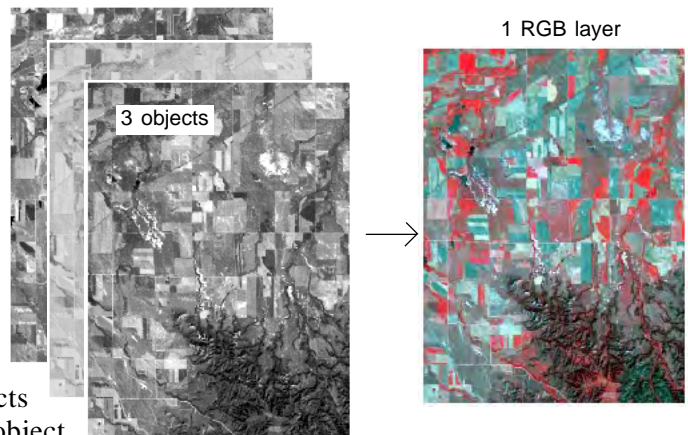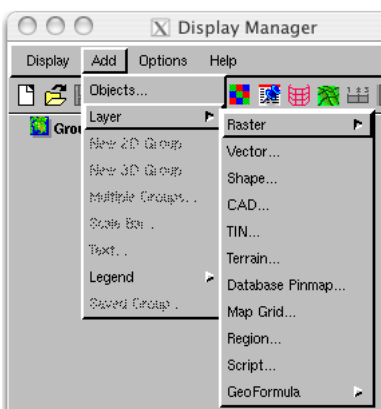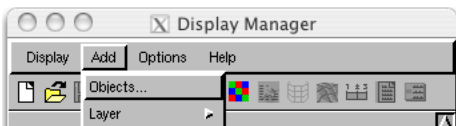# Spatial Display
Adding Layers to Existing Displays

All layer types can be added from icons and from menus, whichever you prefer. You need to have a display group or layout open to add layers to the list in the Display Manager window. Opening new or previously saved groups and layouts is described on the color plate entitled *Spatial Display: Getting Started Using the New Design*. If no displays are open, the list is empty and a shortcut exists that lets you add layers to an as yet unopened 2D group using the Add Objects icon or by selecting Objects from the Add menu. After displays are open, this same icon/menu choice will add objects to the active group (indicated by bolding in the list in the Display Manager). The items on the Add/Layers menu cascade are not active unless a display is open. A number of other items on the Add menu, such as multiple groups, scale bar, and text, are dimmed unless the active display is a layout.

Objects versus layers. An object refers to a spatially-related collection of data that appears at the first level inside a Project File or folder in a Project File. An object can be stored in raster, vector, CAD, TIN, or database format in the Project File. The word layer applies in the context of display where a layer is the lowest member in the hierarchy for display. (To complete the hierarchy, layers are always in-cluded in a specific group, and a group can exist as a display on its own or be included in a layout.) An object is the electronic source of a layer. There is often a one-to-one correspondence in the Display process between objects and layers (for example, a single vector object is always a single vector layer), but that is not always the case. Objects can also be read and combined to build layers. Many raster layers (for example, RGB, CMY, and RGBI) are composites of more than one object. GeoFormula and script layers can also combine many objects into a single layer.

3 objects

1 RGB layer

An additional distinction is made between layers and objects for the purpose of adding them in the Display process: an object selectable from the Add Objects icon or menu is any single-object layer type that can be selected and added without further input from the user. This usage of the word object, as in Add Objects, excludes combinations of raster objects, database pinmaps, scripts, and geospatial database layers. The special layer types that only exist in the context of groups and/or layouts (map grids, scale bars, text, and legends) are not objects. Map grids are added from the Add/Layer menu or the Add Map Grid icon. Special layer types that only occur as separate groups in a layout (scale bars, legends, and text) are on the first level of the Add menu, not on the Layer cascade. These entries and their corresponding icons on the toolbar are dimmed unless the active project is a layout to which they can be added.

These distinctions between objects and layers lead to two separate choices on the Add menu: Objects and Layer. Selecting Add/Objects opens the Select Objects window immediately to let you select any raster, vector, shape, CAD, or TIN object in any combination to add to the list for the active group. Each object selected becomes an individual layer. The Add Objects icon has the same behavior. Selecting Add Layer opens a cascade so you can select the specific layer type you want to add. This choice has the advantage of a refined selection filter if you are just in search of one object type. Also the last object selected for each layer type is remembered separately so the default location when the Select Objects window opens may be different for Add/Objects and Add/Layer/Vector.

Using the Skip button. When you are prompted for objects by opening a new group, if you only want to add a multiple raster layer or a pinmap, click on the Skip button in the Select Objects window to open a new, empty group. Clicking Cancel during the selection process will cancel opening the new group. For the layer types that cannot be added using the Add Objects icon, you should initially choose Empty 2D from the New Display icon or from the Display/New menu.