Scientific Visualization for the Desktop

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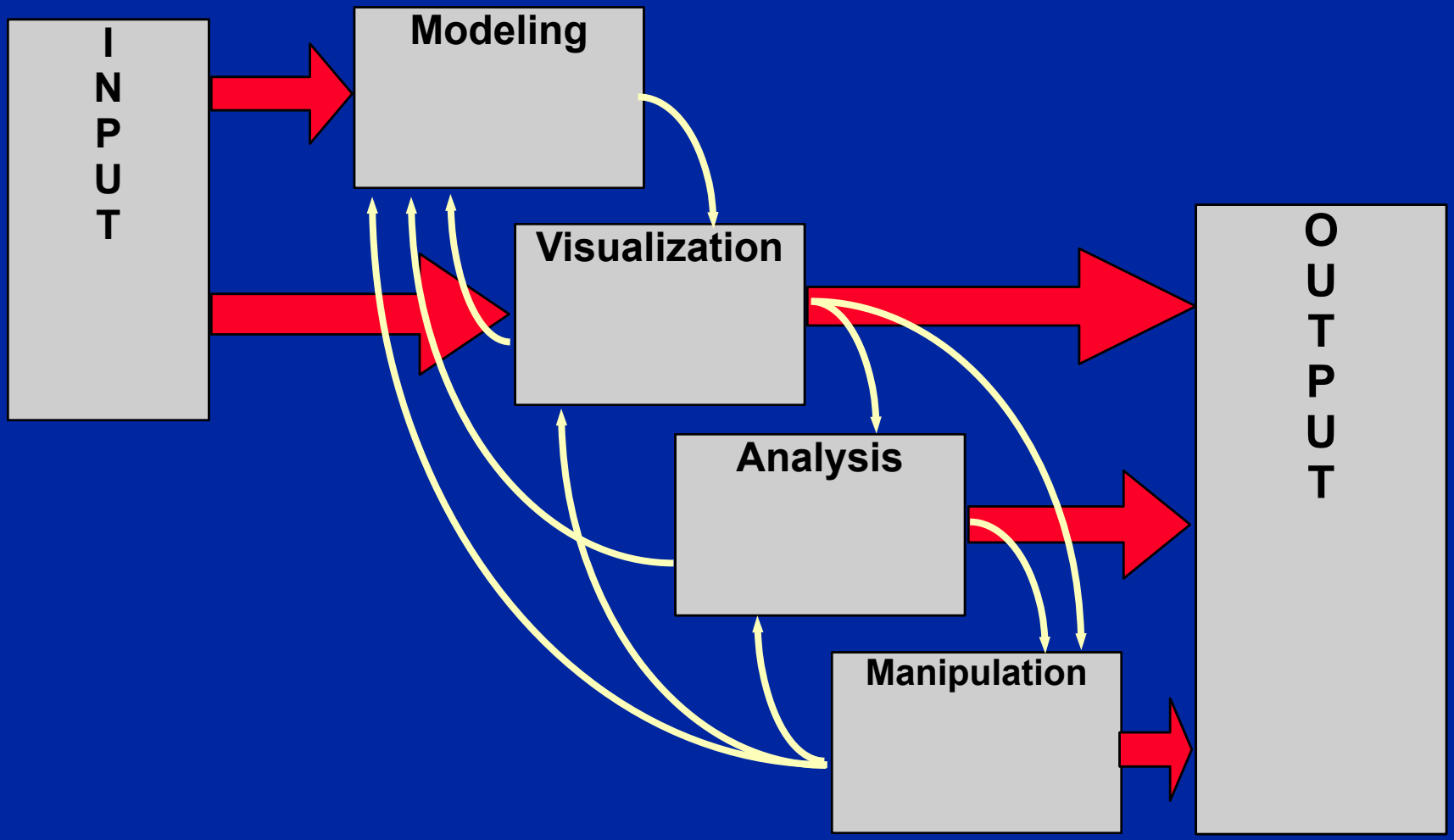
INTERGRAPH
SOFTWARE SOLUTIONS

Presentation Highlights

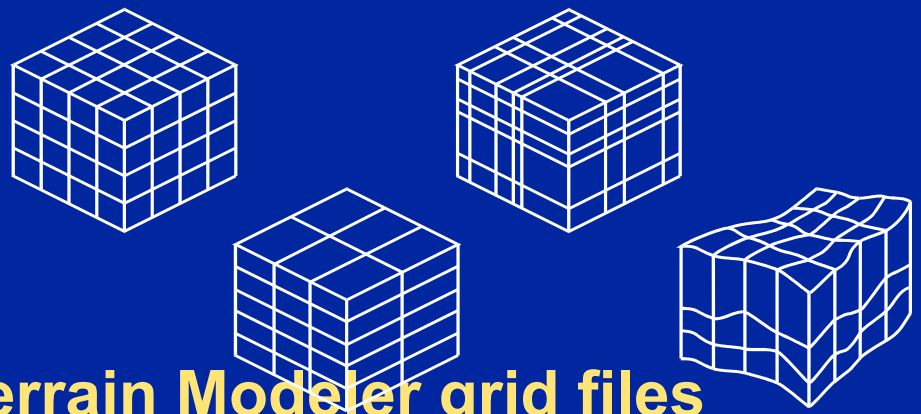
- Voxel Analyst Review
  - Workflow
  - Data Input
  - Modeling
  - Visualization
  - Analysis
  - Output
- Windows NT Benefits
- Demonstration
  - Preview Windows NT

Workflow


INPUT
Modeling
Visualization
Analysis
Manipulation
OUTPUT

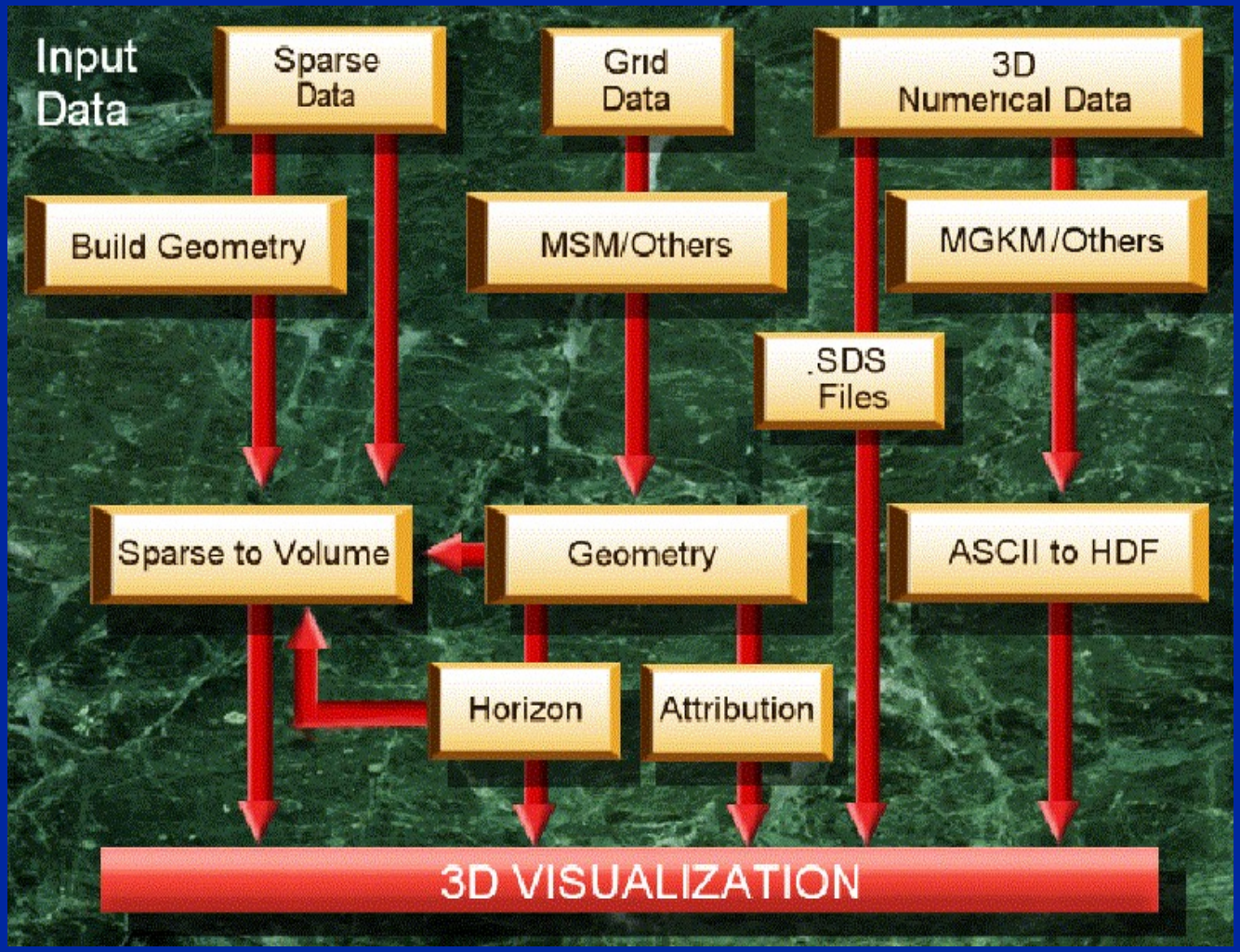
Data Input Options (ASCII)

- Sparsely sampled ASCII data
- ASCII formatted 3D grid arrays
  (Uniform, Regular, Irregular, and Structured)



- MGE Terrain Modeler grid files
  loaded as horizons or attributes
- 2D ASCII grids

Data Input (ASCII)



Data Input (Graphic)

AutoCad
MicroStation
None required

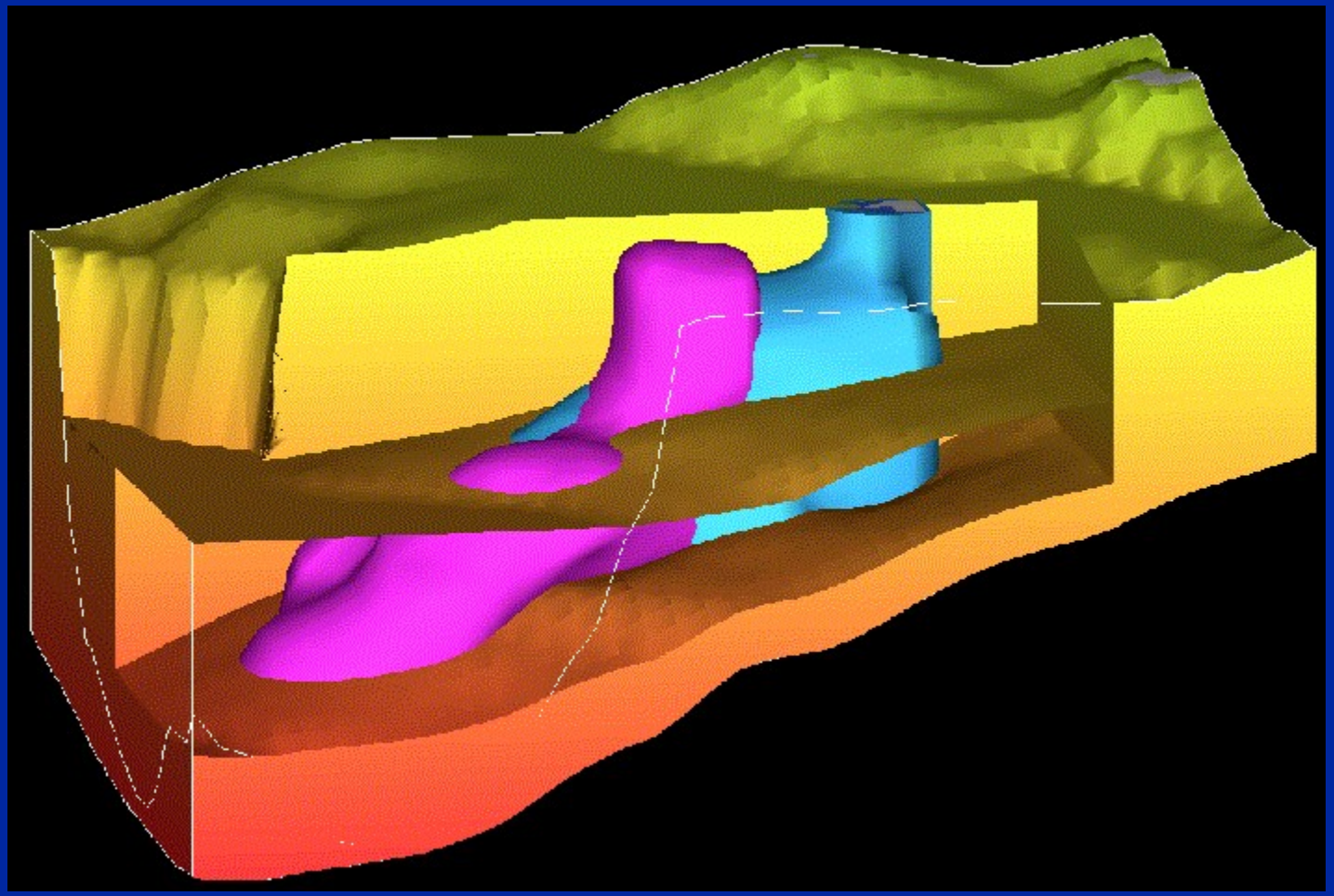
Modeling

- 5 Algorithms
- Global
- Local
  - Restricted Area
  - Symbolic

Visualization

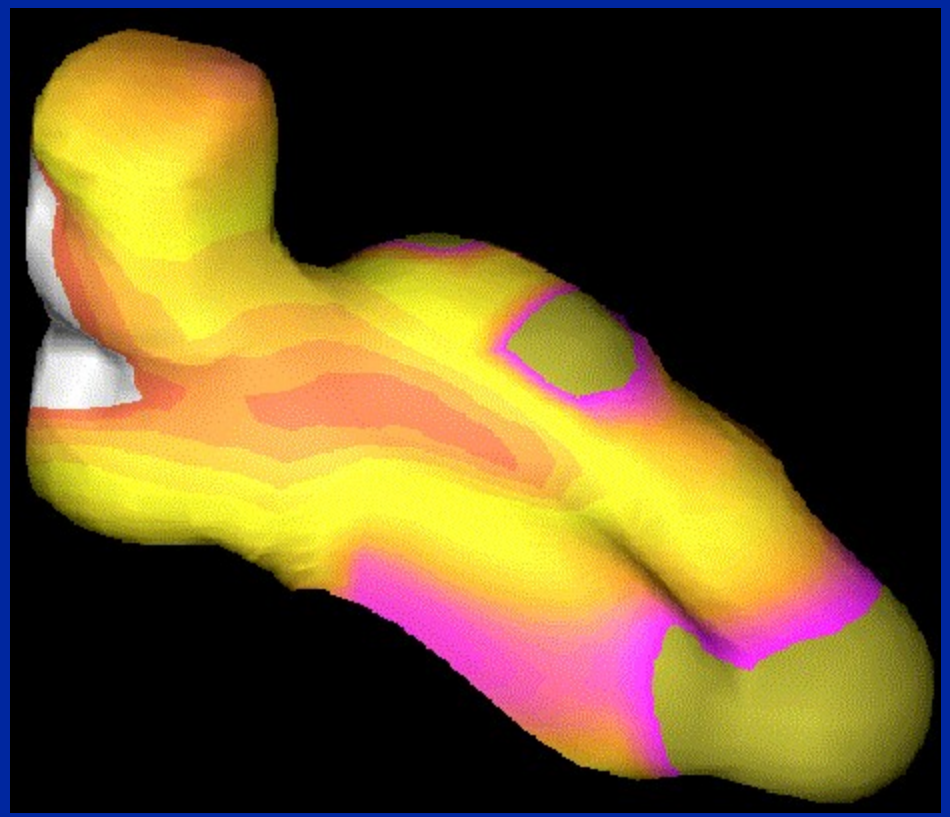
Iso-Solid, IsoSurface
Chair
Cross-section or Cutting Plane

Visualization (cont.)



Visual Analysis

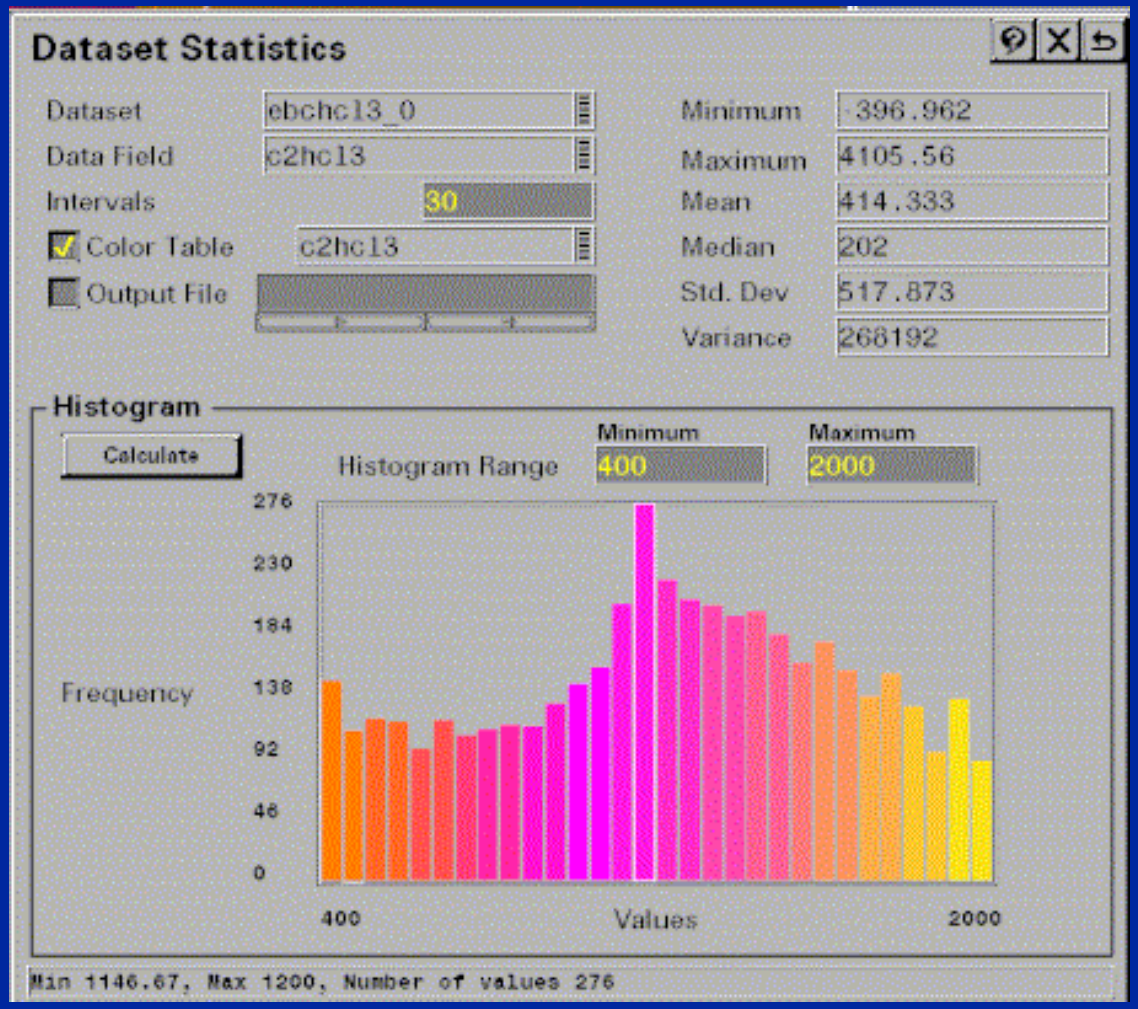
Volume Draping- a display showing the distribution of 1 attribute within a voxel model draped on the isosuface of another attribute in the same model.



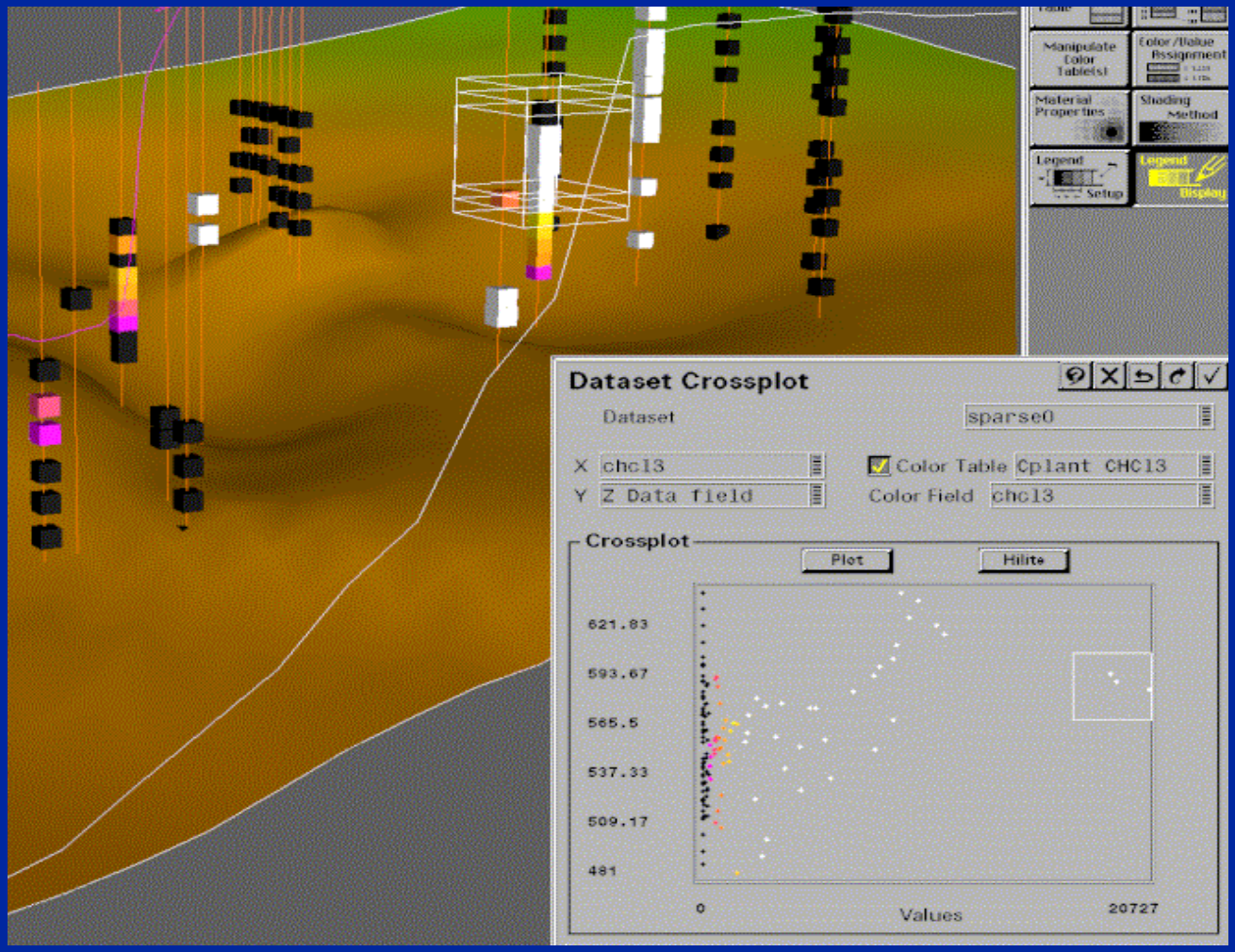
Volume Analysis Tools

- Statistics
- Crossplots
- Volume and surface area calculations
- Graphical Boolean Operations

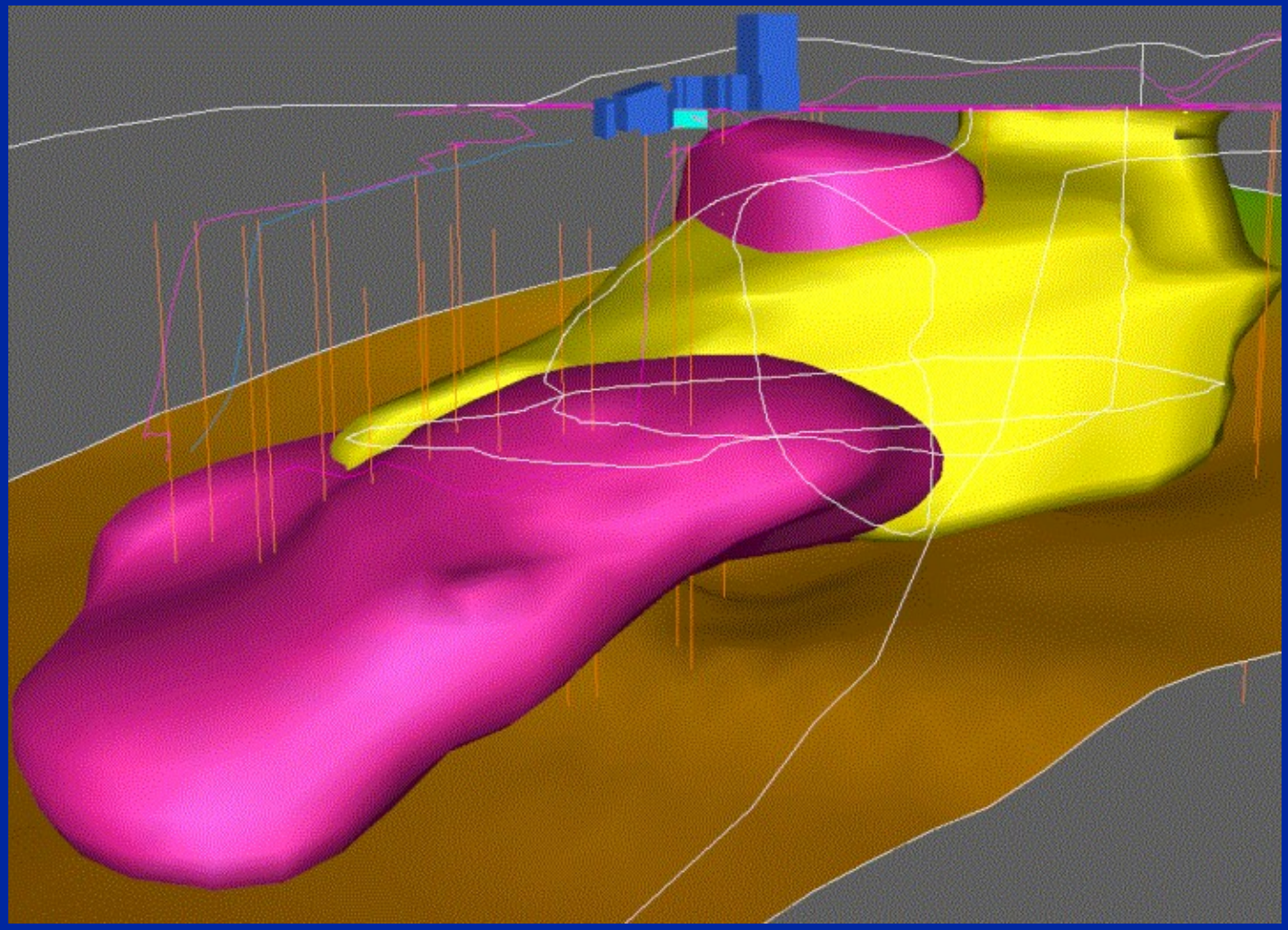
Statistics



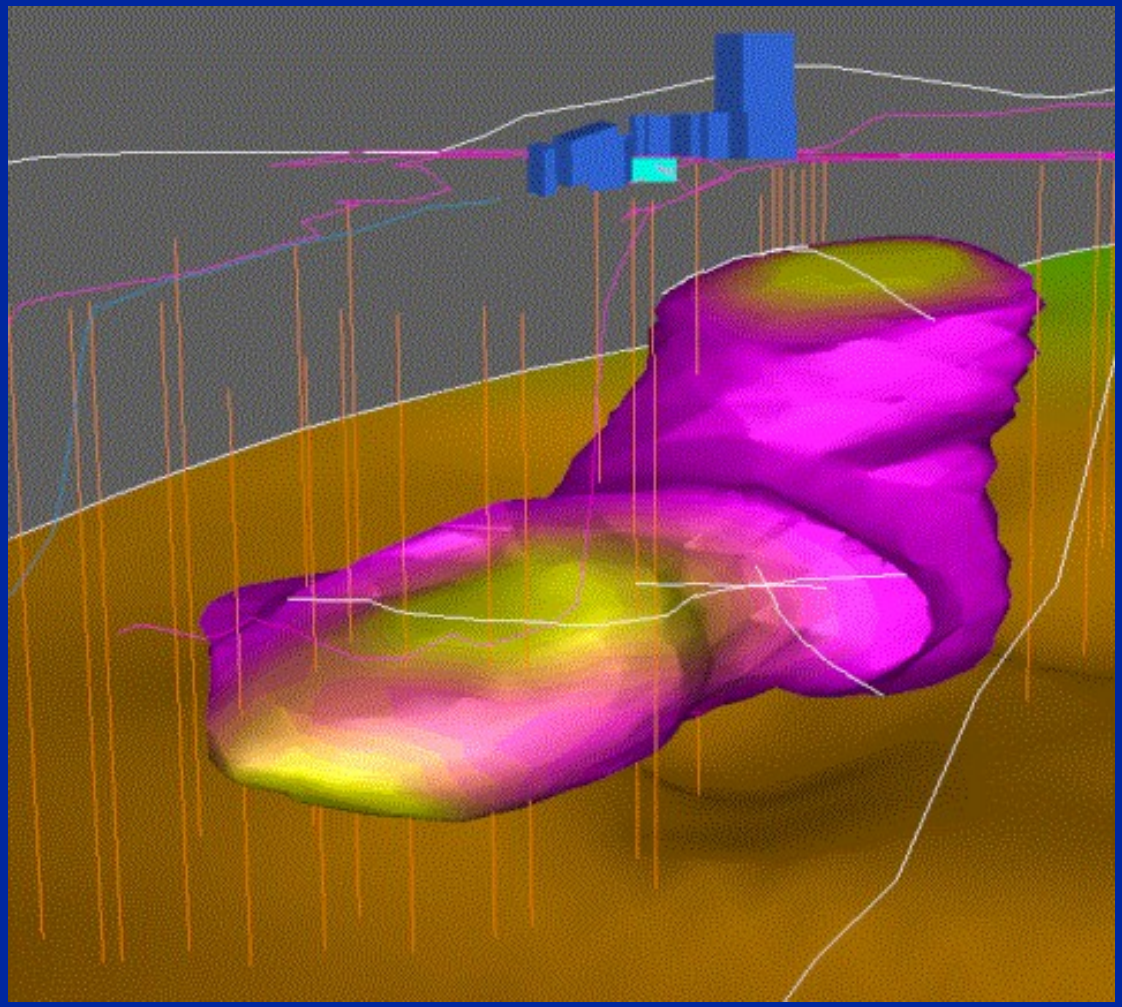
Crossplots


Manipulate Color Table(s)
Color/Value Assignment
Material Properties
Shading Method
Legend Setup
Legend Display
Dataset Crossplot
Dataset
sparse0
X chcl3
Color Table Cplant CHCl3
Y Z Data field
Color Field chcl3
Crossplot
Plot
Hilite
621.83
593.67
565.5
537.33
509.17
481
0
Values
20727

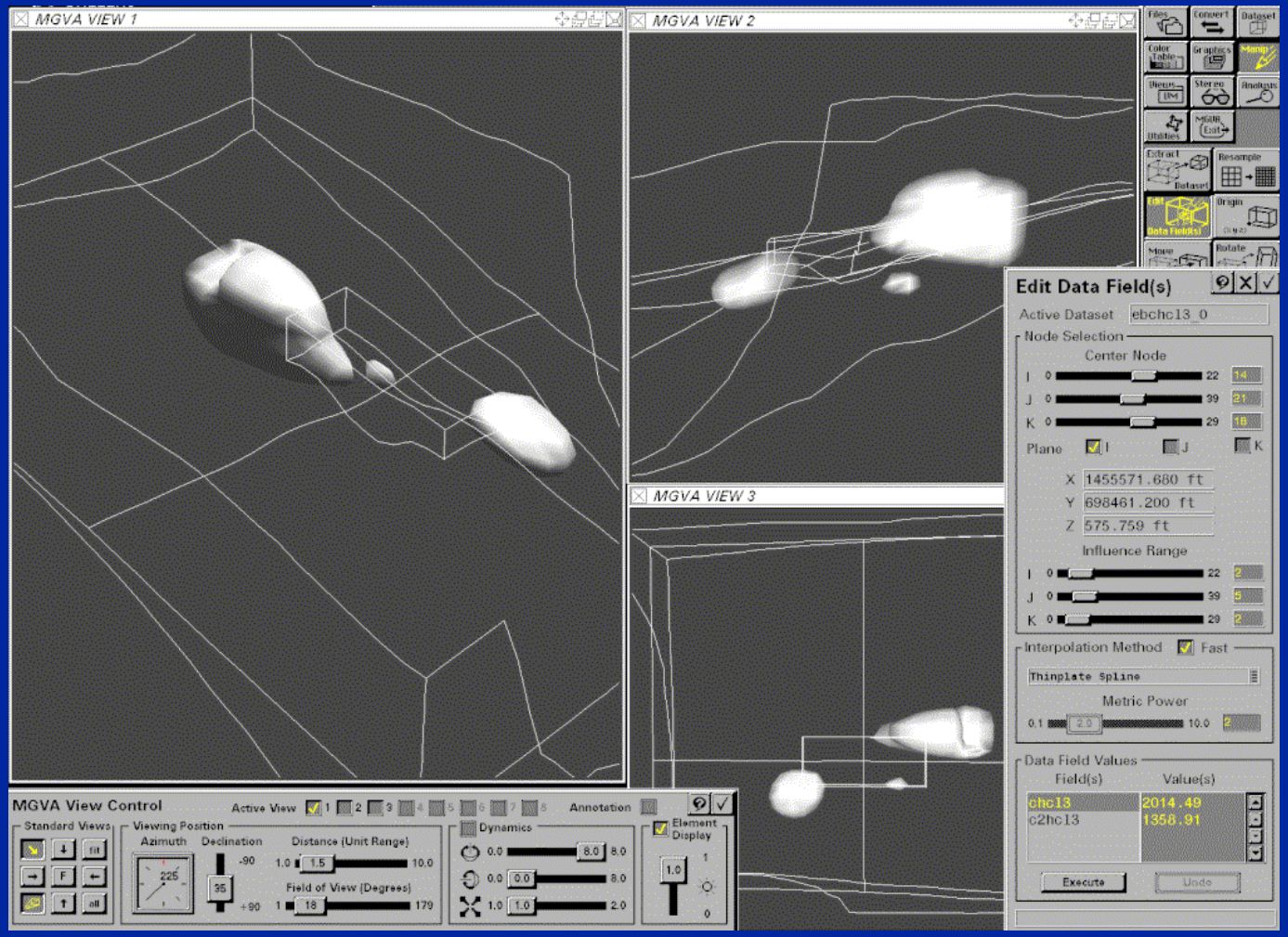
Boolean Operation



Boolean Operation (cont.)



Data Manipulation



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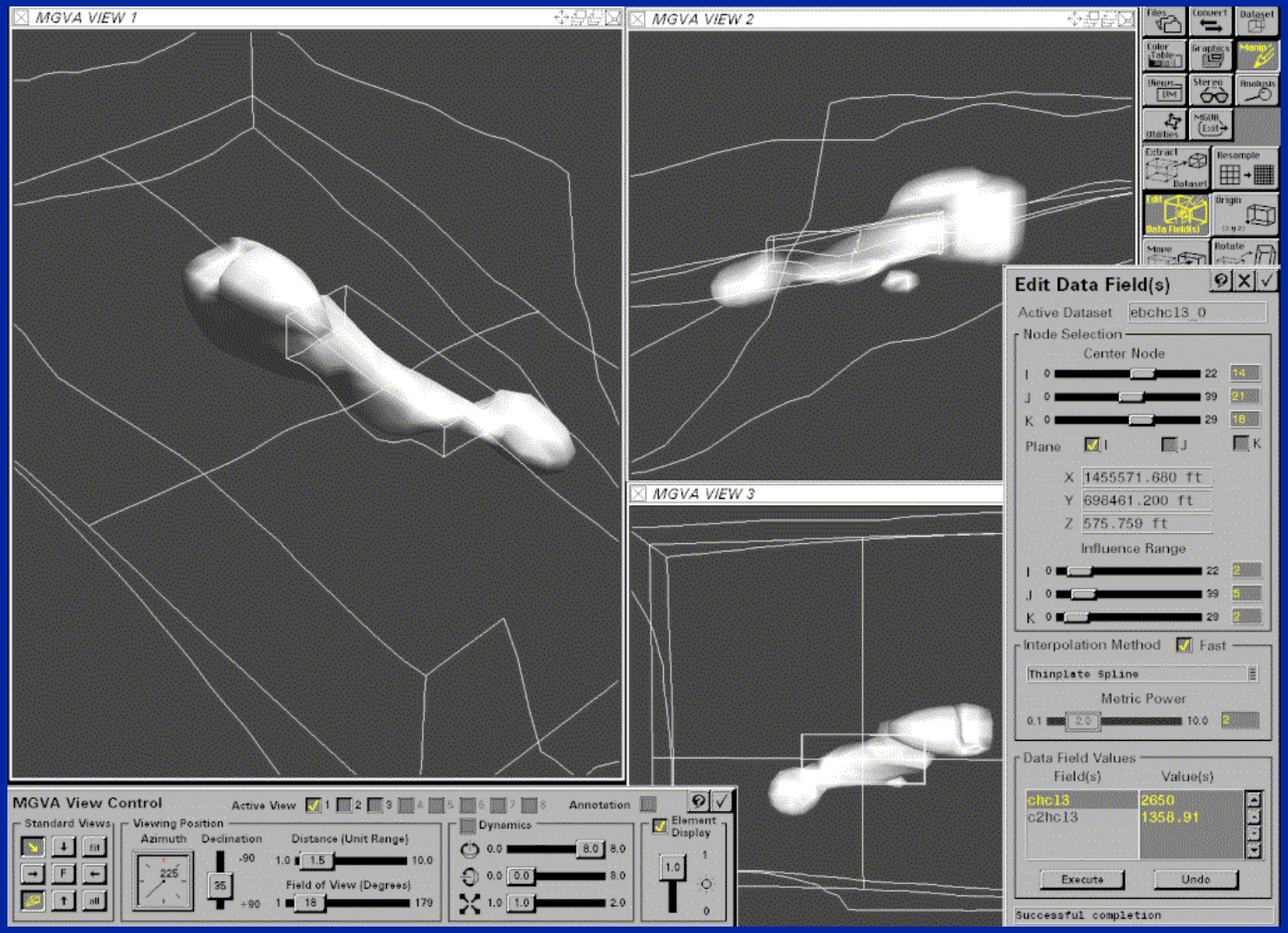
Data Manipulation (cont.)



Data Output

Raster pictures

(i.e. .tiff, .bmp, .rgb, .targa)

Vector data

(i.e. MicroStation, AutoCad)

ASCII files

(i.e. 2-D and 3-D Grid files)

Windows NT Prerequisites

Hardware (Minimum)

- 486 with 16 MB
- 256 Color
- 1024 x 768

Hardware (Recommended)

- TD-4 (dual Pentium)
- As much memory as you can get approved!
- GLZ graphics (true color)

Software

- Windows NT 3.51

Windows NT Benefits

- Ease of use (Windows NT)
- Multi-threaded application
- Standard graphics (Open GL)
- Desktop Integration
- Generic Volume Analysis Tool
  - No Software prerequisites
- New Technology.....Same Data Files

Future Voxel Releases

Windows NT 3.51 Available September 1995
Windows 95 (As soon as OpenGL is not beta)
OLE/COM tools for Volume Analysis

Questions & Answers

Voxel Analyst Panel

- Helen Triplett - Product Manager/Development
- Tom Xiao - Technical Lead/Development
- Chuck Woodbury - Software Certification/Support
- Eric Bayer - Product Planning/Marketing
- Terry Alldredge - Technical Marketing