Advanced Data Capture Solutions

Concepts of Semantic Search

RAF is a Worldwide leader in high speed

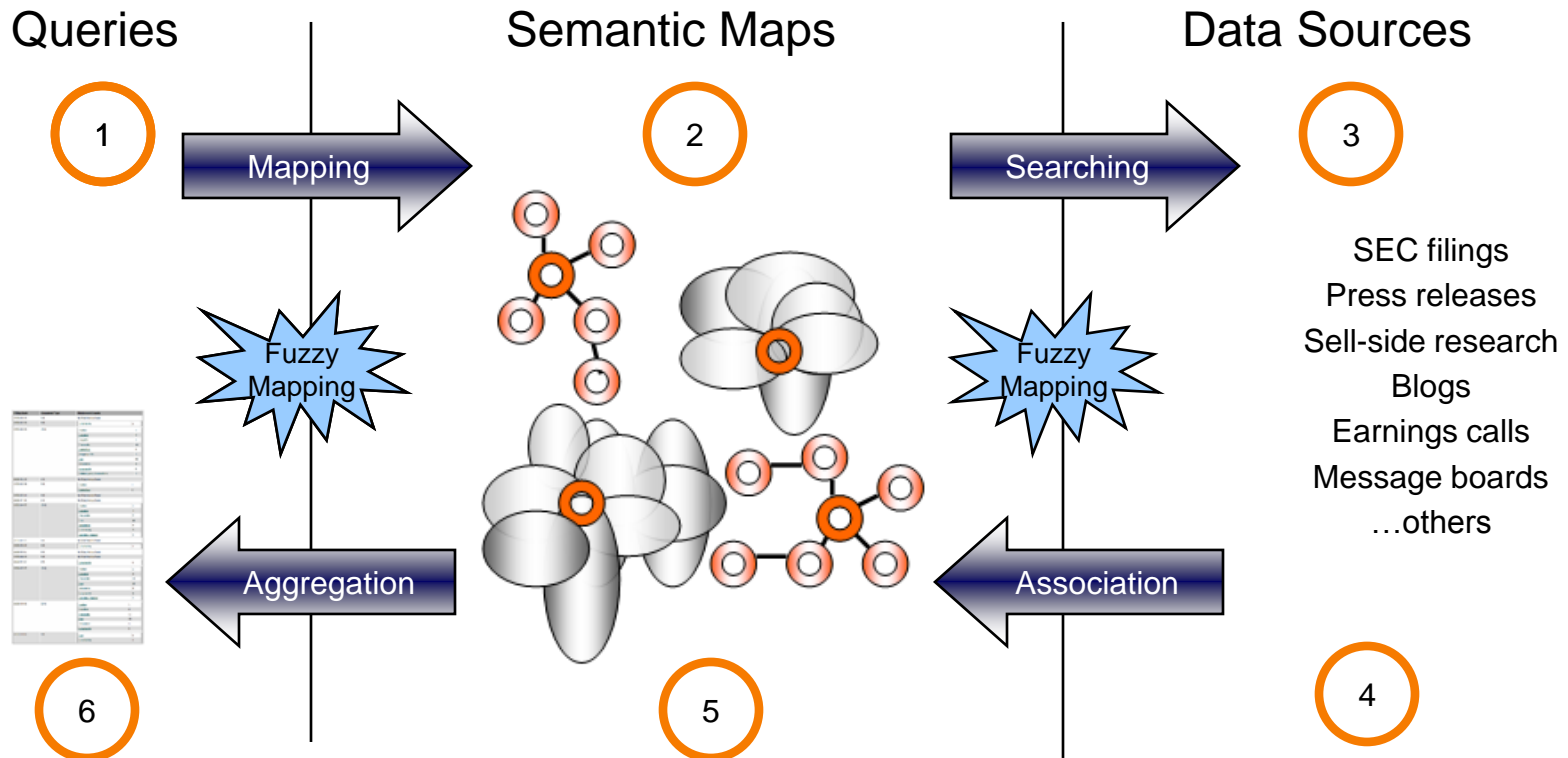Data Capture and Management Solutions

Semantic Engine Process

Innovative Approach: Process for Finding, Scrubbing and Quantifying Relevant Data

Our semantic search engine finds relevant data in text and quantifies it for later use.

Queries | Semantic Maps | Data Sources

1 — Mapping — 2 — Searching — 3

Fuzzy Mapping | Fuzzy Mapping

SEC filings
Press releases
Sell-side research
Blogs
Earnings calls
Message boards
…others

6 — Aggregation — 5 — Association — 4

Example…finding "Rising Margins"

It Works, Proven Results

o Trading Example: Raymond James Financial (RJF)

RJF Trading Results from 7/1/2006 to 9/7/2007

11% Stock Return

26% Radiant Return

Why We're Different
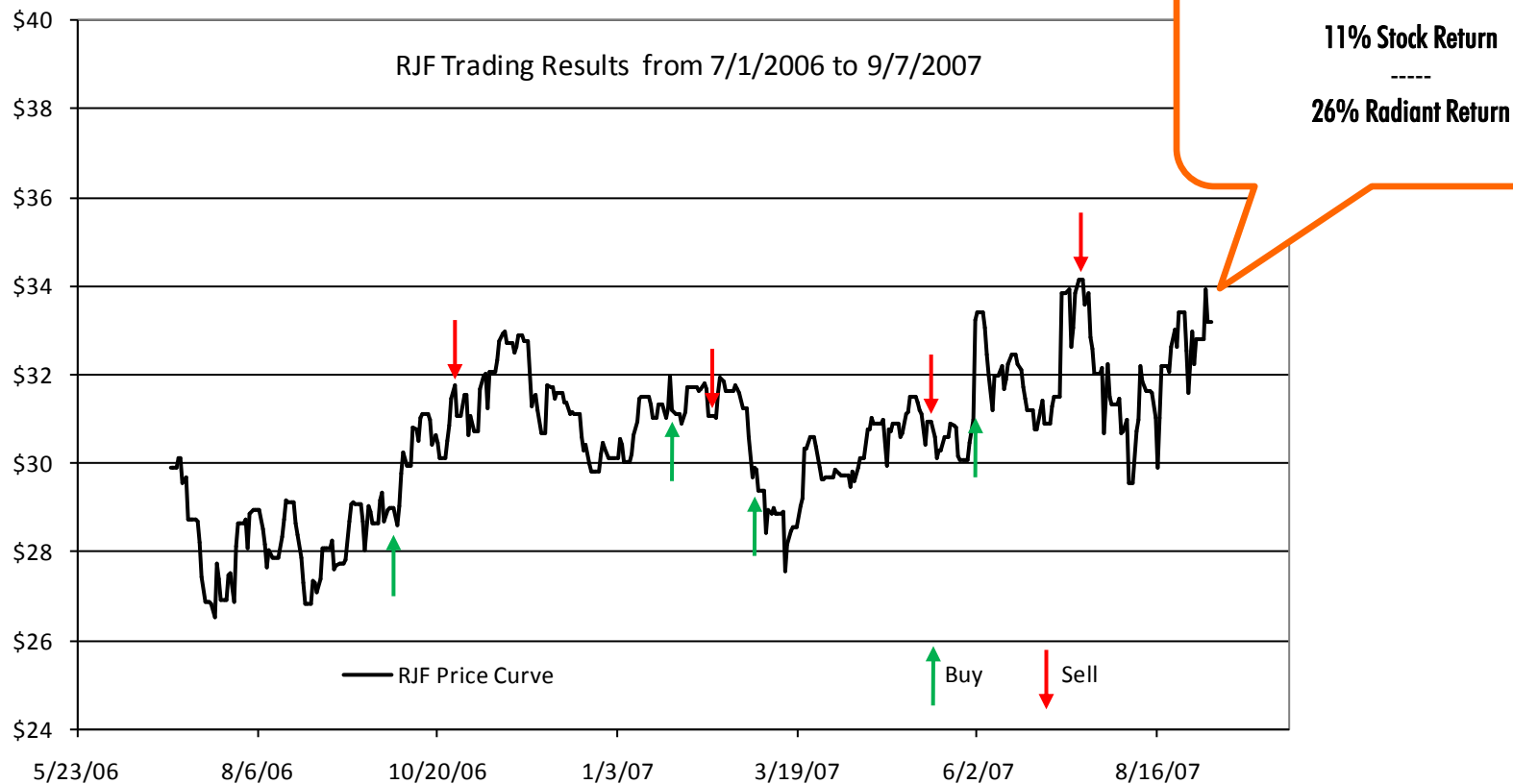
Our unique, systematic process gives us a unique analysis edge

Keyword Search
- Requires substantial prior knowledge of documents
- Inflexible
- No semantically equivalent expressions
- "False positives"

Full Natural Language Processing
- Attempts true document understanding
- NLP understanding in its adolescence
- 10+ years out

RAF Semantic Technology
- Statistical Natural Language Processing
- Concept-based
- Semantic mathematics
- Semantic maps
- Highly adaptive

Relevance Engine – What is it?

- ○ Super fast java-based software that quantifies unstructured textual data

- ○ Uses concepts and semantic maps, not just keywords, to find relevant, embedded data

- ○ Produces proprietary factors by quantifying positive and negative sentiment

Semantic Map Example
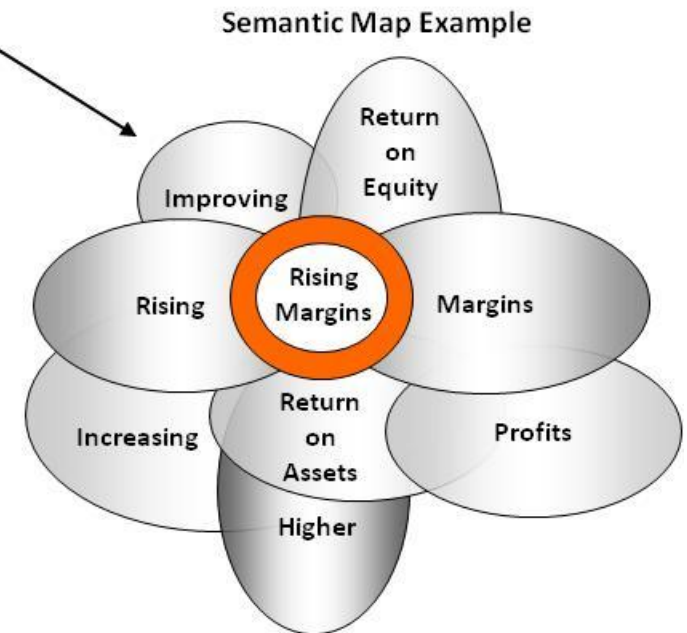
What it's Been Doing Since June 2006

o Identifying new data releases [1]

o Downloading files

o Resolving company identifiers (i.e. ticker, CUSIP, CIK…)

o Identifying relevant concepts [2]

o Indexing concepts by ticker

o Extracting positive and negative sentiment indicators

o Quantifying results

o Producing factors

Notes:
[1] Universe of the rolling Russell 1000 and most liquid stocks by SEC filings going back to 1993 when available – over 7,400 companies and 680,000 documents processed
[2] 10.6M+ semantic "hits"

Our Sustainable Edge

The edge derives from…

☑ Faster process

☑ Better analysis

☑ Original insight

☑ Proprietary information

Our Sustainable Edge

We have a time advantage with our proprietary IP

☑ Faster process
☐ Better analysis
☐ Original insight
☐ Proprietary information

o In milliseconds we…

- Detect and acquire new data
- Extract and index semantics
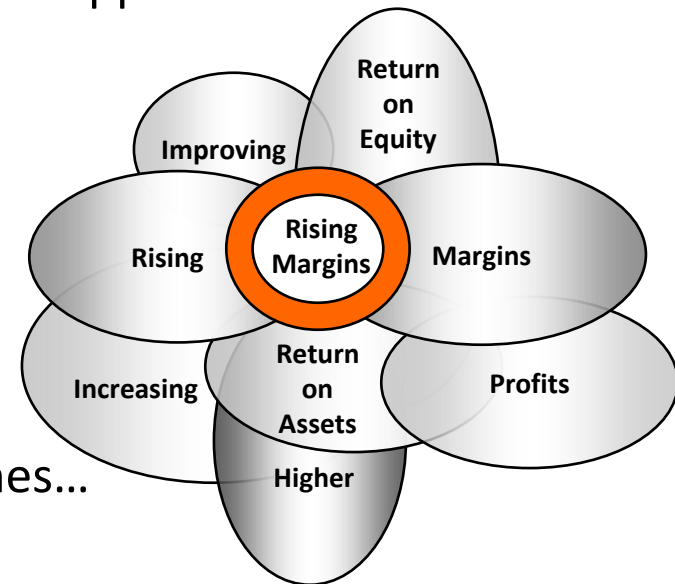- Analyze and quantify
- Make investment decision
- Trade

Our Sustainable Edge

We have better analysis through our research process

☐ Faster process
☑ Better analysis
☐ Original insight
☐ Proprietary information

o Our conceptual, semantic approach is…
  • More comprehensive
  • More relevant
  • More accurate

o Our approach determines…
  • Data source utility
  • Information strength

Improving
Return on Equity
Rising
Rising Margins
Margins
Increasing
Return on Assets
Profits
Higher

Our Sustainable Edge

We have original insight with our non-traditional perspective

☐ Faster process
☐ Better analysis
☑ Original insight
☐ Proprietary information

o Novel approach…
   • Automatically read text
   • Interpret meaning

o Proprietary Market Signals

o Systematic approach combining…
   • Our fundamental research
   • Quantitative overlay

Our Sustainable Edge

We create proprietary information

o   Our process and approach are different…
- <u>Not</u> just "screen scraping"
- <u>Not</u> just analyzing headlines
- <u>Not</u> just pre-packaged data

☐ Faster process
☐ Better analysis
☐ Original insight

o   We transform data into actionable information

☑ Proprietary information

o   We keep the information for our own edge

Where We're Going

Continuous research and innovation: we are not standing still…

o   Technology extension
   • Semantically Improbable Phrases
   • Additional data sources
   • International adaptation

For More Information Please call us at 1 (425) 867-0700