

4th International Conference on

Clinical Trials

 September 11-13, 2017 San Antonio, USA

Using interactive 3D visualization for rapid discovery of "hidden" outliers and correlations in clinical trial studies

Michael Zeitlin
Aqumin LLC, USA

As precision medicine advances, a dramatic increase in data collection, complexity and analysis is occurring. Traditional statistical techniques employed to hunt for relationships between parameters will be more tedious than ever and exploratory analysis of novel datasets could miss answers to important questions one didn't even know to ask. An innovative approach using interactive 3D visualization is presented showing outlier identification and rapid iteration over investigative questions with multiple datasets. The mind's eye is a powerful pattern recognition machine that can detect subtle changes in data when it is presented as 3D geometry using color and motion. The observer can quickly see through the complexity to identify patterns and anomalies, empowering investigators to discover the right questions to ask. Interactive 3D visualization techniques which draw data as geometry with relative movement enable finding answers quickly. Datasets can be merged, re-arranged and displayed on-the-fly while the eye is watching. A single solitary outlier can be detected and understood while observing millions of data points. Software to perform this rapid data ingestion, integration and display now exists which can help process huge datasets effortlessly. A live example will be presented.

Biography

With over 30 years experience in scientific and business computing Michael is a recognized leader in visualization technology worldwide. He created the oil industry's first commercial 3D visualization center. He received the Carnegie Mellon and American Management Institute Award for Innovation in Information Technology. His work was honored with a permanent position in the Archives of the Smithsonian Institution. He founded Magic Earth, LLC. in 2000, and as Chairman and CEO, achieved profitability in three months and was acquired by Halliburton that same year for \$100 million. Michael holds a B.Sc. in Earth and Space Sciences and M.Sc. in Marine Environmental Science from the State University of New York at StonyBrook.

michael.zeitlin@aqumin.com

Notes: