



An Enterprise Knowledge Network

Knowledge exists in many forms inside your organization – ranging from tacit knowledge which exists only in the minds of the users who possess it, to codified knowledge stored in databases and document repositories. Unfortunately while knowledge exists throughout the organization, it is often not easy (if even possible) to locate, use, share, and reuse existing knowledge. This results in a situation often described as “the left hand doesn't know what the right hand is doing” and damages morale as employees spend their days frustrated and complaining that “nobody knows what is going on around here”.

The obstacles that hinder access to existing knowledge can be cultural, geographical, social, and/or technological. And while no technological solution can guarantee perfect knowledge-sharing, tools drawn from big data, data mining / machine learning, deep learning, and artificial intelligence techniques can improve an organization's power to generate, capture, use, share and reuse knowledge.

Using technologies developed as part of the semantic web initiative, and applying the principles of linked data within the enterprise, the Fogbeam Labs **Enterprise Knowledge Network** approach can help your firm integrate and aggregate knowledge which is spread across your existing enterprise applications, content repositories and Intranet.

An Enterprise Knowledge Network enables your firm's capabilities to:

- engage in high levels of knowledge transfer and reuse
- achieve cohesive organizational learning
- benefit from difficult-to-capture tacit knowledge
- discover and leverage previously unknown insights hidden in unstructured data and relational databases
- implement more agile and adaptive organizational structures and eliminate friction that inhibits innovation

Fogbeam Labs solutions improve your knowledge-sharing capabilities by automatically extracting semantically meaningful knowledge and concepts from unstructured and semi-structured data, as well as records in relational databases. This semantic data is turned into a **linked data** web that facilitates the discovery of previously hidden connections between people, data, applications and activities – regardless of where the data is stored.

Using this linked data web, users are able to locate desired knowledge, including connections and opportunities for collaboration that they weren't even aware of before - without needing to use dozens of disparate applications, content repositories and search interfaces. Linking data across the enterprise using semantic web technology allows users to locate contextually relevant knowledge related to any content, task, or application.

Another element of the Enterprise Knowledge Network is a social networking platform which automatically mines concepts from user activities supports the capture of (some) tacit knowledge, and makes it possible to quickly identify other employees with related interests and relevant knowledge. Using this platform employees can identify potential opportunities for innovative collaboration – even if the employees in question do not know each other and have never met. Likewise, employees working on related problems can find each other and swap notes, regardless of their geographical location, position in the firm, and presence or absence of a pre-existing personal relationship.

Text analytics and machine learning facilitate extracting meaning from external content repositories and news sources, followed by integrating this knowledge with your own internally generated knowledge. Using this integrated knowledge-base it becomes possible to identify key connections and insights that link your organization to its external environment. As military leaders would say, this enables you to establish enhanced “situational awareness”.

By constructing a semantic integration layer using RDF, RDF/S, OWL, FOAF, Dublin Core, SIOC, and other industry standards, along with your own custom ontologies, it becomes possible to link data and mine knowledge from across the entire spectrum of applications and repositories. This approach, which we call the **Enterprise Knowledge Network** ensures that the right people have the information and knowledge they need, when and where they need it.

Contact Us

Fogbeam Labs can help with your own firm's issues related to the creation, sharing, capture and reuse of knowledge, or with collaboration, innovation and coordination within your organization. Our Fogcutter Suite includes the products necessary to implement an Enterprise Knowledge Network which integrates knowledge across all of your enterprise applications and content repositories, as well as other internal and external knowledge sources. We will help you build bridges between the silos within your firm, which inhibit the free flow of knowledge and hinder effective collaboration and innovation.

For more information, email info@fogbeam.com or call us at 919-265-4489.

Appendix

In addition to our own Fogcutter products, we develop customer solutions using a broad range of well known Open Source software components, including:

- Apache Jena, Stanbol, Fuseki and Marmotta
- Apache Mahout
- Apache Nutch, Lucene and Solr
- Apache Hadoop, Spark, Storm, Hive, and Pig
- Apache OpenNLP, Tika and UIMA
- Apache Camel and ServiceMix
- PostgreSQL, CouchDB, and Cassandra
- Apache Giraph
- Prolog
- R
- Groovy and Grails