

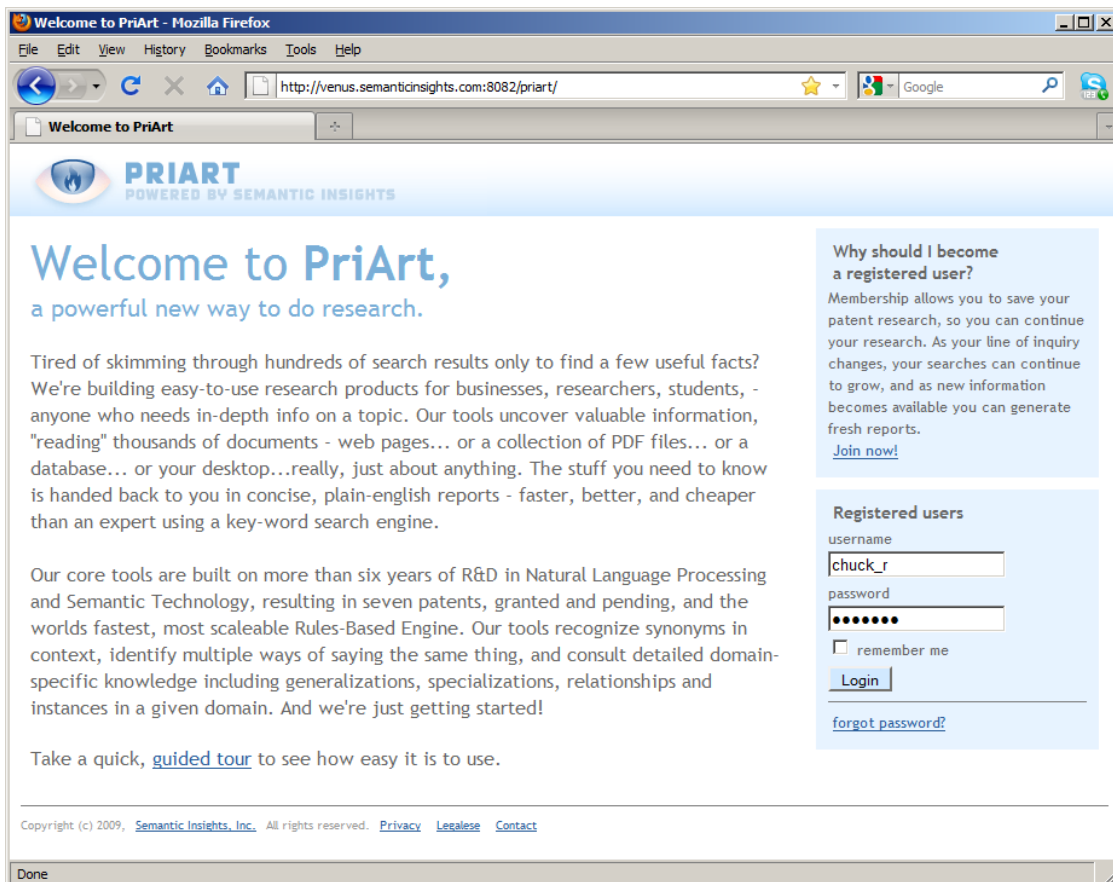
## The SIRA Technology from Semantic Insights

### Management Summary

Massachusetts-based Semantic Insights™ (SI), a wholly owned subsidiary of Trigent Software, has developed something truly new in the emerging Semantic Research market. This technology is applicable to a broad range of problems that have so far not had a practical solution based on the traditional algorithmic approaches. SI has brought together Natural Language Processing, Semantic Technology and a patented high-speed Rules Engine to create a knowledge-intensive automated Semantic Insights Research Assistant (SIRA) capable of quickly “reading” a large amount of documents, finding and extracting the information of interest and producing a written research report with hyperlinks and bibliography. Researchers typically start seeing valuable results from SIRA within a few minutes of first use. However, SIRA’s speed and accuracy quickly improves through continued use of the domain knowledge (Ontology and Dictionary). SIRA Technology enabled products reduce the time and improve the accuracy of on-line and on-disk document research. Initial target markets include: Healthcare, Education, Digital Publishing, Legal, and Financial Market Intelligence. SIRA product demonstrations are available upon request. Early U.S. sales have already begun.

### Key Idea: An Automated Research Assistant

Search Engines such as Google, Yahoo!, Bing and Ask.com are used by professionals to do research every day. This activity can take many hours and often involve reading documents that are not relevant to the research. This results in lost time and higher risk of missing critical information. The SIRA technology was developed to automate research tasks that require knowledge of a natural language (e.g. English), domain-knowledge (e.g. Genomics, Legal), understanding, and reasoning. For a broad user appeal, we designed SIRA to be easy-to-use and easy-to-learn, requiring little or no training beyond what the user already understands.



The screenshot shows a Mozilla Firefox browser window displaying the PriArt website. The address bar shows the URL <http://venus.semanticinsights.com:8082/priart/>. The website header features the PriArt logo and the text "POWERED BY SEMANTIC INSIGHTS". The main content area includes a large heading "Welcome to PriArt, a powerful new way to do research." followed by a paragraph describing the service's capabilities. A sidebar on the right contains a section titled "Why should I become a registered user?" with a "Join now!" link, and a "Registered users" login form with fields for "username" (containing "chuck\_r") and "password" (masked with dots), a "remember me" checkbox, and a "Login" button. A "forgot password?" link is also present. The footer contains copyright information for Semantic Insights, Inc. and links for "Privacy", "License", and "Contact".

## The Markets: Knowledge-driven Natural Language Research

### Digital Publishing


Semantic Insights provides the ability to dynamically identify relevant information from a wide variety of sources and construct well-structured publishable reports. This represents a whole new way to dynamically generate up-to-date on-line content. For example, generated reports can be combined with non-generated material to create custom on-line publications.

### Education

Semantic Insights gives you the ability to leverage the knowledge of experts and other trusted sources to research and generate composite research reports including bibliography. From students, to teachers, to college professors, SIRA can generate new reports or verify your work against current findings. Warning: SIRA can also detect Plagiarism.

## Investigation: Aswan Dam

- My 16 year old is a Junior in High School.
- She wrote a report on Aswan Dam and wished to generate a bibliography for the report.



**PRIART**  
POWERED BY SEMANTIC INSIGHTS

Welcome back, chuck\_r  
[home](#) [profile](#) [tour](#) [help](#) [logout](#)

Investigation name  
**Aswan Dam**

is owned by [chuck\\_r](#). This investigation has [0](#) collaborators.

**PlainText** | [ClaimText](#) | [Reports](#)

Describe your invention

Between the 1960s and 1970s the Aswan dam was built to regulate the flow of nutrient rich providing nutrients to fish in the brackish water lake fishery, from repler farmers and caused increased erosion of the coastland. If this continues catastrophic damage to the ecology, food supply and health of Egypt. Annual flooding of the Nile River occurred unpredictably. The amount of the problem: too much, too little, or just right. The flooding provided rich people of Egypt for farming and gave nutrients to the brackish water lake. Since the dam was built, the nutrient rich silt that is carried along with it trapped behind the dam and is also causing the water level of Lake Nasser its storage capacity. The silt is eroding away naturally but is no longer be farm lands become less productive and more dependent on chemical fert coast line erodes, salt water from the Mediterranean backs up onto the supply is reduced from fish not receiving previous levels of nutrient before addition, the river previously wiped out the breeding pools of mosquito carriers of Malaria and Schistosomiasis respectively. Today they are the worst parasites in Egypt with a great cost to the economy and people. Left unchecked, the loss of nutrients and the increase in weeds with as irrigation will decrease the food supply for a population that has increased.

[Validate](#) | [Save](#) | [Simplify](#) | [AutoQuery](#)

**Bibliography**

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### Market Intelligence

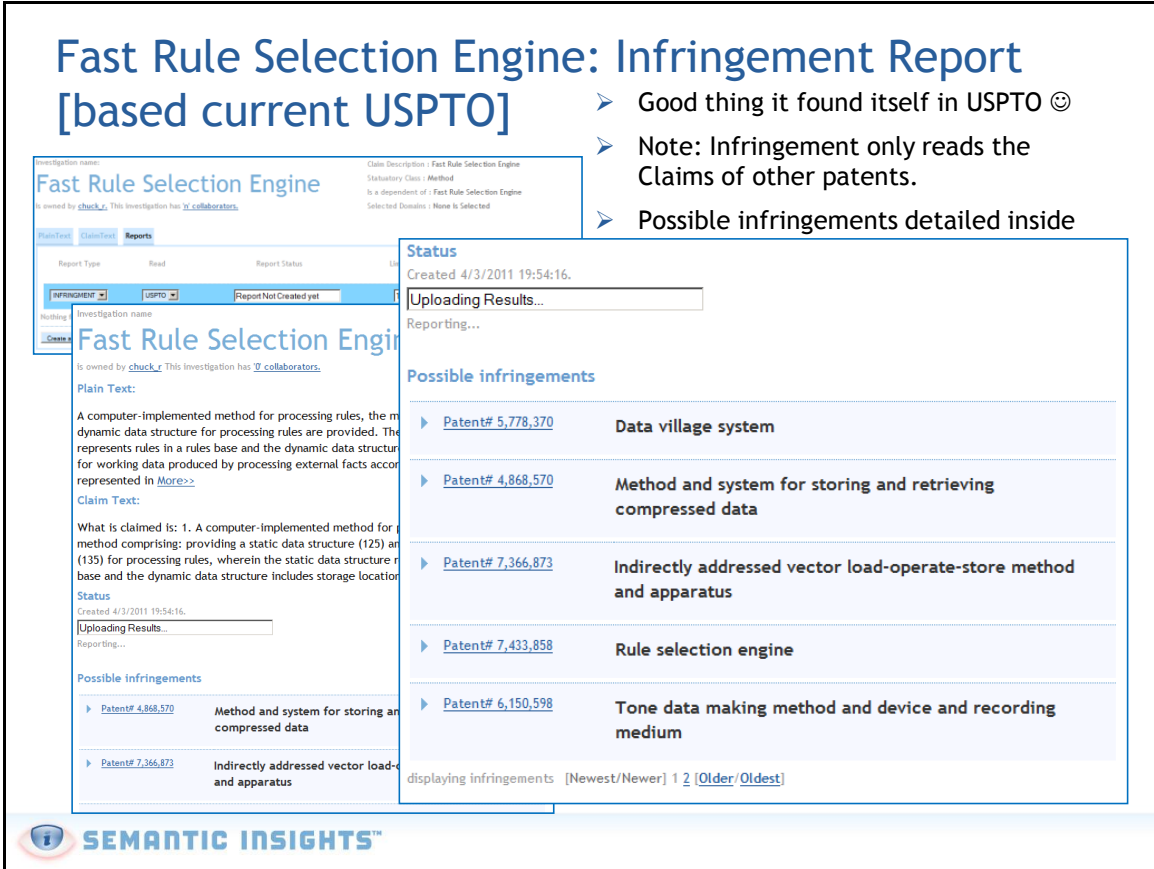
Semantic Insights provides custom research solutions to identify both previous and up-to-the-minute market information that typically requires specialized expertise or would otherwise take too long to gather. Using the SIRA technology, our **! Event Monitor™** product notifies you of your specific events as they occur.

## Legal

Semantic Insights provides: the ability to gather and organize relevant information from previous case law, find potential Prior Art and Patent Infringements and quickly perform semantic-based discovery on a large number of emails or other documents.

### Fast Rule Selection Engine: Infringement Report [based current USPTO]

- Good thing it found itself in USPTO ☺
- Note: Infringement only reads the Claims of other patents.
- Possible infringements detailed inside



**Fast Rule Selection Engine**  
Investigation name: Fast Rule Selection Engine  
Claim Description: Fast Rule Selection Engine  
Statutory Class: Method  
Is a dependent of: Fast Rule Selection Engine  
Selected Domain: None Is Selected

**Status**  
Created 4/3/2011 19:54:16.  
Uploading Results...  
Reporting...

**Possible infringements**

- [Patent# 5,778,370](#) Data village system
- [Patent# 4,868,570](#) Method and system for storing and retrieving compressed data
- [Patent# 7,366,873](#) Indirectly addressed vector load-operate-store method and apparatus
- [Patent# 7,433,858](#) Rule selection engine
- [Patent# 6,150,598](#) Tone data making method and device and recording medium

displaying infringements [Newest/Newer] 1 2 [Older/Oldest]

## Healthcare

Semantic Insights provides information gathering solutions to healthcare Independent Software Vendors (ISVs), providers, managed care organizations, health plans and payer companies. Our solutions apply both domain knowledge and advanced linguistics to reduce manual effort and improve the efficiency of your domain-knowledgeable resources.


Here are some sample uses of SIRA:

1. Given a set of drugs, determine the possible interactions based on drug trials documents or any other documents of interest. This includes sites like: PubMed, ClinicalTrials.gov, and GeneCards, to name a few. With the help of selected search engines, SIRA can drive internet searches based on your investigation.
2. Given a drug, identify the adverse events implicating the drug. You are in control of a potentially large number of kinds of adverse events and you can add new ones. SIRA can read selected sites, or any documents you have access to when and where you want.
3. Given a set of Electronic Medical Records (EMR) and a set of symptoms or circumstances for a given pathology, identify the subset of EMR that share some or all of those symptoms or circumstances.
4. Given a large corpus suspected of information containing the information of interest; starting with as much information as you have about a disease, symptom, or circumstance, locate the documents with the best “semantic overlap”; refine and re-run the research as needed focusing on specific areas of interest.

## Law Enforcement and Homeland Security

SIRA can be used to find similarity between current and past events that are expressed or hinted at in text. SIRA can be used to find relationships of people, places, things and activities that may be expressed or hinted at in text.

### Adnan Shukrijumah: Report Results



Investigation name  
**Adnan Shukrijumah**

is owned by [chuck\\_r](#) This investigation has [3](#) collaborators.

**Plain Text:**

Who has seen Adnan Shukrijumah?

**Status**  
Created 4/3/2011 18:37:58  
[Completed...]  
Reporting...

Most relevant documents pertaining to the investigation content:

- ▶ [Adnan Shukrijumah - Photos](#)
- ▶ [The Jamestown Foundation: Assessing Shukrijumah's Nuclear Plot Against the ...](#)
- ▶ [Al-Qaida Mastermind Rose Using American Hustle - WBUR & NPR](#)
- ▶ [Adnan Shukrijumah](#)
- ▶ [Gutthair Shukrijumah](#)

displaying infringements

These are the prior art findings and references for each step in the investigation.

- ▼ [Who has seen Adnan Shukrijumah?](#)
  - Najibullah Zazi has confessed to huddling in Pakistan with Al Qaeda veteran Adnan Shukrijumah. [1]

**Status**  
Created 4/3/2011 18:37:58  
[Completed...]  
Reporting...

Most relevant documents pertaining to the investigation content:

- ▼ [Adnan Shukrijumah - Photos](#)
  - ▼ Who has seen Adnan Shukrijumah?
    1. Najibullah Zazi has confessed to huddling in Pakistan with Al Qaeda veteran Adnan Shukrijumah. [1]
- ▼ [The Jamestown Foundation: Assessing Shukrijumah's Nuclear Plot Against the ...](#)
  - ▼ Who has seen Adnan Shukrijumah?
    1. More recently Mir has continued his specialty of reporting nuclear gossip by claiming that there is one such al-Qaeda plot in the works involving an elusive intelligent and lone operative named Adnan Shukrijumah (also known as Jaffar al-Tayyar). [2]
- ▼ [Al-Qaida Mastermind Rose Using American Hustle - WBUR & NPR](#)
  - ▼ Who has seen Adnan Shukrijumah?
    1. He registered under the name of Jumah El-Chukri and until a couple of months ago few had put together that Jumah El-Chukri the chemistry major and Adnan Shukrijumah the al-Qaida operative were one in the same. [3]

## WHAT'S DIFFERENT: Natural Language Understanding and fresh Natural Language Reports

Natural Language Understanding requires establishing the “meaning” of what is read. For SIRA, “meaning” is the mapping between an “experience” (e.g. reading something) and a “World View” (represented by Ontology). In this way, experiences are “understood” in terms of what is already known (the World View). SIRA’s World View automatically grows with use. At any time, knowledge can be exported and shared. Third party domain Knowledge can also be uploaded. As SIRA’s Ontology improves, overall accuracy and performance improves.

The results of reading are presented to the user as interactive reports with hyperlinks and bibliography. Report information can be logically structured via user defined report templates, and can include non-generated material. At their option, users can follow hyperlinks to read the original text.

## Contact Us

For more information, visit us at [www.semanticinsights.com](http://www.semanticinsights.com).

Semantic Insights is the R&D division of Trigent Software, Inc. [www.trigent.com](http://www.trigent.com).

We focus on developing semantics-based information products that produce high-value results serving the needs of general users requiring little or no training.

4