What is AVS/Express?

An object-oriented visualization development tool

- Modular
- Hierarchical
- Open and extensible
- Hundreds of predefined application components for visualizing data
  - analyze
  - display
  - manipulate
  - interact

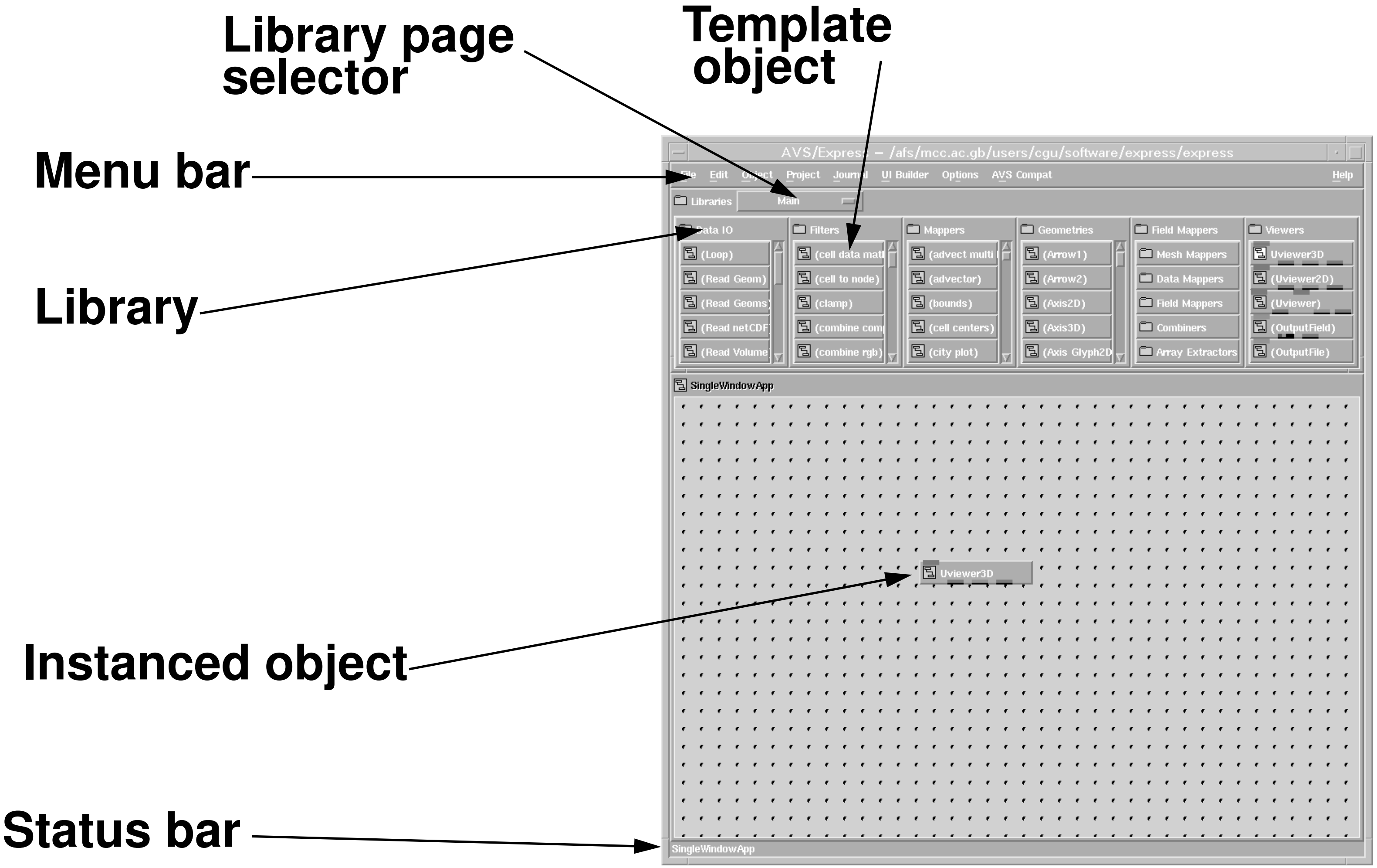
Developers and Visualization Edition

- There are two different editions of AVS/Express:
  - Visualization Edition - upgrade to AVS5
  - Developers Edition - producing custom applications within your organisation or for external customers
- Both have the same architecture
- Throughout the course we will use AVS/Express Visualization Edition

Working with AVS/Express

- Network Editor
- V Code
- Application Programmer Interface

The Network Editor



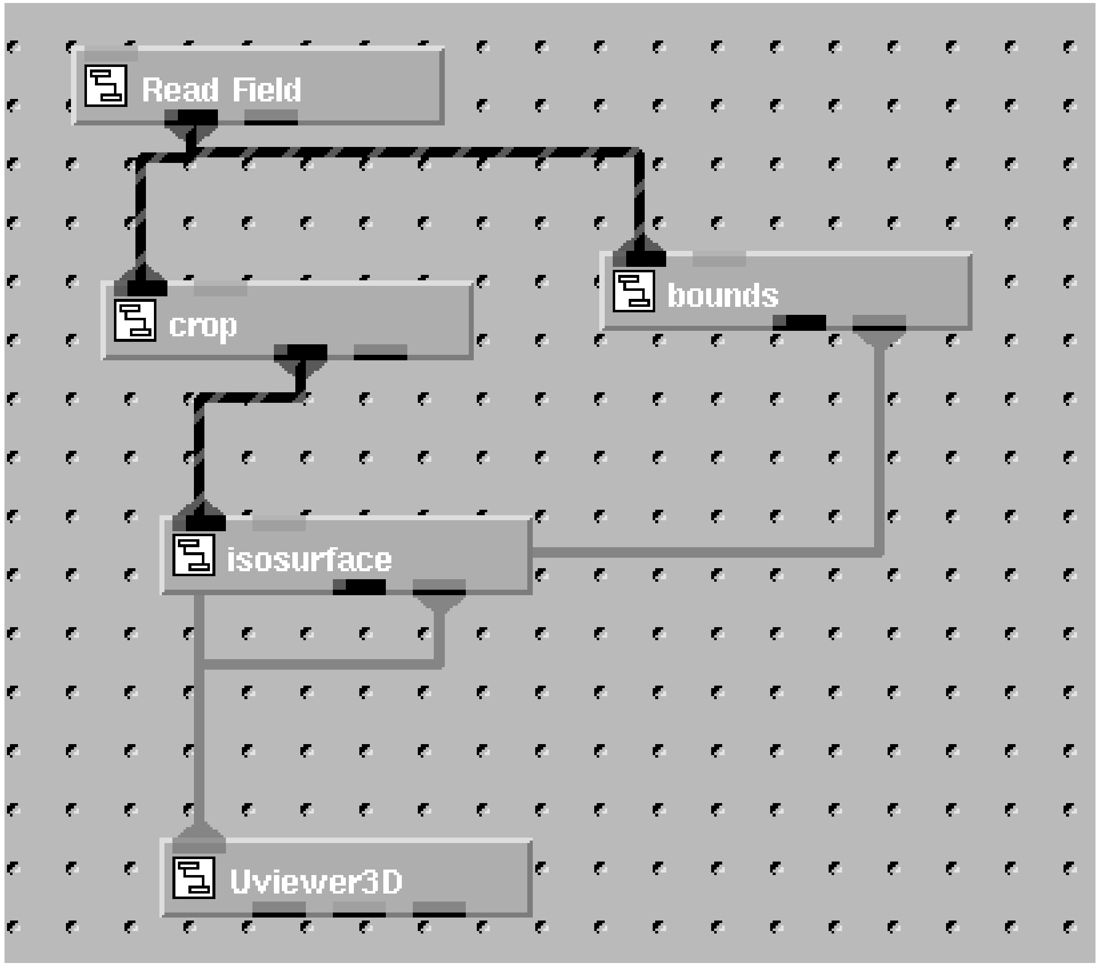
The Network Editor

- A visual editor for constructing entire range of objects
  - simple groups
  - entire applications
- Navigation
  - Finding objects
  - Instantiation
  - Connecting
  - Disconnecting
  - Grouping
  - Scaling and positioning

Visual Programming

- Libraries of objects
- Application workspace
- Objects ‘dragged and dropped’ into workspace
- Lines connecting objects represent data references
- Connections also drive execution of application

An Example Application



Network Editor Pulldown Menus

- File Menu
- Edit Menu
- Object menu
- Project Menu
- Journal
- UI Builder
- Options
- AVS_Compat

File Menu

- New Application
- Load Application
- Save Application
- Delete Application
- Exit

Edit Menu

- Cut
- Copy
- Paste
- Duplicate
- Delete

Object Menu

- Rename
- Find in All Libraries
- Find in Selected Library
- Properties
- Object Editor
- Add Module
- Add File Import Module
- Load Objects
- Save Objects

Project menu

- Edit Source
- Compile
- Reload Library
- Configure
- Save
- Save As
- Save Compiled Project

Journal

- Playback
- Record
- Stop

UI Builder

- Layout Editor
- Snap to Grid
- Group
- Ungroup

Options Menu

- Module Flashing
- Verbose Functions
- Save UI Parameters
- Auto Arrange
- Show Application UI

Help System

- Online document set
- Hypertext links
- Keyword searches

AVS Compat Menu

- Read AVS Network
- Run AVS Script
- Read AVS Module Library
- Read AVS Module
- Read AVS Remote Module

Libraries

- Main
- Accessories
- Standard Objects
- User Interface
- AVS5 Modules
- Examples
- Library Workspace

Data Viewers

- 2D
- 3D
- 2D and 3D
- We will use 3D SingleWndow

The Data Viewer

Data Viewer Scene

- World space
- 3D objects
- 3D camera
- 4 light sources
- Editable!

Scene Editors

- Module
- View
- Transform
- Light
- Camera
- Object
- Datamap

Using the Toolbar

- Transform Mode
  - rotate
  - scale
  - XY translate
  - Z translate
- Acts on
  - Current object
  - Current light
  - Current camera

Using the Toolbar (2)

- Reset
- Normalize
- Centre
- Perspective toggle
- Module Editor
- View Editor
- Camera Editor
- Object Editor