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Rapid Report

The latest news from Cogito

February 2006

Cogito

In the spirit of the Winter Olympics, this Rapid Report introduces a little competition and the drive to be the best. Just as in Torino, the best of the best were brought together recently in a

head-to-head contest to determine the winner in Relationship Analytics. And the winner was...Cogito Knowledge Center.

We are excited to share the results of our first benchmark showcasing the Cogito Knowledge Center against traditional relational database systems in a data analysis challenge. As part of this we introduce Sheri Green, our behind-the-scenes expert in testing and development. SQL expert Joe Celko was behind the relational system in this contest.

Enjoy the report and please feel free to provide feedback using any of the "Talk Back" buttons after each article.

Why Wait?

Coleman Barney, CEO



What manager, trying to find hidden patterns, links or intelligence in a mess of data, sits down in front of a stack of information and knows what they are looking for beforehand? They don't. They need to ask questions. Challenge the assumptions they have. Test theories. Search. When the information at hand is so large it requires a database, the challenge is even more immense. Someone analyzing a problem involving a lot of data needs a discovery platform that is flexible and doesn't require a third degree black belt in data schema design and procedural calls. Analytics software will not become a mainstream tool until we take it out of the hands of the elite – the highly skilled database designer – and place it in front of the masses – the middle-management decision maker.

How many times have you sat in a meeting and requested database resource to find an answer to a question? More than likely the IT guy in the room leaned back in his chair and told you he needs four days to extract the answer, that is if you could get your request prioritized over the requests already in front of him. Or, maybe you didn't even ask for the information because you knew it would take too long to process. And, heaven forbid you wanted to fuse multiple data sources into your analysis. You might as well get in line at the department of motor vehicles and relish the speed of that process, because Harold at the DMV will seem like a speed freak compared to

your DBA. This has to sound familiar because this is something experienced everyday in organizations everywhere.

A graph-based relationship analytics program on the other hand lets the middle manager or intelligence analyst or police detective take control of the data. It gives them a "discovery platform." They can do what-ifs. Hypothesize. Do to the data what data is collected to do. Produce answers to questions as the questions come to you, not when the programmers can get to your request.

So, to demonstrate what we can do, we brought in some top-shelf talent that know databases and asked them to solve a common problem using some standard tools. We asked them to take a fairly large data set and ask a simple question. "Is A related to B?" The result? Someone with minimal training could sit in front of our graph-based Knowledge Center and ingest multiple data sources, use a visual query interface and process their request in under 7 minutes. A skilled database administrator using a relational database could import multiple data sources, set-up a schema, write the procedural program and process the query in about 40 hours. That's hundreds of times faster for a graph-based solution. That also adds up to some serious wait time if I'm the guy needing an answer to a question. I don't think I'd put up with it if I knew there was something better.

Tired of waiting? Tired of the technical bottleneck? Call us and we'd be happy to tell you how you can get an answer right away – and not a week from now.

The Results are In: And You Won't Believe What We Found!

Sheri Green, Product Manager



It doesn't take long for anyone trying to make sense out of a pile of data scattered in different logs, database files, and formats to quickly see the strength and power of a graph based solution. But that isn't good enough; we set out to prove that not only does the graph based relationship query make it feasible to find relationships that were previously lost in the traditional relational database model, it does it hundreds of times faster!!

We decided to tackle a common problem: n-degree searches. A perfect example of an n-degree search is the "Bacon Number" game where actors are linked together through movies in which they have appeared. For example, Tom Cruise acted in "A Few Good Men" with Kevin Bacon and so he is separated from Kevin Bacon by one degree. Another actor may not have acted in a movie directly with Kevin Bacon, but with Tom Cruise. This actor is separated from Kevin Bacon by two degrees. There are many scenarios that could be used to demonstrate the n-degree separation problem; however, we selected this one because its fun to do, familiar to a lot of us and the data is non-confidential and readily available.

We enlisted the help of industry expert, Mr. Joe Celko, author of more than 700 articles and six books on databases and SQL, to write the RDBMS equivalent to this problem. In the meantime we went to work on the graph side (although there really wasn't much to do). The total amount of human hours and computer processing time was tallied and compared side by side. The results are dramatic!

The RDBMS project took more than a standard work week while the equivalent project with the Cogito Knowledge Center took ***less than seven minutes***.

That is hundreds of times faster with the Cogito Knowledge Center!

Not only was development and processing faster with the graph, the RDBMS problem required SQL expertise, while completing the same scenario using the Cogito Knowledge Center was performed by an average computer user.

Take some time to read the full test report. I am sure you will find the results as compelling as we do.

News and Events

What's going on in Cogito

Cogito recently posted its upcoming [event schedule on the web site](#). Here are the highlights; check the web site to get the latest information over time.

February 17-20, 2006

[The International Intelligence Summit 2006](#)

Hyatt Regency – Crystal City, VA

Booth #305

February 22-24, 2006

[Tom Sawyer Software User Group Meeting 2006](#)

Berkeley, California

April 25-27, 2006

[GOVSEC](#)

Washington Convention Center - Washington, D.C.

About Us

Cogito is a software company that specializes in Graph-based Relationship Analytics and has developed an innovative and patented solution based on mathematical graph theory that provides data analysts and users tremendous power in structuring, querying, analyzing, and viewing data and data relationships. Using the Cogito Knowledge Center, information analysts – security experts, financial analysts, database administrators and researchers – can rapidly search, match, compare and discover patterns in data.

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