

Geo360 Solution

A complete view of your geospatial data, in context

Since the introduction of the Geographic Information System (GIS) in 1968, its uses have evolved and expanded – from rendering highly accurate maps to identifying the shortest route to your next meeting – and its audiences and value have grown. However, with the explosion of unruly geospatial data emerging from the web, mobile applications, and the proliferation of sensors and drones, the next era of GIS innovation has been held back by its underlying data management technology. Simply put, GIS cannot keep up with rapidly changing data environments.

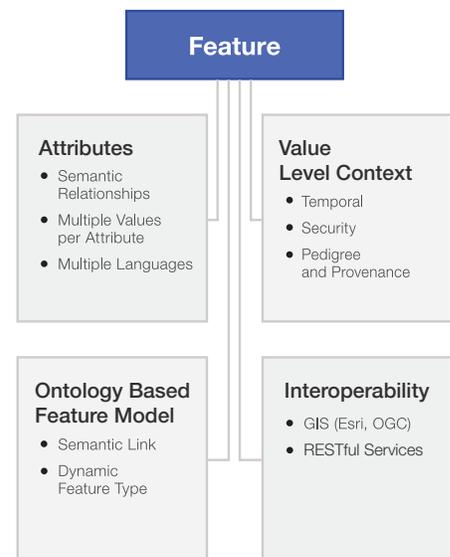
Existing geospatial databases are unfit to manage unstructured information: documents, observations, human geography, or situational awareness. Too often a geospatial database plus a spreadsheet becomes the de facto system of maintaining real-time data, leaving analysts to manage and search geospatial features and institutional knowledge in separate locations. With most geospatial teams managing hundreds to thousands of data sources, the problem is compounded by having to search a geospatial system and numerous feature-related flat files. It is impossible to exploit all of an organization’s geospatial data in a unified perspective with current geospatial systems – analysts are wasting too much time trying to find the haystack, rather than trying to find the needles within the haystack.

The MarkLogic® Solution

The Geo360 solution is a high-fidelity data integration platform capable of modeling complex, real-time geographic information domains such as human geography, structured observation management, damage assessment, and disaster recovery. The solution uses a flexible data model to store, enhance, and disseminate dynamic geospatial features and entities or objects (i.e. a person, place, or event). It places geography in context by answering *Who? What? When? And Where?*

With the Geo360 solution, a geospatial feature is combined with an object – which means users can have multiple views of the geospatial data. For example, the U.S. Capitol can be viewed as three objects: a building, a tourist attraction, and the seat of the U.S. Congress – also, the geographic location can be viewed as multiple points, lines, or polygons. In current relational GIS databases, multiple locations need to be stored separately as features in the database, while objects, attributes, values, and metadata are stored in multiple files in one or more different systems, buried in numerous documents – but with MarkLogic, all information is stored in one database.

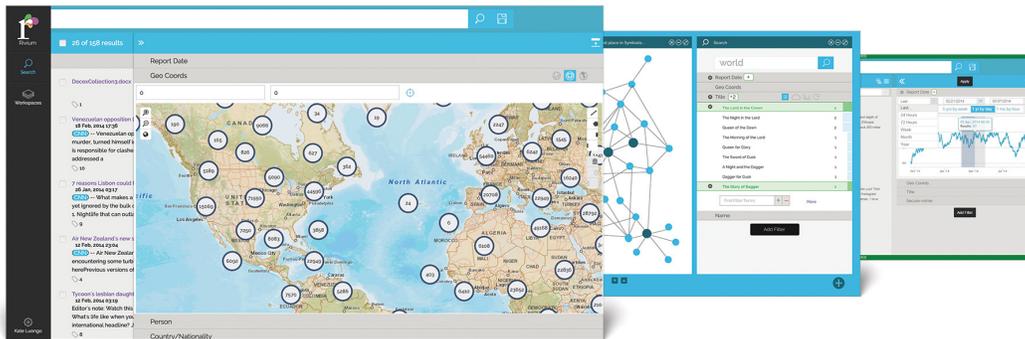
Information can be created or updated – without any downtime – to record real-world events as they occur by allowing users to capture the different states of a geographic feature over time. When field teams realize a building is being used as a school during the day but a training camp at night, users are able to dynamically create observations to reflect that the building has two uses – information which is then available at any time, to anyone with appropriate permissions. With existing relational GIS databases, teams would have to track the building in one system





and related files or observations about the building across multiple spreadsheets, photos, videos, and reports in one or more separate systems. If users need to update the reports to produce a real-time view, the same steps would have to be recreated from multiple systems – which may take days to produce, and the information is outdated. MarkLogic solves this issue with having all information on a single platform, combining the object framework, one database to search with historic and semantic capability, and real-time alerting.

The MarkLogic Geo360 solution delivers an accurate representation of the real world, increased trust and security, as well as significantly decreased TCO of geospatial systems by combining file servers that store information about features and the geospatial system, and allowing analysts to directly capture and relate their geographic knowledge on one platform. It supports integration with industry standard user interfaces such as Esri ArcGIS*, OpenGeo Suite, Berico Rivium*, OGC-compliant GIS tools and SPARQL-compliant semantic visualization tools.



Screenshots of the Berico Rivium application, powered by the Geo360 solution platform

Proven Success

MarkLogic has been cited by multiple industry analysts as a leader in the operational and NoSQL database markets. We and our partners have deployed data integration, search, discovery, analysis, and content delivery solutions to some of the largest organizations in the world. These organizations need the unique combination of reliability, flexibility, and security that only the MarkLogic Enterprise NoSQL platform can provide.

About MarkLogic

For over a decade, organizations around the world have come to rely on MarkLogic to power their innovative information applications. As the world's experts at integrating data from silos, MarkLogic's operational and transactional Enterprise NoSQL database platform empowers our customers to build next generation applications on a unified 360-degree view of their data. Headquartered in Silicon Valley, MarkLogic has offices throughout the U.S., Europe, Asia, and Australia.

For more information, please visit www.marklogic.com.

© 2016 MARKLOGIC CORPORATION. ALL RIGHTS RESERVED. This technology is protected by U.S. Patent No. 7,127,469B2, U.S. Patent No. 7,171,404B2, U.S. Patent No. 7,756,858 B2, and U.S. Patent No 7,962,474 B2. MarkLogic is a trademark or registered trademark of MarkLogic Corporation in the United States and/or other countries. All other trademarks mentioned are the property of their respective owners.

MARKLOGIC CORPORATION
999 Skyway Road, Suite 200 San Carlos, CA 94070
+1 650 655 2300 | +1 877 992 8885 | www.marklogic.com | sales@marklogic.com