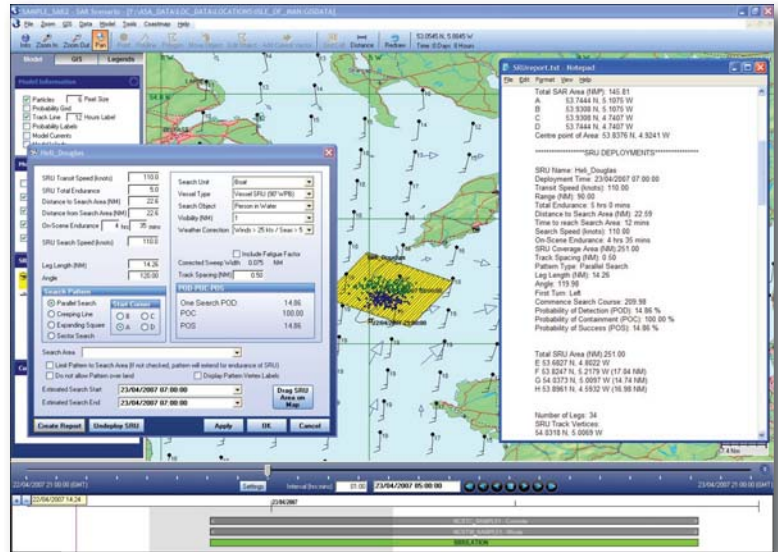
Selected clients include:

- Irish Coast Guard
- Sasemar (Spain)
- Maritime New Zealand
- Singapore Civil Aviation
- Singapore Port Authority
- Argentina Coast Guard
- U.S. Navy



SARMAP Modules

- Search Planning Tool
- IAMSAR and MonteCarlo methods for computing drift
- Forward and Back Tracking SAR
- Optimal Search Planner (2008 release) - an additional module that allows controllers to:
 - › Combine multiple resources for a single or multiple search target(s)
 - › Cumulative POS and optimization tools to maximize probability of success
 - › Integrate prior/subsequent searches to improve in future/successive search planning
- SRU text reporting (ASCII, Notepad, Word, etc.)
- SARMAP for ArcView®

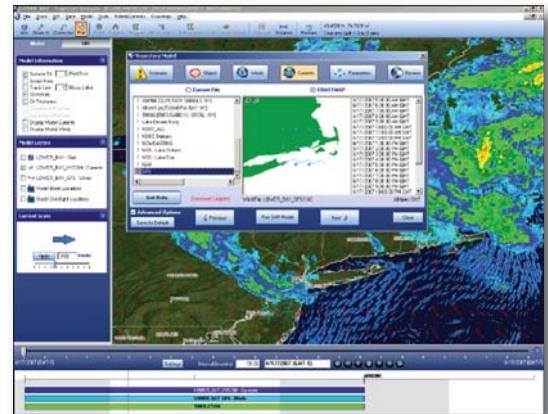


Environmental Input Data

Since the quality of model predictions depends on the quality of the environmental data, a suite of tools allow the user to manage environmental data efficiently. Specifically, SARMAP integrates metocean data (winds and surface currents) for accurate SAR predictions.

ASA is part of the development team for SAROPS, the latest SAR program implemented nationwide by the U.S. Coast Guard in 2007. SAROPS and SARMAP connect to ASA's COASTMAP EDS to obtain the latest current and wind data forecasts for the region of interest. This is very fast and allows the user to make a prediction in a matter of minutes without needing to manually enter data.

Clients may request a subscription service to COASTMAP EDS for different data products from different sources or providers, public or private.



ASA's integrated COASTMAP EDS provides the best environmental data solution because it aggregates different data sources.

ASA has built a wide range of computer modeling applications to solve various environmental problems. ASAMAP™, ASA's suite of environmental modeling tools, are available for licensed use and customization and include: AIRMAP, CHEMMAP, COASTMAP, HYDROMAP, OILMAP, SARMAP, SIMAP, MUDMAP and WQMAP. For more information visit our website at www.asascience.com.



70 Dean Knauus Drive • Narragansett, RI USA 02882 • +1 401 789-6224
 Seattle | São Paulo | Gold Coast | Perth | Dubai
www.asascience.com