



Situational Superiority Oriented Architecture

Changing the SOA paradigm from 'publish, find, and bind' to 'share and consume'.

Arlington, VA, USA; 24 April 2007 – Science Applications International Corporation (SAIC), a leading systems, solutions and technical services company, is leading a consortium that is building a dynamic Semantic Service Oriented Architecture (SSOA) solution. The initial prototype is being demonstrated at the Defense Intelligence Agency CIO-sponsored Department of Defense Intelligence Information System (DoDIIS) Worldwide 2007 conference at the SAIC booth number 1119.

"The demand for robust systems that allow analysts to interact with Information Technology in an intuitive, user-centric manner and focus on higher order reasoning tasks led us to develop the SSOA solution," said Sam Chance, Senior Enterprise Architect for SAIC, "and our demonstration at DoDIIS proves that SSOA is not just talk, but a real world capability demonstrable today."

Features

- **Semantics-based.** Correlating events from multiple disparate sources, SSOA provides a leading edge quality of insight and awareness to humans.
- **Easy to use.** For Analysts & Developers alike. Applications are composed of loosely coupled, re-usable components which are assembled as form-based or graphical workflows.
- **Dynamic, Autonomic and Cost Effective.** Built atop a recovery-oriented Service Fabric, SSOA is self-assembling, self-healing, self-managing, self-scaling and self-auditing. It operates across commercially available commodity hardware.
- **Event Driven.** SSOA provides users full access and awareness into not only changes in relevant data, but changes in business services, thus enabling robust, adaptive processes and "Persistent Awareness."
- **Standards-based.** Leveraging a distributed OSGi™ and Service Component Architecture (SCA) standards-based framework, the Infiniflow Enterprise Service Fabric.

DoDIIS Demo Use Cases

Two use case demonstrations are being featured by SAIC: Emergency Response and Data Fusion.



For the Emergency Response application, data is retrieved from a wide variety of sources (e.g. websites, mail lists, RSS, RDB, email, simulated message traffic, etc) and written to a persistent store as semi-structured data. Persistent stores are monitored by agents and by analysts via a Service Driven User Interface. Collected data are manipulated by agents and assimilated by reasoning services. The primary output of the Emergency Response use case is a recommended response plan. Rapid and agile “Event-to-Response” capabilities are critical to successfully manage emergent situations, and SSOA delivers this need adaptively and intuitively.

Effective analysis and decision making demand rapid processing of relevant information based on real-world events. The Data Fusion use case demonstrates rapid analysis through Data Reduction and Data Integration. Unstructured data is retrieved from a variety of unstructured data sources (e.g. websites, Mail Lists, etc) and Essential Elements of Information (EEI) from each data source are extracted by robots, and represented as semi-structured data, and written to a persistent store which is monitored by agents. Upon a particular combination of events, the semi-structured data is processed into highly-structured data and input into the knowledge base. The knowledge base is responsible for providing an integrated view of the structured data, and depending upon the type of event, agents may modify the robots’ behaviors, such as directing robots to acquire new information. An analyst interacts with enriched contextual information which forms the basis for intuitive, effective conclusions and sound decision making. Analysts may share contexts or connect to other contexts, thus creating a larger body of corporate knowledge.

The SSOA Consortium

Six organizations and independent software vendors are involved with the SSOA Consortium in addition to SAIC: Agent Logic, Dynamics Research Corporation, Kapow Technologies, Paremus, Siderean Software and SoftPro Technologies.

"Semantic SOA is the future," said Chance. "People are getting excited about Web 2.0 today; and SAIC and our team mates are demonstrating our technology leadership position by delivering the next generation of semantic based systems that could form the basis for what will be described as Web 3.0."

About SAIC

SAIC is a leading provider of scientific, engineering, systems integration and technical services and solutions to all branches of the U.S. military, agencies of the Department of Defense, the intelligence community, the U.S. Department of Homeland Security and other U.S. Government civil agencies, as well as to customers in selected



commercial markets. With more than 44,000 employees in over 150 cities worldwide, SAIC engineers and scientists solve complex technical challenges requiring innovative solutions for customers' mission-critical functions. SAIC had annual revenues of \$8.3 billion for its fiscal year ended January 31, 2007. SAIC: FROM SCIENCE TO SOLUTIONS™

About Agent Logic, Inc.

Founded in 1999, Agent Logic is the leading provider of Event Detection and Response™ software. The company's fourth-generation products support commercial and U.S. national security initiatives in highly complex environments requiring world-class reliability, scalability, flexibility, speed of deployment, and security. Headquartered in Northern Virginia, Agent Logic is part of the Walker Ventures portfolio of technology companies.

Agent Logic is also part of the In-Q-Tel portfolio. In-Q-Tel is a private, non-profit enterprise, funded by the Central Intelligence Agency (CIA), whose mission is to identify and invest in cutting-edge information technology (IT) solutions that serve U.S. national security interests.

For more information on Agent Logic, please visit: <http://www.agentlogic.com>.

About Dynamics Research Corporation

Dynamics Research Corporation (DRC) is a leading provider of mission-critical technology management services and solutions for government programs. DRC offers forward-thinking solutions backed by a history of excellence and customer satisfaction. Founded in 1955, DRC is a publicly held corporation (Nasdaq: DRCO) and maintains more than 25 offices nationwide with major offices in Andover, Massachusetts; Vienna, Virginia; and Fairborn, Ohio. For more information please visit our website at www.drc.com.

About Kapow Technologies

Kapow Technologies can transform applications, data and content into web services using a visual development environment that requires no programming. Kapow is used to accelerate: open source data collection, web service enabling applications, composite applications, information sharing, federated search/query, content migration and data integration. For more information about Kapow Technologies, please visit www.kapowtech.com.

About Paremus

Paremus offers Infiniflow™ – the Enterprise Service Fabric – a suite of lightweight, distributed, autonomic, SOA platforms for highly dynamic, composite, business applications. Leveraging the OSGi and Service Component Architecture standards, Infiniflow allows users to realize the full potential of distributed computing for their reusable, composite service oriented applications. Infiniflow's distributed autonomic runtime environment offers maximum IT agility for businesses while delivering advanced resource management technology that allows automatic resource optimization to dramatically reduce datacenter operating costs. Infiniflow provides transparent



support for composite POJO's and Spring-based business applications and makes it simple to enhance resilience, distribute, scale and manage these applications at runtime. Identified by Gartner as a Visionary in the Enterprise Application Server marketplace, Infiniflow is the ideal next generation solution to deliver competitive advantage for your enterprise today. For more information please visit www.paremus.com.

About Siderean Software

Siderean Software, Inc. enables organizations to navigate their digital universe. Siderean's information access platform, Seamark Navigator, uses patented relational navigation technology to allow customers to keep pace with their exploding information access requirements. The next step in the evolution of information access, Siderean's solutions break through traditional search technology limitations to deliver high-value, high-impact information to users in a personalized and intuitive way. Seamark provides users with a new way to aggregate and navigate through all their information to illuminate previously unseen relationships and create actionable context for information from across the enterprise and on the Web. Siderean enables Media, High Tech and Government organizations to effectively provision their information for unified discovery, access and participation. Founded in 2001, Siderean is backed by leading investment firms Clearstone Venture Partners, InnoCal Venture Capital and Red Rock Ventures. For more information about Siderean, please visit www.siderean.com.

About SoftPro Technologies

Founded in 1999, SoftPro's mission is to provide our clients with innovative solutions for complex, demanding problems.

SoftPro's customers include the Defense Research Projects Agency (DARPA) and commercial clients whom we support via long-term technical alliances. For example, in partnership with Intelligent Agent Corporation (IAC), SoftPro has developed software for analysis of real-time, multi-channel, time-series data from oil and gas wells. SoftPro's approach has significant advantages over conventional surveillance technologies. In partnership with Condition Monitoring International (CMI), SoftPro has implemented analytic tools for assessing the internal condition of mechanical components such as high-value engines, gear-boxes, and transmissions.

The common theme in all our work -- DoD and commercial -- is that SoftPro collaborates with clients to provide users with the data they need, whenever they need it, organized and structured to meet their own personalized needs. For more information, please visit our website at www.softprotech.com.