



SPM® Data Sheet  
 PSIM Overview  
 CBRNE  
 Environmental Monitoring  
 Campus Security  
 Defense

# Sensor Policy Manager™

## ViaLogy SPM® for Defense Applications: Force Protection Sensor Networks

The product SPM®-FPS (Sensor Policy Manager - Force Protection Software) was created in response to Installation Protection Program (IPP) requirements for future sensor network interoperability with existing legacy IPP data management architectures. In this situation, SPM-FPS serves as middleware that provides a solution to the Department of Defense (DoD) 5000.1 requirement for interoperability of information systems.

### Overview of DoD Mission Objectives

The objective of the DoD is the rapid procurement and installation of off-the-shelf, best-value technology to provide protection for U.S. military installations. The DoD seeks complete, fully functioning Installation Protection Systems and the associated professional program management, engineering, and technical support services.

These requirements stipulate that IPP software be:

- **Based on an open Service Oriented Architecture** (SOA 2.0) that can automatically integrate information from diverse Programs of Record.
- **COTS or GOTS** (Commercial or Government Off-The-Shelf) and DoD data standards compliant (i.e. possess CAP 1.1 interoperability).
- **Able to interface with various sensors and first responder communication devices** to facilitate effective communications with civilian response organizations.
- **Compatible with a common interface** among various non-tactical applications and be sufficiently flexible to reside in any backbone Automated Security system such as TASS or JBC2S.

*“For IA-4, [ViaLogy participated in all IAs, Integration Assessments] the FPJE developed a C2/COP display system, or Data Fusion Engine, that successfully integrated 28 different sub-systems at three geographically separate locations. The system included automation and fusion enhancements that reduced operator workload and improved situational awareness, enabling timely, tactically correct decisions and successful base defense operations.”*

Newsletter, PM-FPS (Product Manager, Force Protection Systems), Winter/Spring 2008

## Limitations of Today’s Sensor Management Approaches

System integrators can integrate the input from multiple sensors to overcome problems such as those listed in the table below. However, integration has historically been time consuming and costly. Costs increase exponentially as an organization attempts to integrate more and different types of sensors, especially complex sensors such as radars and CBRNE sensors. Furthermore, it is difficult to transition from centralized to distributed control as networks grow.

Problem	Example
False positives	Perimeter security motion sensor is tripped by an animal or moving vegetation.
False negatives	Operator misses out-of-range sensor reading or significant event captured by surveillance camera.
Delayed awareness and response to critical events	Oil field operations personnel are not alerted to incipient leaks revealed by slightly off-normal readings from different types of sensors.
Underutilization of sensors because of their placement	No historical trending information is available to help determine if a sensor would be more useful in another location.
Information available at one terminal only	Operational personnel can only view sensor readings from a dedicated terminal or from the sensor itself. This prevents monitoring by personnel in different geographical locations and impedes continuity of operations if employees cannot access the sensor or terminal for some reason.
Lack of automated response	Until now, there has been no easy way to rapidly and reliably implement policy-based responses to sensor input, such as triggering another sensor for a confirmatory test, locking doors, or notifying a response team.

## SPM® Deployment at Joint Exercise Integration Assessment IV

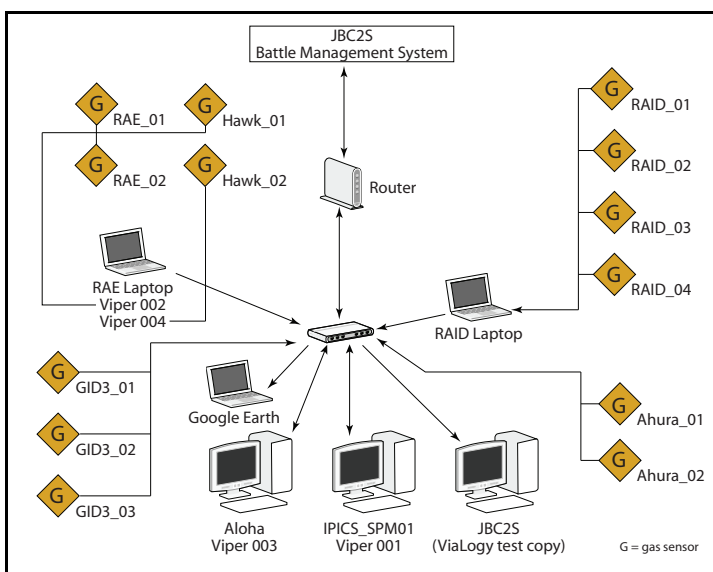
SPM's ability to integrate multiple sensors and communicate to third-party systems was demonstrated at the Force Protection JE IA-IV exercise at Eglin AFB.

In this exercise multiple chemical sensors were monitored for detecting gases and their dynamic GPS location, and the real time readings and sensor locations were monitored on the SPM console.

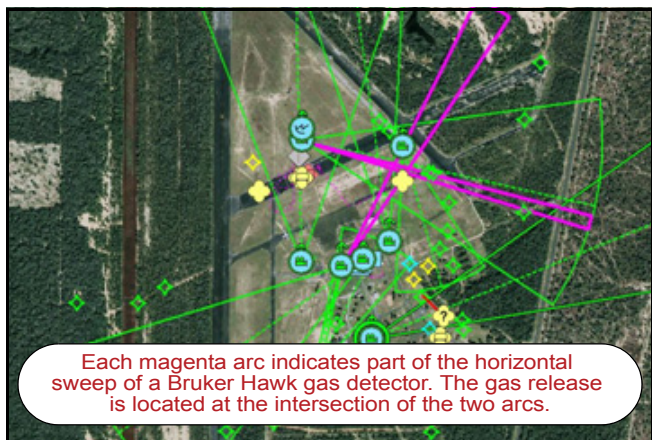
Chemical detections were automatically modeled using ALOHA to generate real-time chemical plumes which were then overlaid onto a Google Earth map of the exercise area.

Actively scanned gas detections from multiple Bruker Hawk sensors were displayed as quadrant outlines.

Sensor alert status, communication status, and the Hawk gas detections were translated into the ICD-0100 messaging protocol for display by the exercise JBC2S Battle Management System.



## Advantages of ViaLog's SPM-based IPP Solution



**Immediate integration and data commonality** – SPM is a standards-based product that can access and operate on all sensors (including video streams) that are part of an existing or prospective IPP solution. The commonality of the data transfer protocols embedded in or enabled by SPM allows better integration of response involving government agencies during a terrorist attack or serious incident. This commonality enhances integration of assets, response and resupply.

**Tested solution** – the SPM solution has been tested through several DHS-funded pilot deployments as well as in four US DoD Joint Force Protection Advanced Security System (JFPASS) exercises.

**Future upgrade path** – SPM enables future sensor interoperability upgrades because (a) SPM has an existing library of over 100 sensor adaptors, including many common and unique CBRNE sensors, and (b) ViaLog's ability to rapidly create new sensor adaptors. SPM scales cost-effectively to accommodate multiple sensors of any type, at new sites, and employing new policies.

**Reduction in costs** – the bottom-line advantage is the reduction in life cycle management costs because the simplified information management structure provided by SPM creates a single integrated decision system to support Tier 1 and Tier 2 IPP requirements.

**Automated, policy-based response** – SPM responds automatically to alert conditions by executing customer-defined actions and responses, including personnel notification via digital messages devices such as marquees, voice, Short Message Service (SMS), and e-mail. Automated notification reduces operational costs and minimizes human error.

**Standards compliance** – SPM is certified by the National Incident Management System (NIMS) as compliant with the OASIS CAP 1.1 protocol.

### Contact Information

To learn more about the ViaLog SPM® software solution, e-mail [sales@vialogy.com](mailto:sales@vialogy.com) or call (626) 768-2580 (U.S. headquarters) or +44 (0) 207 869 7014 (European headquarters).

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