



## Social Network Data Convergence into Reliable Information for Emergencies

The artificial intelligence, machine learning software known as the Social Network Data Convergence into Reliable Information for Emergencies (SCORE) was originally designed as a modular system to converge multiple, unstructured social networking sites (e.g., Twitter, Facebook, YouTube, etc.) into useful, verified, and reliable information in the event of a crisis. The massive amounts of data SCORE can process is significant. SCORE can perform analysis on various digital forms of data and filter out “noise” resulting in actionable intelligence utilized for crisis response. Simply put, SCORE will find “the needle in the haystack”.

Key components SCORE uses are:

- Language Analysis using Semantic, Statistical and Trend (LASST) analysis
- Information Verification and Validation (IV&V) / User Identification (UI) and trust metrics
- Metadata database to store analyzed data, provide user and query APIs, and 3rd party integrations (Graphic User Interface (GUI), mapping, analysis, management)

In summary, SCORE performs its analysis, assigns a statistical level of importance based on its custom Artificial Intelligence (AI) algorithm, and filters out low priority messages resulting in truly actionable information.

While SCORE captures the actionable intelligence, System Network Artificial Intelligence Readiness Solution (SNAIRS) enhances SCORE by recommending solutions for the flagged data and assisting with providing configuration management. SNAIRS drives out operating inefficiencies, optimizes resource utilization, and achieves operational excellence. Together, SCORE-SNAIRS is designed and architected in a modular fashion to allow for easy adaptability to a variety of issues and uses. Each module represents a specific piece of functionality that can be utilized to perform tasks. The advantage of the modular architecture is adaptability as more functionality is required new modules can be added or combined with current modules.

SCORE is currently configured to scan the ship’s network logs automatically (up to 20 million entries per day), aggregate those logs, and pull-out items of interest (“needles in the haystack”) presented in an easy-to-read dashboard display. SNAIRS identifies the potential issues and provides common solutions and/or fixes to use for troubleshooting. This decreases the network administrator’s time and effort to manually review the log data line by line, find the anomalous log items, and independently search for their fixes. This process reduces network down time, expedites the repair process, and increases the effectiveness and efficiency of network administrators.

SCORE-SNAIRS’ also provides configuration data for the administrator through a dashboard. Configuration of Navy systems is constantly evolving so it can be difficult keeping up with current configuration management. In addition, SCORE-SNAIRS provides a consolidated repository of errors and solutions that can be distributed to the ships to provide better configuration management.

In conclusion, SCORE-SNAIRS will provide mission support to the warfighter by automating much of the current manual process used to analyze logs, identify the logs of interest, and provide solutions all while assisting with managing configuration information on the CANES network.



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