

Lecture Notes

Editor OOD.

1. Drawing facility
2. Selection facility
3. Modification facility
4. Undo facility

There are two aspects to the design, the design of the internal object model, and the design of the programming mechanisms. The programming mechanisms are secondary.

First, design a carrier object that will represent a single drawing. This object will contain sub-objects to describe the parts of the drawing. It will contain other things as well.

Design the drawing objects themselves. A good idea is to first create a base class that will serve as a carrier for the common properties of a drawing object. The different objects will be sub-classes of this class.

Organizing the drawing objects is a complex task, and is a separate research project in its own right. In our work here we will use a doubly linked list to facilitate additions and deletions. The order of the objects will be the order in which they are drawn.

The SG editor uses circles and rectangles. We could add other things.

Mouse Transactions

The primary interaction between the component and the user will be mouse transactions. A mouse transaction consists of a mouse down, one or more mouse moves and a mouse up. For drawing, only the mouse down and mouse up are important, but the behavior during mouse moves will provide important feed-back for the user.

Modes

Like most graphical editors, our editor will have modes. There will be at least three modes, select, circle, and rectangle. Mouse transactions mean different things in different modes, and will produce different results in different modes.