

COMPLEX CHALLENGES REQUIRE ACTIONABLE KNOWLEDGE

Without relevant information and innovative technologies, decision-makers often resort to guesswork and fall back on limited experience, gambling away objectivity and reducing likelihood of success. Given today's increasingly complex challenges amidst global uncertainties, it is critical to have actionable knowledge and true situational awareness for accurate and effective decision-making.

RAISE OBJECTIVITY

Signature Analyst synthesizes relevant information from diverse sources and discerns the causal factors that contribute to the situation or event in question. Learning from past events, the system creates a pattern or GeoSignature™ and uses it to project where similar events or situations are likely to occur within a specific area of interest (AOI). Since the analysis is based primarily on empirical modeling, Signature Analyst delivers a high level of objectivity that eliminates guesswork and boosts confidence in decisions.

TRADITIONAL TECHNOLOGIES FALL SHORT

Traditional analytics technologies fall short due to their inherent constraints around structured data and propensity to solving challenges where causal factors are known and well understood. Example applications include target marketing, segmentation and customer profiling. They are limited in their ability to scale to complex global challenges, since they accommodate neither spatial nor unstructured information and are constrained to data internal to the organization. Nor can they address challenges where the deciding factors that contribute to an occurrence of an event or a situation are not well understood.

SIMPLIFY COMPLEX ANALYTICS

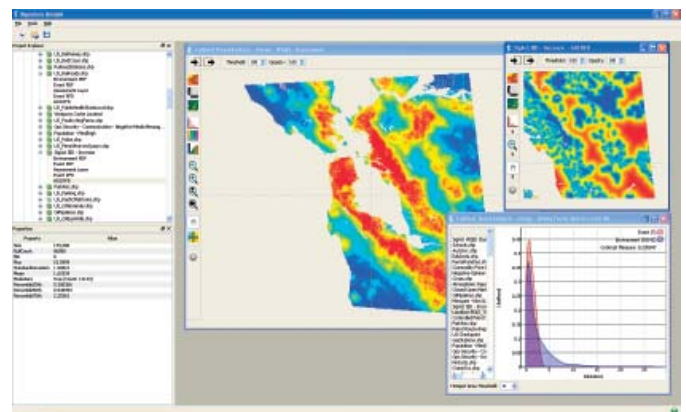
Signature Analyst reduces the tedium of complex analytical challenges. Its powerful capabilities transcend traditional geospatial methods, allowing fewer analysts to evaluate more data in less time. Designed to handle your most complex and sizable consequence modeling challenges, Signature Analyst can easily process thousands of layers of data and quickly narrow down relevancy through automated variable reduction techniques, including validating suitability of information to a given area of interest.

SIMPLE AND COMPLEX PROBLEMS SOLVED WITH A SINGLE TOOL

Basic challenges where the key elements and relationships between them are well understood (for example, target marketing and retail site selection) are appropriate for deductive modeling. Traditional spatial analysis products primarily adhere to and provide the means for deductive reasoning through data layering techniques. Inductive modeling, where analysis demands a highly data-driven approach and objectivity in outcomes is mandated, is appropriate for complex challenges where underlying elements and relationships are not well understood. While Signature Analyst excels at inductive reasoning, thereby eliminating the need for understanding causal factors up front, it also provides deductive modeling capabilities where speed is critical.

SIGNATURE ANALYST HELPS DECISION-MAKERS AND ANALYSTS:

- Strengthen competitive advantage through predictive knowledge
- Make confident decisions based on informed insights rather than subjective guesswork
- Increase agility in the face of changing market conditions, situations and organizational objectives
- Increase resilience through better allocation and protection of critical assets and resources
- Provide clear and actionable information to diverse stakeholders



ADVANCED CAPABILITIES YOU CAN COUNT ON

Empirically-based algorithms and techniques. Analysts can model a variety of consequences and outcomes through purely empirical modeling techniques based on Signature Analyst's patent-pending statistical and predictive algorithms. Furthermore, specific algorithms based on data type are applied for optimal evaluation.

Support for diverse data types. Signature Analyst supports a wide range of structured and unstructured data, such as physical terrain, temporal, demographic, cultural, social, economic and human terrain, in a wide variety of input and output formats. Specific spatial input and output formats are shown in *Spatial Inputs and Outputs*.

Speed of deduction. Signature Analyst's core strength lies in its ability to rapidly process thousands of layers of data and narrow down relevancy through automated variable reduction techniques, including validating information suitability for a given AOI.

Transferable GeoSignatures™ for confident predictions

Identification of causal factors and relationships from numerous layers of seemingly disparate information produces a unique pattern, or GeoSignature, of a situation or event that can be projected to defined areas of interest to predict where the modeled situation or event is likely to occur.

Collaboration capabilities for optimal outcomes. While reducing the tedious nature of complex analytical challenges, Signature Analyst fosters a collaborative process among analysts to optimize outcomes based on iterative consequence modeling, assessment evaluations and streamlining workflows.

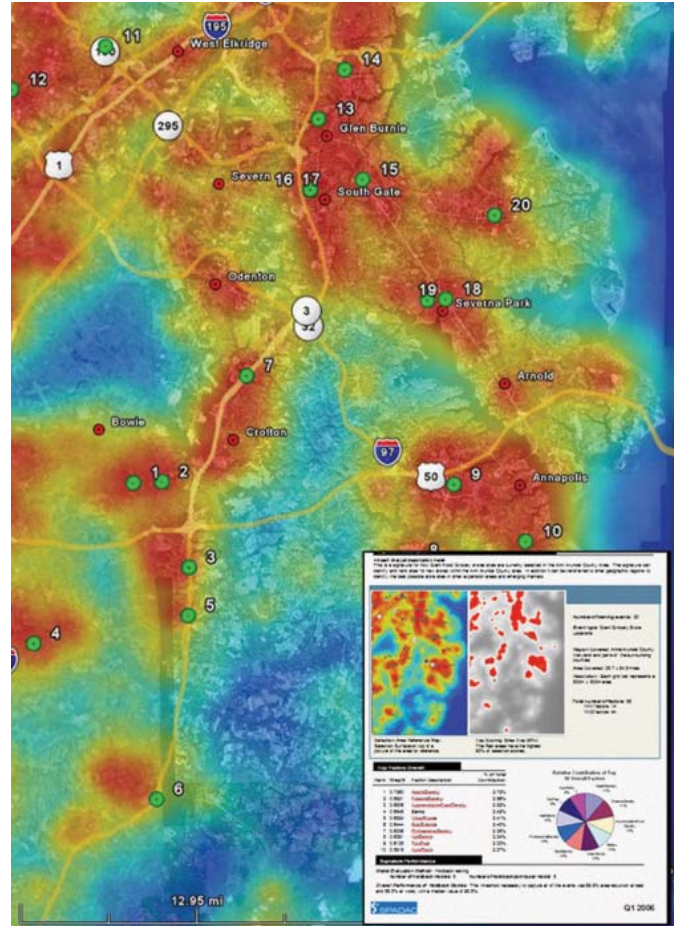
Detailed examination capabilities. Through a variety of statistical and exploratory assessment tools, Signature Analyst allows detailed examination of outputs and relationships between contributing data elements.

Advanced AOI definition. Signature Analyst accepts AOIs in virtually any shape or geometry, and supports region exclusions within selected AOI and user-defined grid sizes and variability.

Sophisticated visualization. Signature Analyst provides seamless support for leading geospatial interfaces such as Google Earth and ESRI ArcMap for defining AOI and visualizing outcomes.

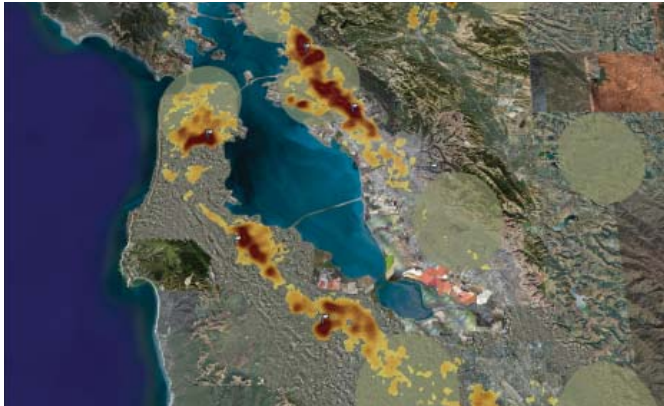
Scalability and performance. Signature Analyst's modular architecture enables full enterprise scalability. Multi-threaded processing and distribution across multiple CPUs enhance performance, as do sophisticated spatial indexing capabilities.

Assessment visualizations are supported by detailed information products or reports that enable more objective, relevant, spatially-enabled judgments that help the customer select courses of action.



DATA FORMATS

Format Name	Input	Output	Output
SHP	•	•	ESRI Shape Files
TIFF	•	•	GeoTIFF and TIFF with TFW file
IMG	•	•	ERDAS Imagine Format
ASC	•	•	ESRI ASCII Grid Format
ADF	•		ESRI ArcInfo Coverages
GRD	•		ESRI ArcInfo Binary Grid
JPG		•	JPEG Image Format
PNG		•	PNG Image Format
BMP		•	Windows Bitmap Image Format
KML		•	Keyhole Markup Language (Google Earth)
CSV		•	Comma Separated Values
OCI		•	Export to an Oracle database
TXT		•	Export to a ASCII Text file
CONTOUR		•	Export to an ESRI contour shape file

**SYSTEM REQUIREMENTS****Software:**

- Microsoft® Windows XP

Minimum Hardware:

- 32-bit Pentium 4 or compatible
- 1GB RAM (2GB RAM optimal)
- 5GB free disk space

LEARN MORE

Contact SPADAC today to find out more about Signature Analyst and our wide range of offerings. Go to www.spadac.com, call **703-893-3500** or email info@spadac.com.