White paper
Why semantic technologies make sense:
The business benefits of Semaphore
Why semantic technologies make sense; the business benefits of Semaphore

In today’s business environment, unstructured information has become one of the most valuable resources in an organization and its rate of growth is staggering. The need to extract information from internal and external sources and integrate it into existing systems for use in key business decisions is critical to maintaining a competitive advantage.

The Semantic Web was supposed to solve this problem. All information would be available, required facts would be a click away and intelligent agents would locate things. The reality; the volume and complexity has spiraled out of control, the quality of publicly available information is suspect, and the context in which that information was created is seldom obvious. Today, organizations struggling to extract value from the 80% of unstructured information inside the enterprise are overwhelmed by a flood of available, but not very usable, information.

The real problem is description. It’s difficult to extract value from information unless it’s well described; the context, the topics it pertains to and the relationships between facts must be clearly identified in a way that machines can interpret. And if we rely on humans to determine information context and validity then the promise of the Semantic Web is for naught.

The true power of the Semantic Web lies in its standards. Standards provide a common framework that allow technology to create meaningful relationships between disparate resources and make the meaning of those resources explicit.

The Semantic AI platform Semaphore has been architected to fully harness the power of Semantic Web standards. Model management tools are web-based, task-centric and include workflow and life-cycle management capabilities to support information governance. Model mapping and linked data strategies are supported and improved fine-grained classification strategies provide the precise, descriptive metadata that allow machines to interpret volumes of information to help organizations derive value, gain insight and drive business decisions.

Semaphore Knowledge Model Management (KMM)

KMM is a feature-rich platform used by model builders to collaborate with stakeholders and subject matter experts (SME) throughout the enterprise, to create models that accurately reflect the concepts, topics, subjects and relationships within the organization. KMM’s web-based interface facilitates collaboration and is designed for business users to support model building processes without lengthy training.

Semaphore model changes are task-centric, tasks facilitate testing against multiple environments, drive workflows and improve feedback loops that support the way teams work. The ability to perform what-if modeling that can easily be discarded, saves time and reduces errors in the long run. Information governance policies can be applied to model changes where model managers review and approve modifications before committing them to production.

Semaphore’s ability to incorporate public domain vocabularies is a key component in helping organizations save time and remain flexible. Industry-standard models such as, the Medical Subject Headings (MeSH) and the Gene Ontology (GO), which are maintained by expert sources, can be quickly integrated to reduce model building time and decrease bottom line expenses.
Semaphore supports the ability to link full or partial models together. This allows organizations to traverse multiple problem spaces from the same starting point. For example, linking drugs and side effects, diseases and conditions and the side effects of drug interactions reduces query coding and results in precise analytics which can be acted upon immediately.

These and other model development approaches spread costs across groups, departments and organizations and allow models to be rapidly developed, published and used in Semaphore’s classification process in an iterative and agile way.

**Semaphore Classification and Language Services (CLS)**

Semaphore’s CLS uses sophisticated natural language processing and part of speech tagging to enhance classification accuracy. Sophisticated fine-grained entity and fact extraction strategies provide for the description of entities and facts within a document; different from most solutions which extract facts at the document level.

Semaphore provides fact extraction rules that allow for discovery of entity relationships within documents as well as the ability to group relationships to derive enhanced meaning. For example, instead of simply knowing that Fred is a shareholder in XYZ Company, facts can be combined to result in classification that identifies Fred as a shareholder who owns 40% of XYZ stock and lives in the United Kingdom.

We use this technology to enhance what we do best; define precise and consistent metadata. Our classification process creates precise metadata that harmonizes information from multiple sources to create a rich user experience. The industry standard RDF output and access to a SPARQL endpoint makes data flexible, dynamic and provides a broad canvas of exploration for solving business problems in a way not possible with traditional technology.

The Semaphore platform has simplified and improved the delivery process that allows you to harmonize information, drive workflows, secure sensitive information, improve search and retrieval, and archive, migrate and monetize your information. It integrates with content management systems, workflow engines, analytics, business applications and search platforms to maximize your enterprise technology investment.

**Innovation and Transformation**

In the same way relational and post-relational technologies positioned organizations to use structured information in new and innovative ways, Semaphore transforms unstructured information into actionable intelligence that drives organizational decision-making to gain a competitive advantage.

Find out how Semaphore harnesses the power of the Semantic Web without the complexity [http://www.smartlogic.com](http://www.smartlogic.com)