We Need Interactive Data Interpretation Rather Than Interactive Data Visualization

Gudrun J. Klinker
(presented by Ingrid Carlbom)

Cambridge Research Lab
Digital Equipment Corporation

Workshop on Scientific Visualization Environments
SanDiego, Oct. 21-22
Data Interpretation Cycle

- Merging geometric data with array data
- Data format versus data display
- System architecture
Data Format Versus Data Display

The traditional coupling between data format and data display is too restrictive.

• Variable views of the data
  The user needs to specify interactively:
    - - which dimensions are displayed
    - - which display mechanisms are used to display the selected axes
    - - how the data along the undisplayed dimensions is treated

• Multiple views of the data
  - - One or more arrays displayable in one or more windows:
    linked cursors in several windows versus array overlays in one window
  - - Coordinate transformations between arrays, dimensionality reduction
  - - Displaying several arrays in different graphical representations
System Architecture

A customizable framework rather than a fully configured, inflexible system.

- Module hierarchies and automatic network customization
- Mechanisms for incremental data interpretation
  - Circular data flow
  - Permanent data storage
- Customizability
  - Data flow executive
  - Screen layout
  - Extensible widget set for parameters