



# Automating Competitive Intelligence for Informed Decision Making

Developed by Megaputer Intelligence

## Background

Successful companies understand the importance of exploring the competitive landscape. Competitive intelligence (CI) enables them to monitor important developments of competitors, partners, suppliers, and the industry as a whole. Keeping track of new market trends and emerging technologies provides unique opportunities to enhance the company's offering, develop new business strategies, and increase market share.

A US company specializing in the development of medical technologies and devices decided to implement a more efficient way to monitor market and technological trends, follow key activities of competitors, and identify potential acquisition targets. The company was planning to use knowledge uncovered by a CI solution to increase its market share and boost the annual revenue.

## Challenge

The bulk of data one can use for CI is found in publicly available sources: articles, news feeds, websites, patents, conference proceedings, and press releases. Reading through these textual documents one derive invaluable insights about competitor activities, market trends, and emerging technologies. This requires sophisticated analysis of facts and relations, and thus traditionally companies were hiring human analysts to handle this task. However, the fast growth in volumes of data that need to be processed makes the manual document analysis an extremely expensive and time-consuming endeavor. Human analysts can process only a limited number of documents in a given time period, they become tired quickly, and start making errors. Soon it becomes impossible for a reasonable number of analysts to manually read and analyze thousands of documents that need to be processed every day.

To increase the breadth and accuracy of the analysis, while reducing the amount of required time and resources, the company was seeking an automated CI solution capable of pulling all relevant data from public sources, extracting and organizing facts about key players and new technologies in the medical device industry, and summarizing the results in easy-to-comprehend graphical reports.

## Solution

The company turned to Megaputer to provide a scalable, automated CI solution that could process thousands of articles quickly and provide targeted, real-time results on the state of the industry. Megaputer created a scalable CI solution capitalizing on deep linguistic analysis capabilities of PolyAnalyst™, its proprietary text and data analysis system. The solution analyzes documents from a variety of sources, ranging from the most popular news agencies like Reuters, Bloomberg, Forbes, and Business Wire, to more domain-specific magazines like Modern Healthcare and Ortho Spine News, extracting and organizing all relevant facts about the company's competitors, technologies of potential interest, and other industry updates. Upon cleansing and deduplicating the raw data, the solution performs automated extraction of facts, including company relationships and business transaction of different types with the corresponding dates and amounts in order



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to track the completed and pending mergers, acquisitions, partnerships, licensing agreements, subsidiaries, joint ventures, investments, and other activities (Figure 1).

Standard/Companies/Acquisition	
Buyer:	AbbVie Inc.
Buyer Type:	Companies
Object:	Shire plc
Object Type:	Companies
Status:	Initiated
Amount:	54,700,000,000 USD
Value:	54,700,000,000.00
Amount USD:	
Currency:	
Confidence:	1.00

*“Medtronic and [AbbVie](#), which has agreed to buy Dublin drugmaker [Shire Plc](#) for **\$54.7 billion**, are both subject to the new restrictions, raising questions about this year's two largest announced inversions.”*

**Figure 1.** The panel on the left shows one fact extracted from the sample news sentence above.

The CI solution also provides vital information about industry trends related to technologies the company wishes to follow. The solution discovers key players working on technologies, and gauges how much time and money those parties have spent researching and developing those technologies. It identifies other technologies of potential interest these companies are working on. This information makes it is easier to determine which companies might be good acquisition targets or business partners. The system’s built-in data visualization (Figure 2) and relationship linking features map out these connections for easy navigation of competitors’ activities as well as the top industry technologies and topics of interest.



**Figure 2.** System-generated graphical report shows the evolution of technology developments over time.

In addition to consolidating the tasks required for gathering competitive intelligence, the solution provides verifiable, transparent reports summarizing the results of the analysis in graphical form. Analysts can use the solution’s built-in reporting features to quickly drill down to text fragments supporting the discovered insights, with the matching patterns highlighted in text. The automated text analysis solution can also update the results based on the periodic analysis of new documents.



The solution is flexible. It can be easily customized to monitor additional data sources, industries, and technologies, and generate alerts to notify decision makers of new activity for any companies or technologies they are especially interested in tracking.

## Benefits

The implementation of an automated CI solution enabled the company to timely and consistently monitor all data of interest, while eliminating tedious and time-consuming work involved in the manual information extraction. The CI solution addresses several pressing challenges:

- **Enables timely analysis of all available data.** In contrast to the manual processing severely limited the amount of data that could be processed, the automated analysis allowed the company to timely extract useful information from a dense stream of all newly appearing data.
- **Enhances accuracy and consistency of results.** While human analysts are always subjective, get tired quickly, and start making errors, the automated solution can ensure high accuracy of the results and apply the resulting fact extraction model consistently against all available data.
- **Facilitates transparency and reproducibility of analysis.** Human analysts can examine the fact extraction models, identify the root of any errors in results, make the necessary fixes, and re-apply the modified model against all available data.
- **Delivers summaries of results to decision makers.** The solution facilitates interactive graphical presentation of results enabling non-technical decision makers to easily answer important business questions with just a few clicks.
- **Provides significant savings.** Replacing the work of human analysts with machine analysis saves quite a bit of money. At the same time, the real financial gain from implementing a CI solution results from improving the prudence and timeliness of informed business decisions supported by the solution.

The new CI capabilities provide the company with up-to-date and accurate information about the key activities of competitors and the market trends. Now the CI team can proactively identify emerging threats and opportunities, make better business decisions, and gain competitive advantage.



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