

## Touch Assisted Command and Control System (TACCS<sup>TM</sup>) Capabilities Summary

Priority 5's Touch Assisted Command and Control System (TACCS<sup>TM</sup>) C5I software solution provides an out-of-the-box common operating picture and other situational awareness and decision support tools for domestic and international end-users. It includes an operator configurable multi-display of ready- reference dashboards, and is available as an on-premises or cloud hosted solution. Its user interfaces are designed for operations centers, dispatch desks, executive offices, field personnel and analysts to support seamless operational decision making at all command levels.

TACCS<sup>TM</sup> is built with a service-oriented open-architecture utilizing geographic information systems; and integrates most standard GIS data (including ArcGIS, DigitalGlobe, and Open Street Maps) and most common data formats (including Web Map Service (WMS), Web Feature Service (WFS), ArcGIS Feature Data, Representational State Transfer (REST) API, Google Maps Webfeed (GeoRSS), and KeyHole Markup Language (KML)). It gathers, collates, synthesizes and disseminates information in real-time to all authorized parties under role-based access controls. Its features include integration of data feeds from almost any source; alert processing; critical infrastructure management; incident and event management; reporting; and recovery and mitigation planning. TACCS<sup>TM</sup> is deployed on a Linux server and Windows workstation, and is also available through a web-based interface and a mobile application. The web-based interface can be run with any modern browser (Chrome, Firefox, Edge, and Safari), and the mobile interface is available on iOS, Android and Windows Mobile operating platforms.



## Core Capabilities

TACCS<sup>TM</sup> provides an extensive set of core capabilities including:

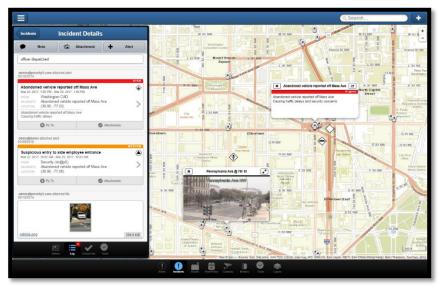
*Easy Navigation*: Operators easily navigate to geospatial locations on the display. Search capabilities allow users to submit queries to multiple databases and fly-to the location results.

*Alert Management*: Alerts are compiled in a single inbox, with the software automatically assigning a preliminary priority to each alert based on keywords and alert types. The software also automatically displays each alert in its location on a geospatial display, with the color of the icon indicating its relative

priority. An operator can archive an alert that does not require further attention, and can escalate an alert requiring action into an incident, with the software automatically transferring relevant information to the new incident form. The software will automatically notify operators and others via email or text when alerts are received.



*Incident Management*: In addition to incidents escalated from alerts, incidents can also be created independently by operators. Incident information can be created or supplemented by an operator, who can provide a situation overview, log entries, view critical information associated with the incident, assign tasks, request resources, and view nearby cameras. All incident entries are tracked in an audit log. Incidents are displayed on the map with an icon and an animated colored swirl.



Automated Alert Analysis: The software includes rule-based expert system AI to predict the possibility of future activities or conditions. The software's AI engine enables operators to define multiple factors that are or may be predictive of those activities or conditions, and the AI engine then uses those factors

to constantly scan incoming alerts and other data in the software to determine if those factors exist. The AI engine can manage large numbers of simultaneous searches for factors that meet any of several different search criteria, and will notify operators and others if the different search criteria giving rise to a prediction are satisfied. Depending upon the formulation of various factors, the satisfaction of any one or more of them may enable the AI engine to predict a specific area of interest or time interval, thus providing the operator the opportunity to initiate a required operating procedure, including the commencement of avoidance or mitigation activities, or prepare to implement an appropriate response.



Operational Status: Infrastructure, people, vehicles, and other resources that are critical to the operations of an organization are referred to as assets, are modeled in the software and are represented in their locations through icons shown on the common operating picture display. The icons are shown in different colors to represent the operational status of the underlying asset. The effects on an asset of a change in its operating environment are brought to an operator's attention by a change in the icon's color presentation. Behaviors of the asset as a result of such changes are dictated by the dependencies, operating parameters and vulnerabilities incorporated in the model of that asset. An information panel associated with each icon provides an operator with ready access to information such as related Contacts and a Virtual Binder for files with additional information. A Search tab and Nearby Cameras allow the operator to gather additional information about the asset.

Mission Readiness: The software enables an operator to define one or more missions of an organization (e.g., maintaining adequate security measures, maintaining operational readiness of key assets) and associate the assets and other operating criteria that are essential to mission fulfillment. Combinations of alert, incident or asset based rules constantly operate in the software to reflect at any given time whether the organization's ability to carry out a mission is normal, of concern, or in critical condition.

The software provides automated notification to an operator if a mission has been degraded, by both a color change in the mission status panel display and via email or text.



Event Management File: The Event File is a single panel in the software that is used to manage and reconstruct a complex operating environment for a specific event. It associates Alerts, Incidents, Resource Requests, Tasks, Organizational Charts, Assets, Binders, Missions,

Images, Videos and Critical Information for pre-planning, during an event and post planning. The playback capability enables real time analysis and lessons learned during operations or in training or exercises by presenting timeline of the event using different intervals. At each interval, the software displays the information associated with that period.



## Resource Management:

Operators can use the software to request resources, have their requests approved by the chain of command and estimate the cost. Requests can be initiated through an Incident or Event File panel and tracked throughout the process. By incorporating the resource request workflow in the software, an organization is able to avoid the need for an after-the-fact recreation of requests from loose notes and emails.

*Task Management*: The software enables operators to create and assign tasks in both the Incident and Event File panels, and track those assignments through to completion. Individuals using mobile applications see only those tasks assigned to them and can provide real-time updates from the field.

Social Media: If a social media feed is available, an operator can use the software to define a particular area, view the tweets from that area and filter the tweets based on keywords. An operator can use the software to create an Alert from a tweet and to add that Alert to an Incident file.

Virtual Binder: A Virtual Binder in the software is used to store PDF and Word documents, locations, .kml files, and layers. Binders can be associated individual assets or more generally with Event Files.



*Reporting*: The software includes flexible report generating functions with a broad range of editing tools and template options. A common report format enables the operator to drag and drop screenshots directly into the report and automatically populate the report with details from the Event File, Alert, Incidents and Missions. The report can be saved as a PDF, Word document or HTML for distribution.

Role-Based Access Controls: Role-based access controls enable system administrators to authorize user access to data and software functionality.

Notification: TACCS<sup>TM</sup> integrates a notification capability into the standard processes for operations and awareness. As part of the standard workflow for incident management, TACCS<sup>TM</sup> operators triage and track on-going issues through the Incident panel. To affirmatively notify users about a new update to information in the Incident panel, the operator can send an electronic notification by voice, email or text to those users selected by the operator. By notifying users to open the Incident panel to view the new information, the operator is able to verify that particular users have viewed the new information by confirming that they have accessed the Incident panel with the new information. The notification feature also enables operators to associate desired message recipients (individuals or predefined groups) to an existing or newly created Incident, send notifications of the need to access critical information, see who has accessed the Incident details, and update the information in real-time for everyone. The notification feature enables TACCS<sup>TM</sup> to provide continuous, real-time status display of on-going emergency situations in read only or in full response mode, and to give a much more detailed and useful tool to operators in guiding those who are not tasked with implementing a response to avoid danger or to avoid unintentionally hindering on-going response efforts.

## Consequence Analysis

The TACCS<sup>TM</sup> Consequence Analysis Module provides enhanced modeling and simulation features using the TACCS<sup>TM</sup> simulation engine:

Asset Interdependencies: The software enables an operator to identify and incorporate in the

simulation engine both simple and highly complex interdependencies among assets and resources. By incorporating such interdependencies, the software is able to dynamically display the consequences on the entire simulation environment that result from a change of state of a particular asset or resource upon which other assets or resources directly or indirectly depend.

Impact Analysis: The Impact Analysis feature enables the operator to select a subset of assets that are to be simultaneously subjected to one or more conditions in a manner specified by the operator (simulating, for instance, a wind storm or flood in a section of a city). As one or more of the assets is subjected to those conditions through the simulation, the software displays the simulated impairment of their operations as well as any consequent impairment of the operations of other assets affected through the user-defined network of interdependencies.

Recovery Planning: Used in conjunction with the impact analysis capability discussed above, the Decision Support Tool enables an operator to optimize the use of post-event recovery crews, including the ability to coordinate public and private efforts, to restore mission operations. Using that feature of the software, the operator can: designate the types and locations of Recovery Assets (e.g., supplies, equipment and personnel) that are or may be available to be used to restore damaged CI/KR; identify and prioritize critical societal or organizational missions; and create a plan for deploying the available Recovery Assets in the most effective manner. Recovery plans can be modified to account for other emergency resources that may be deployed in the course of the recovery (e.g. emergency generators, temporary shelters) and that may contribute to mitigating the societal or organizational consequences.

