

Geostreaming: We Can See the Light at the End of the Tunnel

“We still have a long way to go! But we can see the light at the end of the tunnel!” This statement represents a vision that has brought together Microsoft SQL Server, ESRI, and the University of Southern California’s Information Laboratory (USC InfoLab) to sketch the road map of an end-to-end solution in geostreaming. Geostream data refers to the datasets that are acquired continually over time and needed to be processed and/or visualized on-the-fly. These datasets include geographical extents such as geographical coordinates of a point, a line, or a polygon. The coordinates may or may not change over time.

Microsoft SQL Server StreamInsight is a powerful platform for developing and deploying complex event processing (CEP) applications. Its high-throughput stream processing architecture and familiar .NET-based development platform enable developers to quickly implement robust and highly efficient event processing applications. With its extensibility infrastructure, Microsoft SQL Server StreamInsight enables developers to integrate their domain expertise within the query pipeline as user defined operators and aggregates. Also, the Microsoft SQL Server Spatial Libraries deliver comprehensive spatial support that enables organizations to seamlessly consume, use, and extend location-based data through spatial-enabled applications which ultimately helps end users make better decisions. ESRI is the world leader in GIS (geographic information systems), spatial modeling, and mapping software. ESRI’s long experience and sound technologies add the necessary domain expertise to the data streaming platform provided by Microsoft StreamInsight. The applied information management research at the USC InfoLab and its domain expertise in two areas of smart oil field technologies (through its projects with USC’s CiSoft center) and transportation systems (through its projects with USC’s METRANS transportation center) bridge the gap between academia and industry, and brings the latest technologies in managing unconventional data types to CiSoft and METRANS end users: Chevron, USDOT and Caltrans.

This special session covers geostreaming from various angles and brings together experts in the field from academia, industry, and research labs to discuss the lessons they have learned over the years, demonstrate what they have achieved so far, and listen to the geospatial community so we can build the future of our community *hand-in-hand*.