



Capabilities Overview

Sophic Systems Alliance Inc. is a scientific/biomedical software and services integrator. The company delivers a suite of **advanced data integration, linguistic text mining and knowledge management commercial off the shelf software (COTS)** developed by our business partner Biomax. The flexible, highly configurable, rapid development software platform allows teams of Sophic consultants to deliver cost-effective, end-user-driven software solutions for complex organizational oversight of scientific and biomedical problems.

Sophic services are provided by teams of technical and scientific experts, each holding **advanced degrees plus years of hands-on experience** in a wide range of technical and scientific areas.

Sophic was founded in 1993. **Key words/tasks describing Sophic capabilities include:**

- **Automated text and database mining of scientific and biomedical information.**
- **Manual curation and annotation of scientific and biomedical information.**
- **Genomic/proteomic and chemistry related contract research projects**
- **Configuration and implementation of database integration Knowledge Management Software.**

In 2005 Sophic was awarded a GSA Schedule 70 Contract (GS35F-0549R: Award renewed in 2010) for SINs 132-32, 132-33, 132-34 and 132-51 and NAIC codes 518210, 511210, 541511, 541512, 541519 and 541690. Sophic is a **SDVOSB** and since 2004, has developed a strong past-performance track record supporting government customers at NIH/NCI. In a series of projects, Sophic consultants configured the Biomax Knowledge Management software to provide management oversight of complex organizations and custom configurations to support a wide range of cancer research projects. Sophic's commercial customers are major pharmaceutical, biotech and agro-chemical companies in Europe and the US including **Wyeth/Pfizer, Merck, Sanofi Aventis, Syngenta and Sanofi Pasteur.**

Past Performance

1. In September, 2010, after successfully completing two scientific peer reviews, **Sophic won a NIH/NCI Phase II SBIR \$750,000 Award** to complete the development of the SBIR Phase I prototype of **SCan-Mark** (HHS link below).
http://projectreporter.nih.gov/project_info_description.cfm?aid=7700470&icde=5745588
2. In April 2009 **Sophic completed a Phase I SBIR Grant** (\$150,000 – 6 Months Project) to design and develop a prototype for a world-wide repository of cancer biomarker information, the **Sophic Cancer Biomarker KnowledgeBase – “SCan-Mark”**. Phase I was judged to be successful and NCI invited Sophic to submit a proposal for a Phase II SBIR \$750,000, 2 year project, which it is currently executing.



3. **In December 2009**, Sophic licensed and configured BioXM to provide the Office of the Director of NCI's CCR with a **Portfolio Management System**. BioXM provides sophisticated management reporting using **advanced linguistics and knowledge integration for management oversight of research in over 250 labs**.
4. Sophic and Biomax teamed to provide NCI with an extensive, manually-curated **Cancer Gene Database delivered to NCI in April 2008**. In this \$2.4M 5-year project, our scientists used the BioLT Linguistics Tool to text-mine MEDLINE abstracts in order to identify all cancer genes, the cancer disease related to each gene, and the treatments and compounds related to each cancer gene.
5. **In January 2007**, Sophic licensed Biomax's BioXM™, BioRS™ and BioLT™ software to NCI's **Center for Cancer Research (CCR)** for implementation in six laboratories supporting brain, ovarian, radiation, pediatric, tumor metastasis, cellular and molecular cancer research.
6. **In 2006**, Sophic was the **first** commercial company to successfully **complete the NCI caBIG™ Bronze Certification** program. During NCI's evaluation, it was additionally determined that the **Biomax BioXM Knowledge Environment was configurable to caBIG Silver Compatibility**.

Enterprise Software Solutions

The **BioXM™ Suite** is an agile, rapid development platform that supports the delivery of end-user-driven enterprise applications - **without programming**. Sophic has configured and delivered easy-to-use applications for a wide-range of complex integration applications from organizational oversight to biomedical and scientific research.

The **BioXM™ Suite** is based on a two-tiered design concept that provides integration of semantic and scientific objects into graphically displayed relationship knowledge networks. Typically, information is stored in "data silo" flat-files or relational databases (My SQL or Oracle) and large volumes of text files. BioXM accesses these "live sources" through the first tier of Biomax tools, the **BioRS Data Integration and Retrieval System** and the sophisticated **BioLT linguistic tool**. BioRS queries across "data silos" and integrates information stored in diverse and disparate flat-file or relational database sources. This information may be stored in remote locations or in local data centers made accessible through network communications. **BioXM** is in the second tier of the architecture and uses information from BioRS and BioLT to find and map semantic and scientific object relationships. The system uses sophisticated data models and powerful mapping algorithms to find and graphically display complex relationships.

Technical & Scientific Consulting Services

Software Implementation Services – Sophic's consultants have PhD or MS Degrees in Computer Science, Biology, Chemistry and Linguistics. Our teams install, configure, implement and provide training for our customers. The goal is to empower customers with the ability to rapidly develop and deploy integrated, end-user friendly systems using the BioXM Knowledge Suite.



Scientific Systems Research and Annotation Services – Sophic provides a wide range of computer science and research services including:

- Software as a service (SAS) application hosting and contract research.
- Conversion of legacy databases and text files to populate the BioXM Knowledge Environment.
- Development of content databases similar to Sophic’s NCI Cancer Gene Project and the Cancer Biomarker KnowledgeBase.