

Strategic Investments

Winning the Big Data Wars

How KPMG LINKed to the ultimate analytical weapon

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Question: With 12 NCAA football teams, two divisions, a 14-week season, and more than two dozen requirements – from road trips, to match ups, to mandated game-free dates – how many possible football schedules can you create for the 2015 season?

Answer: “More than the number of atoms in the sun,” says **Dr. Chris Groer**.

A core member of KPMG’s Customer Analytics team (formerly Link Analytics), Groer, his brother and founder **Sean Groer** and co-founder **Dr. Will Hakes** are undaunted by such enormous numbers. They love plumbing virtual *haystacks* of data to extract *needles* of actionable information.

“We have one telecom client who sends us 1.7 billion records a day; 12 million every 10 minutes. We ingest and process it real time into our Hadoop cluster computer at the Montvale data center,” says Advisory manager **Dr. Thilina Gunarathne**, a recognized worldwide expert in open-source big data processing frameworks.

The company builds dozens of schedules dispatching NCAA teams to the right places at the right times. But the Customer Analytics team’s work on pressing business issues reaches far beyond the playing field.

Sharpening the Solutions

“We can solve any problem that requires discrete choices, whether it’s a sports schedule, the ideal place to build the next factory or the quickest, safest school bus route, in a clear, sensible and useful way. The underlying mathematics often allows us to assure our client that we also provide the *best* possible solution,” explains Chris Groer.

The Customer Analytics team teases out hidden patterns in health care, insurance, online retail, telecom, education and trucking company records, to name a few. Its data scientists, mathematicians, researchers, engineers, analysts, marketers and consultants create customized solutions that can pinpoint supply chain bottlenecks, speed product delivery, sharpen pricing or troubleshoot customer churn. Clients targeting critical business challenges gain a clearer view of what their data says. All that’s required is a willing company, a complex problem and a large data set.

“Many of these companies have collected all kinds of data for years and hide it away in some system because they don’t know how to get the valuable information out,” says Chris Groer.

Computing Powerhouse

Launched in 2010 as Link Analytics, our Customer Analytics team provides a platform to accelerate the design and delivery of those analytical solutions for Fortune 1000 companies. Link provided KPMG with some of the world’s best computational resources (ranked No. 40 globally by an international 2011 computational challenge), along with 40 professionals, including six PhD’s. Named among CIO Review’s “20 Most Promising Big Data Companies” of 2013, our Customer Analytics team works alongside KPMG’s robust suite of D&A offerings, further advancing our “One Firm” approach of embedding sophisticated analytics inside client organizations.

But collecting and crunching data is just part of the story. *Optimization* is the pot of gold at the end of the metadata rainbow.

“Optimization is a way for letting you figure out the best way to address a challenge. At the end of the day that’s how companies make money,” explains Groer.

A telecom company may seek optimization to reveal the *who, what, when, where* and *why* long-term customers leave for other carriers, helping them predict and head off customer drift. A school bus company need routes optimized not just for efficiency and economy, but for the safest and quietest streets. And NCAA conferences, presented with countless potential schedules, may require multiple choices ranked according to how well they address multiple constraints.

There’s rarely a single perfect solution. Still, Big Data enables companies to better understand what data means and to make informed decisions.

 Recommended 8 times

DidYouKnow?

Did you know that Link Analytics, acquired by KPMG and now called Customer Analytics, has the talent and technology to generate solutions to a wide range of challenges, whether it’s finding the ideal place to build a factory; determining the quickest, safest school bus routes; or developing a a schedule for Big 12 athletics ([watch the quick animation](#)).



Watch how Link uses Data & Analytics to crunch all the requirements considered in creating a Big 12 sports schedule.

Meet the Team



Dr. Will Hakes



Sean Groer



Dr. Chris Groer

Besides, Chris Groer notes, computers are quick, accurate and less messy than the old approach.

“Before computers, the people who did these NCAA schedules by hand would sit in a room, arrange dozens of papers to get the best combinations, and then do it over and over again. Their paper would cover all the walls, the tables, and the floor. Now we can often generate the absolute best possible schedule in less than a minute,” says Groer.

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Dr. Thilina
Gunarathne



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