MineSet™

Business Solutions Using Data Mining and Visualization

Solutions

Silicon Graphics offers *innovative data mining* and data visualization solutions that solve the most critical problem companies face today: the need for *intuitive, real-time interpretation* of massive amounts of data. Managers and analysts can now make better decisions faster with *scalable, highly customizable* solutions using *MineSet.*

" MineSet provides executives with the analytical and visual insight necessary to make critical decisions about their businesses. It is evident that with the new features in MineSet, Silicon Graphics has created one of the best analytical and visual data mining solutions available today."

—Aaron Zornes
Vice President, Application
Delivery Strategies Services
META Group

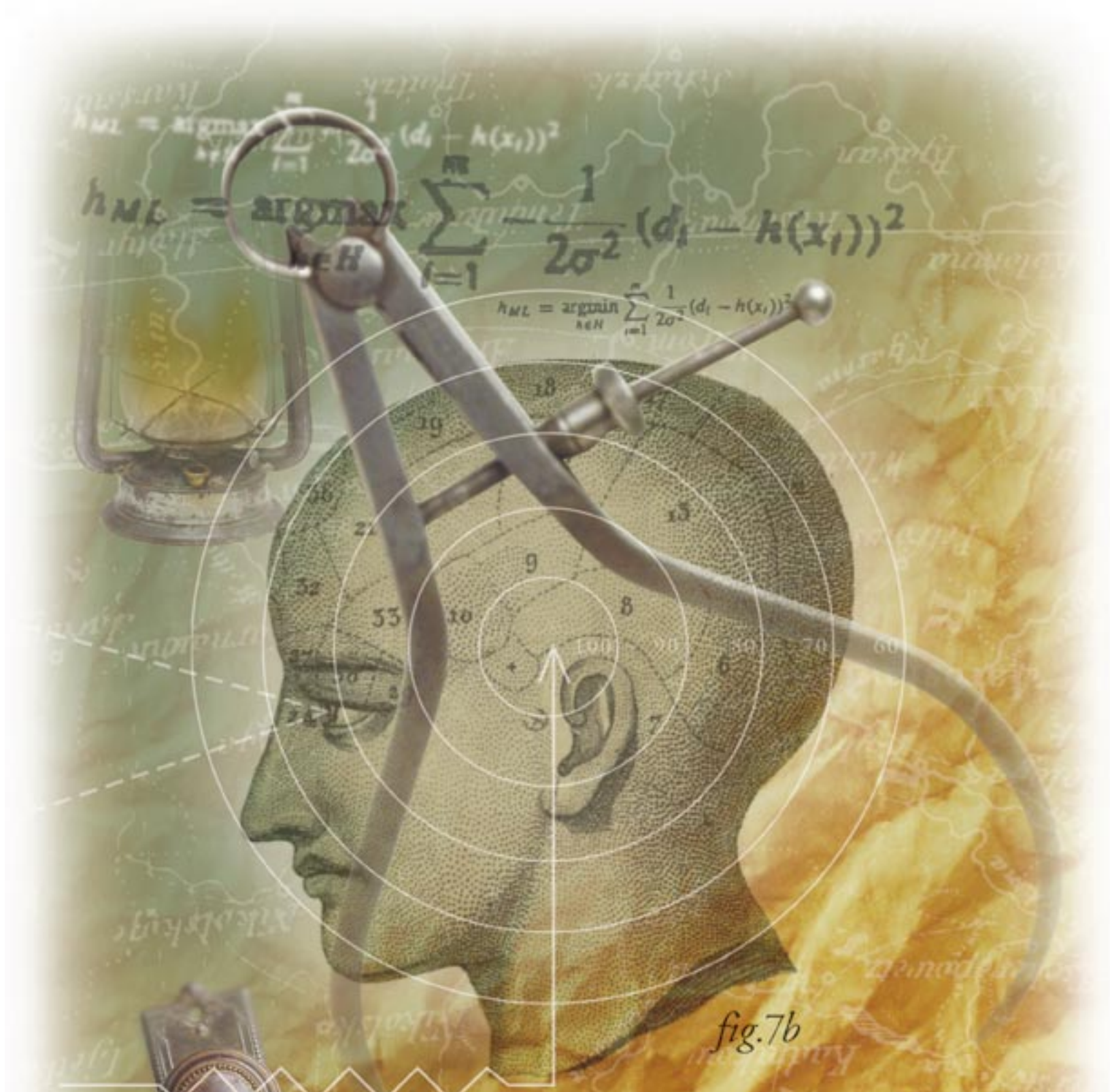*Fly-Through Landscapes for
Interactive Classifier Models*

TREE VISUALIZER/
DECISION TREE CLASSIFIER

Visual Cross-Selling Analysis

RULE VISUALIZER/
ASSOCIATION RULES

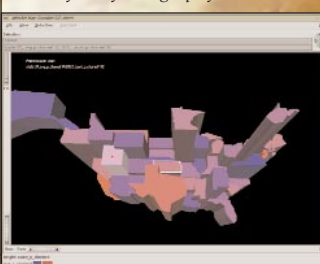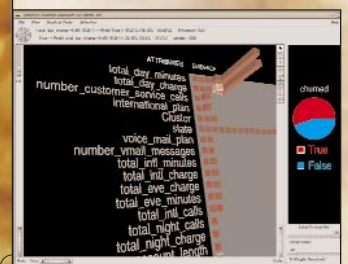*Visual Segmentation Analysis
for Large Datasets*

SPLAT VISUALIZER

$$h_{ML} = \arg\max_{h \in H} \sum_{i=1}^{m} \frac{1}{2\sigma^2}(d_i - h(x_i))^2$$

$$h_{ML} = \arg\min_{h \in H} \sum_{i=1}^{m} \frac{1}{2\sigma^2}(d_i - h(x_i))^2$$

fig.7b

Real-Time OLAP Analysis

Multidimensional Profitability Analysis by Geography

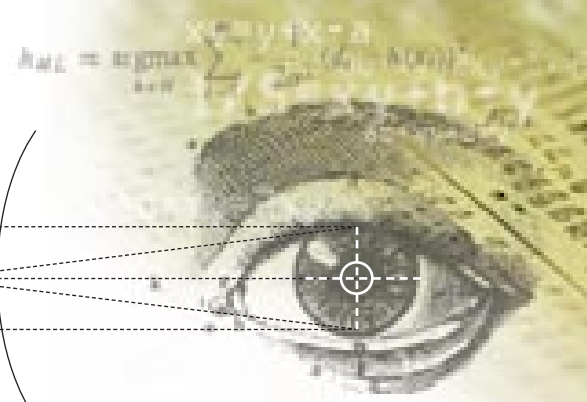*Real-Time What-If Scenarios*

DECISION TABLE VISUALIZER/
DECISION TABLE CLASSIFIER

MAP VISUALIZER

EVIDENCE VISUALIZER/
EVIDENCE CLASSIFIER

"MineSet was long known for its advanced visualization capabilities. Today, MineSet is the only data mining suite that effectively couples sophisticated data and knowledge visualization with best-of-breed data mining algorithms."

—Ismail Parsa
Director of Analytics
Epsilon Data Management

SOLVING CRITICAL BUSINESS PROBLEMS

Faced with an explosion of transactional and operational data, companies today face an enormous challenge: how to turn vast amounts of data into valuable insight. Silicon Graphics® MineSet data mining and visualization software is deployed by various organizations to address their most important business problems. From revolutionizing drug discovery in the pharmaceuticals industry to redefining marketing effectiveness in the financial and retail industries, data mining and data visualization are changing the way business is done.

MineSet leads the strategic business analysis field by tightly integrating sophisticated analytics with matching visualization algorithms. Because decision makers in corporations have varied technical backgrounds, MineSet visualization tools were designed to shorten the learning curve for effectively using data mining. The same innovative design also aids the user in exploratory data analysis to quickly identify key trends or critical patterns. By reducing complexity, encouraging model interpretation, and easily depicting multidimensional data, the visual paradigm of MineSet empowers business users without requiring mathematical or statistical expertise.

THE IDEAL PLATFORM TO INTEGRATE DATA MINING SOLUTIONS

MineSet offers you a competitive advantage by combining best-of-breed data mining and visualization tools in one seamlessly integrated solution package. Because there may be other tools that might be relevant to your business, MineSet provides easy integration capabilities and interfaces so you can plug in additional algorithms or programs as needed.

The answer to today's sophisticated business problems often requires iterative and arduous analysis of underlying data. The ability to easily switch between different tools and visually transfer critical information from one model to the next brings a significant competitive advantage. It also considerably reduces the time required to gain valuable insight from reams of data.

IMPROVE YOUR COMPETITIVE POSITION AND EXPAND INTO NEW MARKETS
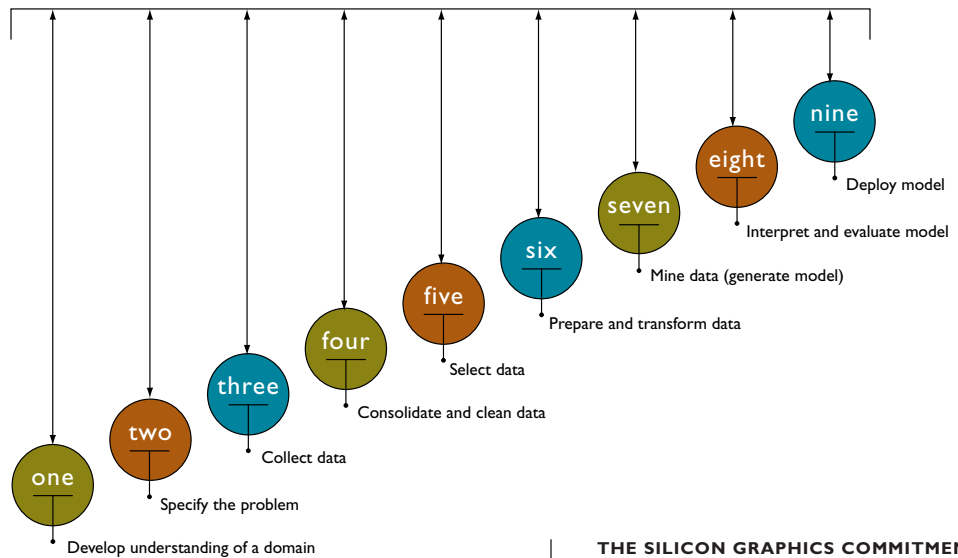
With fierce competition for an increasingly more educated and selective customer base, you need the leading data mining and data visualization solution to help you enhance your target-marketing efforts. MineSet delivers complete functionality within one integrated package to conduct market-basket analysis, discover cross-selling opportunities, and identify promising new customer segments.

Combining strong technical features with excellent usability, MineSet offers a solid platform to support your strategic marketing efforts. Using MineSet, you can derive increased revenue from your existing customer base and depict profitable new market segments that are precisely defined for immediate marketing action. The analytical models generated within MineSet can easily be plugged back into your data for producing effective marketing campaigns.

"We chose MineSet because we are aiming to integrate MineSet's unparalleled visualization and data mining tools with our state-of-the-art business intelligence tools we developed in-house."

—Win Farrell
Partner, Emerging
Solutions Group
Coopers & Lybrand, LLP

KNOWLEDGE-DISCOVERY PROCESS

nine — Deploy model

eight — Interpret and evaluate model

seven — Mine data (generate model)

six — Prepare and transform data

five — Select data

four — Consolidate and clean data

three — Collect data

two — Specify the problem

one — Develop understanding of a domain

MineSet enables rapid solution deployment with a proven methodology. Every feature of MineSet is designed and tailored to facilitate the knowledge-discovery process.

SEAMLESS SUPPORT FOR HETEROGENEOUS COMPUTING ENVIRONMENTS

By providing native support for all the major RDBM software (Oracle, Sybase, and Informix) running on any hardware platform, MineSet gets maximum leverage from existing systems. With seamless integration capabilities into heterogeneous IT environments, you can now truly maximize your return on investment from existing data warehouse or data mart installations.

To further simplify blending MineSet into your decision support systems we provide a proven MineSet implementation services option.

SOLUTIONS THAT GO BEYOND THE STANDARD ALGORITHMS

While other vendors offer solely generic implementations of key data mining algorithms, Silicon Graphics has gone the extra mile to optimize every analytical feature for scalable performance. MineSet also includes special tool options to calibrate analytical models by assigning real-life costs to classification errors.

Because accuracy is just as critical as speed when measuring for best results, all the classification tools now come with a boosting option, allowing the user to dramatically improve model precision in certain cases.

TAILORED VISUALIZATIONS IMPROVE USER-FRIENDLINESS AND INTERPRETABILITY

By using commonly recognized graphical objects to represent data mining results, MineSet visualizers can easily convey complex data or sophisticated models. These visualization tools can not only handle multiple dimensions but also facilitate real-time drill-up and drill-down at numerous levels.

With VCR-like features such as animation, hundreds of charts representing mountains of information can be summarized with one visualization. Moreover, animation can easily depict trends and patterns by expressing how critical attributes change over key variables such as time.

THE SILICON GRAPHICS COMMITMENT TO DATA MINING

Silicon Graphics is committed to helping professional and academic decision makers achieve their business goals. Building on our leadership position in visualization, database, and server technology, Silicon Graphics has teamed with leading third-party solution providers, industry and academy visionaries, and corporate IT professionals to develop and deliver practical and innovative data mining solutions.

MineSet delivers the ultimate tools for exploratory data analysis. With MineSet, you gain a competitive advantage by turning data into knowledge and knowledge into strategy. Discover how MineSet and Silicon Graphics can be part of your formula for success.

MineSet

Industry Solutions Matrix

SOLUTIONS	Financial Services	Telecom	Government	BioChem/ Pharmaceuticals	Insurance	Retail	Manufacturing	Automotive
Churn Management	✓	✓			✓			
Risk Analysis	✓				✓			
Target Marketing	✓	✓				✓		✓
Market-Basket Analysis	✓					✓		
Category Management						✓		
Loan/Portfolio Modeling	✓							
Claims Analysis			✓		✓			
Credit Scoring	✓				✓			
Fraud Detection	✓	✓	✓		✓			
Call Behavior Analysis		✓						
Cross-Selling	✓				✓	✓		
Warranty Management							✓	✓
Business Simulation	✓					✓		
Demand Forecasting						✓		
Drug Discovery				✓				
Clinical Trials Analysis				✓				
Genomic Research				✓				
Quality/Process Control			✓	✓			✓	✓
Operations Research							✓	
Inventory Management			✓			✓	✓	✓
Capacity Planning							✓	✓

SiliconGraphics
Computer Systems