

# Cogito

## CORPORATE OVERVIEW

Cogito gives its customers the power to discover connections between remote and seemingly unrelated data. This new science—**Relational Analytics**—keeps data in context, unlike other approaches that condense, massage or peel data out of its natural relationship structure. It enables discovery in even the largest and most complex data stores.

Cogito has invested many man-years researching and modeling data structures, knowledge management algorithms, and data visualization techniques. The resulting product—the Cogito Knowledge Center—represents the first commercially significant advance in information management since the advent of relational databases.

Relationship Analytics has tremendous value to a wide range of applications including intelligence and security, financial services and fraud, manufacturing, social network analysis, bioinformatics research, and business link analysis. Moreover, Relationship Analytics can be applied to data already managed in traditional systems, by using the Cogito Knowledge Center as an overlay—or complement.

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### COGITO AT A GLANCE:

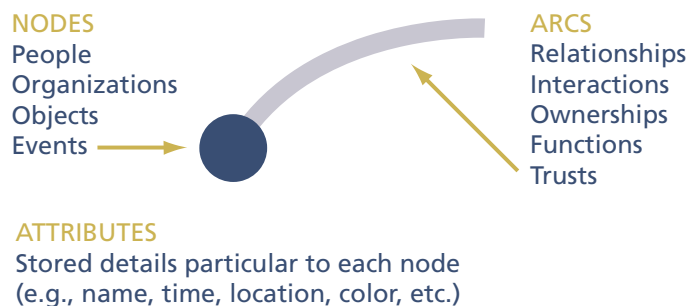
- Software company focused on Graph-based Relationship Analytics (GBRA)
- Targeting Intelligence & Security, Financial Services, Manufacturing and Life Sciences
- Partnerships include Northrop Grumman, Booz Allen Hamilton and Enforsys
- Customers include NSA, MyFamily.com, Sierra Nevada Corp

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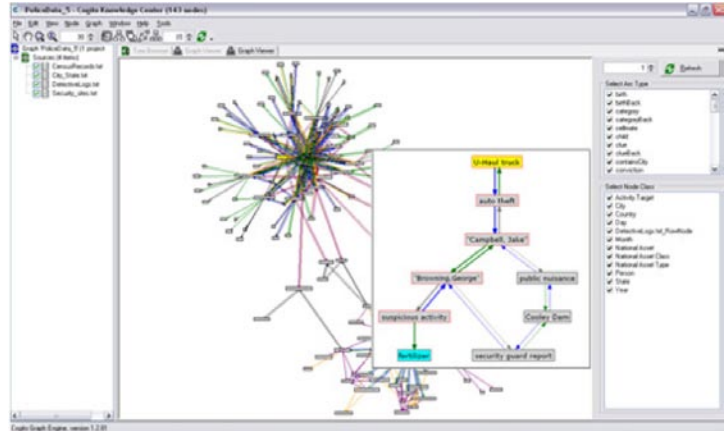
### HOW GRAPH TECHNOLOGY WORKS

Data stored in a graph database is represented with nodes and arcs (as opposed to rows and columns as with typical relational format). A node represents a concrete entity or specific instance of something. An arc represents a relationship of some type between any two nodes. A node can be linked to any other node.



## WHAT WE DO

Relationship Analytics can be applied to any field where multiple dimensions of data exist and there is a requirement to detect, analyze and visualize links or groups in context. Once data is joined into a network that expresses the relationships among the data elements, analysts are able to see visual representations of connected data, find patterns and discover connections that often remain hidden in standard relational data structures.



The Cogito Knowledge Center enables users to view relationships in context within a flexible discovery oriented framework. Relationships naturally emerge, and query speeds are reduced from hours and minutes to seconds and milliseconds. Because no programming is needed to make changes to the data schema, knowledge workers have complete control of the discovery process. This is critical when considering the common need for recursive queries, data model changes, data set expansion and query changes.

## THE PRODUCT

The Cogito Knowledge Center is an integrated solution for data mapping, modeling, visualization, query, and analysis. Based on graph technology, it is particularly powerful for network pattern detection and analysis, with the ability to uniquely structure, view, and analyze data.

Cogito Knowledge Center modules include the Workbench, Data Integration Broker, and Graph Engine -available in various configurations to meet application and scalability needs for any organization.

- The **Cogito Knowledge Center Workbench** is a Windows-based console for users to map, model, ingest, view and report data.
- The **Cogito Data Integration Broker** provides aggregation and synchronization between a Cogito graph database and other information sources such as databases, websites, text files and more.
- The **Cogito Graph Engine** is a Java-based core that rapidly assimilates and stores massive amounts of data in graph database form.

The solution is available for both Windows and Linux (32 & 64-bit) and supports Service Oriented Architectures (SOA) with a full software development kit for Java and .NET.

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## INTELLIGENCE AND SECURITY APPLICATIONS

- **Link Discovery and Analysis**— Determine how two people are related through multiple dimensions of data and calculate strength of each link.
  - **Group Finding/Extension**— Discover social networks linking people together by one or more dimensions; extend known groups by finding other actors/individuals with common links or associations.
  - **Cluster Analysis**— Determine roles in a social network and minimum number of key actors to be removed to disable a network.
  - **Pattern Matching/Detection and Analysis**— Look for specific patterns of data relationships, and systematic or repeating patterns.
  - **Alias Detection** — Identifies labels/ names that may intentionally (criminal alias) or unintentionally (misspelling) be associated with a specific entity.
  - **Visual Analysis**— Use graph visualization to form general hypothesis.
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