



SPATIAL DATA SHEET

Netezza Spatial™: Analytics with Direction

Take a closer look at your business. There is location intelligence embedded in nearly every data point, decision and business transaction. But exploiting location data for optimal decision-making has been daunting, if not impossible, within traditional data warehouse environments... until now.

From government to telecommunications to financial services to retail, location or spatial information plays a critical role in decisions that can make or break an organization's success. As defined by industry analyst IDC, spatial data represents things that exist in space such as roads, property boundaries, machine parts or molecules, whereas geospatial data references things with a location on earth – i.e. roads, rivers, property boundaries or building footprints.¹

So, why does location data matter to your business? Here are just a few examples of how location intelligence can make a huge difference:

- Government organizations can use spatial information to identify the best locations for public facilities such as airports, trading docks and armed forces bases, from a combination of environmental factors and demographic data. Law enforcement agencies can identify areas of high crime to optimize personnel deployment in different regions.
- Financial Services companies can optimize their offerings by identifying high-risk and high-value customers based on location intelligence – such as families with \$500,000-plus homes living within five miles of a hurricane zone – and adjust their marketing and pricing strategies accordingly.

- Manufacturers can find the best places to purchase raw materials by evaluating distances, routes and fuel costs incurred throughout the procurement and distribution processes, allowing them to optimize the efficiency of their sourcing operations and distribution channels.
- Retailers can identify the best location to open new stores based on the locations of their targeted customers and surrounding competitors to maximize profitability. They can also figure out how particular products are performing within a store in order to optimize product placement across their store chain.
- Telco and Utility providers can pinpoint locations with the highest frequency of service outages, and correlate that information to the addresses of impacted customers. They can then identify the best places to put new facilities to improve service and/or offer targeted promotions to inhibit churn.

1. Sonnen, David and Dan Vesset. "Worldwide Spatial Information Management 2008-2012 Forecast and 2007 Vendor Shares." (IDC #213930, Sept 2008).

Key Features:

- An optional extension to the Netezza petascale data warehouse appliance (Integrated DBMS software, system hardware, high-speed storage)
- Asymmetric Massively Parallel Processing™ (AMPP™) architecture – Best combination of SMP and MPP for petascale, complex spatial and non-spatial query processing
- Patented Streaming Architecture – Location-based analytics embedded on the Snippet Blade™, with data streaming at the disk level
- Integrated (appliance) package with native understanding of location and shape
- Open, standards-based spatial data model
- Full range of spatial operators and functions

Key Benefits:

- **PERFORMANCE:** 10-100x the performance of existing spatial database solutions
- **ITERATIVE, REAL-TIME ANALYTICS:** Enabling ad hoc queries and complex analytics on large relational and spatial datasets
- **AFFORDABILITY:** Low acquisition and implementation costs
- **NO ONGOING ADMINISTRATION:** No complex indexes, aggregates or partitioning required
- **MANAGEABILITY / EASE-OF-USE:** Simplified application integration and native spatial understanding limit database administration needs
- **LINEAR SCALABILITY:** From a few hundred GB to petabytes of spatial and non-spatial user data
- **FLEXIBILITY / AGILITY:** Easy addition of modular processing units for scalability and reconfiguration
- **STRUCTURAL RELIABILITY:** Full mirroring and ACID transaction management of all data

"Being able to do analysis on spatial data 50 to 100 times faster than you can today opens up some compelling new application areas. If you are a retail chain and you need to make a decision on the site for a new store within the next three days, it makes a huge difference whether you can just run one analysis which takes two days, or dozens of analyses which take 30 minutes each, allowing you to try a range of assumptions and different models. I believe that Netezza technology changes the game by enabling enterprise location intelligence on a scale that is not possible with today's technologies."

*Peter Batty,
Geospatial Visionary
President, Spatial Networking
and former CTO, Intergraph*

Nonetheless, few companies actually collect, interpret and analyze location data to its fullest potential to help them make strategic and operational decisions that will drive competitive advantage.

Why not?

Most organizations are overwhelmed by the costs and complexities associated with location intelligence deployments. And those who have tried merging their spatial and non-spatial data for comprehensive analysis often end up with such poor performance that their investment delivers limited, if any, value to the organization. They end up pushing spatial data to the wayside, relying solely on summarized, non-spatial data – and thus settling for sub-optimal decisions – because they simply don't have the time or resources to leverage the benefits of location intelligence.

Companies who consolidate their data into a single, easy-to-use infrastructure that can scale as data volumes grow while providing fast answers to a multitude of questions, will ultimately be able to leapfrog the competition. By removing standard business process bottlenecks, these companies can finally leverage all that location intelligence has to offer.

The Solution: Netezza Spatial

With the Netezza data warehouse and analytic appliance, you can expand your BI capabilities and data accessibility across the enterprise for enhanced competitive advantage, faster speed-to-market and better decision-making. By architecturally integrating relational database, server and storage, the compact and power-efficient Netezza system delivers 10-100x the performance of traditional systems.

The Netezza system's performance advantage comes from its patented streaming technology, which puts processing power right at the source, next to the data, so it can be processed "on stream" — at streaming speeds with minimal data movement. This innovation — bringing processing power to the data — has given organizations orders of magnitude improvements in their processing, helping them make decisions using all their data, all the time.

Netezza Spatial brings the power of the Netezza architecture to bear on location intelligence, powering ad-hoc queries to run 10-100x faster than ever before. While providing rapid analytics on spatial and non-spatial data to their users, customers no longer need an army of DBAs to maintain the complex infrastructures required by traditional systems.

Finally, business users can run location intelligence applications on huge, comprehensive datasets to make rapid and informed decisions that can provide the ultimate competitive advantage. Netezza's game-changing technology has already shaken up the world of BI. Now, the world of GIS and location intelligence can benefit from Netezza too!



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About Netezza Corporation:

Netezza (NYSE: NZ) is the global leader in data warehouse and analytic appliances that dramatically simplify high-performance analytics across an extended enterprise. Netezza's technology enables organizations to process enormous amounts of captured data at exceptional speed, providing a significant competitive and operational advantage in today's data-intensive industries including digital media, energy, financial services, government, health and life sciences, retail and telecommunications. Netezza is headquartered in Marlborough, Massachusetts and has offices in North America, Europe and the Asia Pacific region. For more information about Netezza, please visit www.netezza.com.