Select Objects for Use

In TNTgis you select geospatial data for viewing and analysis using the *Select objects* window (which may have varying names depending on the context). The upper part of the window has several tabbed panels with controls you can use to specify files or objects to add to the selected list at the bottom of the window. You can use the controls on the Browse panel to select local data by navigating your computer and network file system directly, as described in this Technical Guide; or select Internet-based data such as web tilesets hosted by MicroImages, KML files, WMS layers, and others, as described in the TechGuide entitled *System: Using Internet-based Maps and Images*. You can create a list of frequently-used spatial objects that is maintained on the Favorites panel for quick selection. The Recent panel automatically shows a list of your most recent selections. You can use the Catalog Search panel to search for local or web data by geographic location and/ or by text contained in the object, file, or folder name or the file or object description (see the TechGuide entitled *System: Searching Geodata Catalogs*).

The sidebar to the right of the tabbed panels can include a Tree View of the current folder path and a Preview of an object you have highlighted in the list on one of the tabbed panels. Icon buttons at the top of the sidebar allow you to turn the Tree View and Preview panes on or off, and to hide or show the entire sidebar.

Browse Panel

The Navigation Bar at the top of the Browse tabbed panel provides controls for manually navigating through your computer's drives and directories to locate the desired items. The contents of the current directory, file, or Project File folder are shown in the list below these controls. The *Files* and *Objects* controls below the browse list can be used to restrict the types of files or objects listed, as described in the section *File and Object Filters* below. Once you have navigated to the correct location, choose one or more objects from the browse list and press [OK]. To select objects/files from multiple Project Files/directories, add each to the Selected list at the bottom of the Select Objects window before navigating to the next location.

Navigating

The navigation bar shows the components of the path to the current folder or file, beginning with the drive letter or volume name on the left and proceeding through folders and subfolders toward the right. The last (deepest) component of the path has
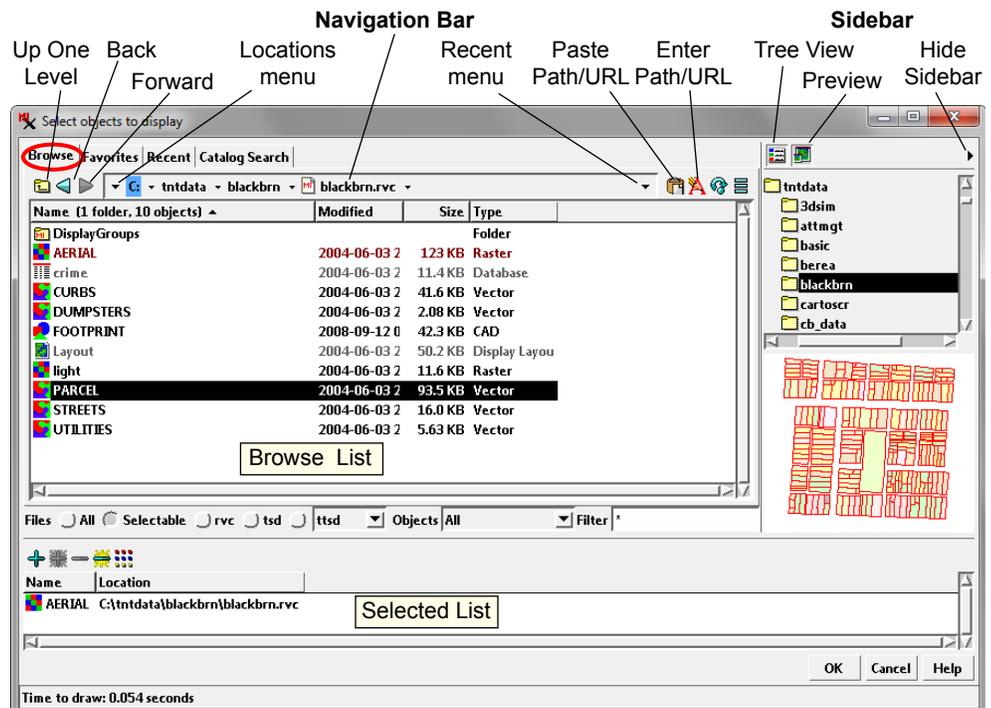
Select Objects window with the Browse tabbed panel exposed.

an icon to the left of the name, identifying it as a file, folder, or drive. You can use the navigation bar in combination with the browse list below it to navigate to the desired destination.

Browse List Items: The browse list for a folder shows names and icons for all of the contained subfolders and files. You can left-click on a folder or file icon, or double-click on the name, to navigate down one level into the folder or file. You can navigate into MicroImages Project Files and into files in any format supported for direct use in TNTgis if these files contain multiple spatial objects. Examples are TIFF and JP2 files containing multiple image bands and ESRI geodatabase files containing multiple shape objects. The contents list for a file shows names and icons for all of the contained objects.

Folder Names: You can jump to any level in the current path by clicking on the name of a folder (or drive/volume name) in the navigation bar.

Up One Level: Press the *Up One Level* icon button to the left of the navigation bar to move upward one level in the directory hierarchy.

Back and Forward: You can also press the *Back* icon button to the left of the navigation bar to step back through the last-used folders. Once you have pressed the *Back* button, the *Forward* icon button also becomes active so you can step forward through the last-used sequence of folders.

Path Separator Buttons: In the navigation bar a small arrowhead icon appears to the right of the drive entry and each folder

entry in the path (see illustration below). Clicking on this icon drops down a menu from which you can choose any subfolder at that level. That subfolder will then appear as the next component to the right in the path.
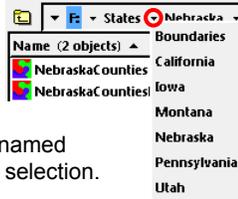
Dropdown menu for the folder named States, listing its subfolders for selection.

Locations Menu: Pressing the *Locations* icon button (large black down-pointing arrowhead at the left end of the navigation bar) drops down a menu that provides high-level navigation options. The upper portion of this menu (number 1 in the example illustrated below) provides the options *Web*, *Computer*, *Desktop*, *Home*, and *Network* (the latter only on Windows computers). The *Web* option shows a hierarchical listing of Internet-based map and image layers, including web tilesets and KML files hosted by MicroImages and cataloged Web Map Service (WMS) and ArcIMS layers (see the TechGuide entitled *System: Using Internet-based Maps and Images*). The *Computer* option shows in the browse list all of the drives or volumes accessible from your computer. The *Desktop* option jumps to your Desktop folder, while the *Home* option jumps to your User folder. The *Network* option allows you to access other computers available on your Windows network.
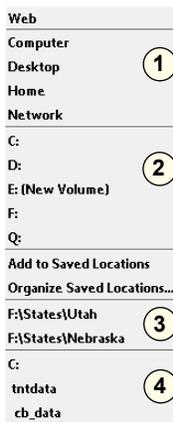
The section of the Locations menu labeled 2 in the illustration lets you jump to any drive or volume available to your computer.

Section 3 on the Locations menu is present if you have used the *Add to Saved Locations* option in the menu. This option adds the path to the current drive or directory to the Saved Locations section in the menu, allowing you to directly choose frequently-used directories from the menu. If you have saved locations, the *Organize Saved Locations* option is also provided in the menu. Choosing this option opens a window that allows you to remove any saved location from the menu.

The section of the Locations menu labeled 4 in the illustration has selections for each component of the path above the current level; this section is not shown if there are less than three levels above the current level.

Recent Paths Menu: Pressing the *Recent* icon button (large black arrowhead at the right end of the navigation bar) drops down a menu listing the most recent paths used in any process (maximum of 20 listings). You can use this menu to move to any recently-used folder.
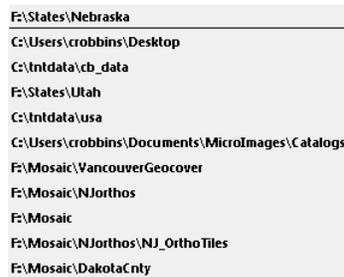
Entering or Pasting a Path or URL: You can manually type a directory path or a web URL into the navigation bar by pressing

the *Enter Path/URL* icon button or by left-clicking in the blank portion of the navigation bar to the right of the last path component. You can also paste a path or URL from the clipboard into the navigation bar by pressing the *Paste Path/URL* icon button.

The latter option is especially useful when you are selecting tileset TSD files or KML files from a web location for display or for use in the Assemble Geomashup process (see the TechGuide entitled *Geomedia Publishing: Adding Custom Web Layers to Geomashups*).
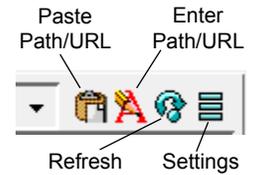
Default Browse Location: The Select Object window opens with the browse path set to a default location dependent on your previous selection actions. The Start Browse Location toggle options in the Settings icon button menu let you choose how that default location is determined. If you choose the *Separate for each process* option, the default browse location is set from your last selection in the current process. If you choose the *Shared by all processes* option, the last selection location used in any process (input or output) sets the default browse location. This option may simplify the navigation steps when you are processing data in sequence through a number of different processes. In this mode the last selection location used in the current process is included at the top of the Recent icon button menu.
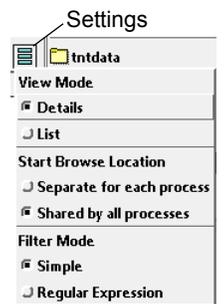
Sidebar Tree Control: The Sidebar tree control automatically updates to show the current directory level set by the other navigation controls. It can also be used directly to navigate through your drives and folders. You can use the vertical scroll bar to scroll through all of the drives and their main-level folders available to your computer. A "+" control next to a folder icon indicates that it contains subfolders; press this icon button to expand the folder to show the subfolders (the icon changes to a "-" icon that you can press to collapse the folder). Left-click on a folder entry to set it as the current folder and show its contents in the browse list on the Browse tabbed panel.
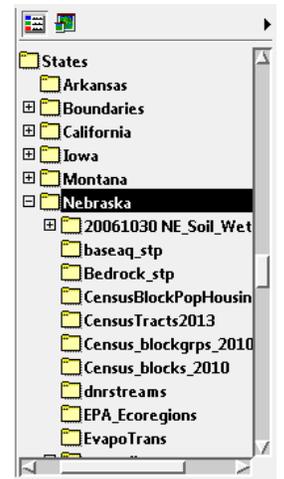
Browse List
The browse list below the navigation bar shows the contents of the current file or folder. If the contents of the current folder change while the Select Objects window is open, you can press the Refresh icon button to the right of the navigation bar to update the browse list.

Highlighting and Selecting Objects or Files: You can select objects or files from the Browse list in several ways. Left-clicking on the icon for an object in a Project File (or a single-object

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external file such as a shapefile or KML file) adds the object to the Selected list; double-clicking on the name has the same result. You can also highlight one or more objects or supported external files in the browse list for selection using the *Add* icon button in the Selected list. Left-click on an object or file entry to highlight it exclusively. If no entries have been highlighted, right-clicking on an entry also highlights it. Left-click on two list entries while holding down the Shift key to highlight those two entries and any entries in between them. Left-click while pressing the Ctrl key to toggle highlighting of an entry on or off.

When you have navigated into a Project File (or external file with multiple objects), the OK button on the Select Objects dialog is activated when you highlight one or more objects in the browse list. If all of the objects you wish to select are highlighted, you can simply press [OK] to select them for the current process; you do not need to add them to the Selected list first. However, highlighting single-object external files (such as shape files) does not activate the OK button; these files must be added to the Selected list (see the section on the Selected list below). You may also wish to select objects from multiple Project Files or folders in one operation; to do so, add each to the Selected list before navigating to the next destination. When all desired objects are in the Selected list, press [OK].

single-object external file) shows a DataTip with position and extents information and a graphic showing the location and extents of the object.

Left-click on any column heading to sort the list alphabetically by the entries in that column; left-click again on the same heading to reverse the sort order. Right-clicking on any column heading reveals a menu with choices to Sort Ascending, Sort Descending, and Fit to Content (which changes the column width to fit the widest entry). The final menu, Choose Columns, opens the Choose Columns window, which lets you pick which information to include in the list. In List mode the column headings are shown so you can sort the list by the hidden contents of these columns.

Right Mouse Button Menu: Right-clicking on the browse list with one or more entries highlighted opens a menu that lets you take actions on or show information about the highlighted items. The options on this menu vary depending on the number and type of entries highlighted. For all selections the menu includes the options *Add to Favorites* (see next section) and *Delete* (which deletes the object, file, or folder from your system). When only a single folder, file, or object is highlighted, the menu also includes

the *Rename* option. When a spatial file or object is highlighted, *Properties* and *Metadata* options are included. The Properties option opens a window showing file or object details including path, size, creation and modification dates, along with a list of contained objects and subobjects. The Metadata option opens a window showing any metadata that has been created for the file or object. For MicroImages Project Files and objects the menu also includes an *Edit Access Control List* option, which opens a login dialog for the access control list (see the TechGuide entitled *System: Access Control Lists*).

Browse List View Mode: The format of the browse list is set using the toggle options in the View Mode section of the Settings icon button menu. The *Details* option (the default) shows one entry per line in the list, with additional information shown in columns. If some list items are not visible at the current window size, the list can be scrolled vertically using the scroll bar to the right of the list. The *List* option arranges all of the entries in multiple columns (if necessary), and the list can be scrolled horizontally if there are multiple columns that do not all fit within the list pane. These options are illustrated above.

Browse list in Details view mode

Browse list in List view mode

Favorites Panel
You can add frequently-used spatial objects and files to the list in the Favorites tabbed panel (illustrated below) for easy selection. You can select and highlight objects and files in this list in the same ways as in the Browse panel list. When you highlight an
(continued)

Columns and Sorting: In Details mode the browse list includes a Name column and optional additional columns such as Type (for files), Created, and Modified (providing creation and last-modified dates, respectively). You can drag the separators between the column headings to resize columns and drag the column headings to reorder the columns. Pausing the mouse cursor over the name of a spatial object in a file (or the name of a

item in the Favorites list, its enclosing folder is highlighted in gray in the Tree View pane (if open). Choosing another folder in the Tree View automatically switches the window to the Browse tabbed panel.

You can add an object or file to the Favorites list from either the Browse or Recent tabbed panel. Highlight the desired items in the Browse or Recent list, then right-click and choose *Add to Favorites* from the pop-in menu.

The Favorites list shows the name of each object or file by default. However, you can provide a different name for any listed item. To do so, highlight the item in the list and press the *Rename* icon button. A Rename window opens allowing you to edit the name of the item in the list. This action only applies to the Favorites list; it does not alter the actual name of the object or file. To remove one or more items from the list, highlight the entries and press the *Remove from Favorites* icon button.

Recent Panel
The Recent tabbed panel lists up to twenty of the objects most recently used in any process. You can highlight and select objects from the Recent list in the same ways as in the Browse list. You can also add any items in the Recent list to the Favorites list using the right mouse-button menu. You can also remove any highlighted items from the Recent list using the *Remove from Recent* icon button.

Catalog Search Panel
The Catalog Search panel provides controls that allow you to search for local or web data by geographic location and/or by text contained in the object, file, or folder name or the file or object description. See the TechGuide entitled *System: Searching Geodata Catalogs* for a description of this panel.

Preview Pane
The optional Preview pane in the sidebar automatically displays a thumbnail rendering of the spatial object currently highlighted in any of the lists, including web layers such as web tilesets, KML files, and WMS layers (see the TechGuide entitled *System: Preview Local and Internet Geodata Layers*). If the object is too large for the thumbnail to be drawn immediately, an arrow icon button is shown in the center of the Preview pane; you can press this icon button to draw the Preview. You toggle the Preview pane on or off using the Preview icon button at the top of the sidebar.

File and Object Filters
The File and Objects filters below the Browse, Favorites, Recent, and Catalog Search panels allow you to limit the entries shown in these lists by file type, object type, and by file or object name. These controls (illustrated below) provide variable content depending on the selection context.

The Files control provides options selected using radio buttons. The *All* option shows all files at the current level, while *Selectable* shows only those that can be selected for the current operation. The *RVC* option at the folder level shows only MicroImages Project Files and excludes from the list other external file types that can be used in TNTgis. One additional file radio button is provided for a recently-used file type, and another is provided to allow you to apply a choice from the adjacent menu, which provides choices appropriate for the current selection context. For example, when you choose an option from the Add Raster menu in the Display Manager, file filter options are presented for raster file types that can be directly displayed.
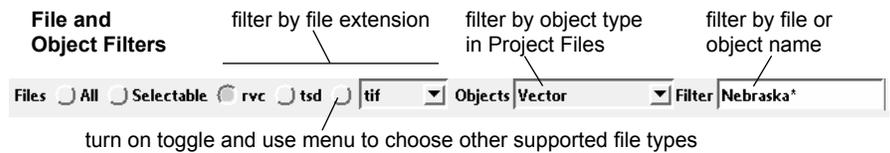
The *Objects* menu provides a list of object types appropriate for the current selection context; choose one at the Project File level to limit the list to objects of the selected type.

The *Filter* field allows you to filter a file list or object list by a pattern match on the file/object names. Use the Filter Mode section of the Settings menu to set the type of pattern matching you can use; the choices are *Simple* and *Regular Expression*. The *Simple* mode allows you to use simple wildcard characters: "_" to match any single character and "*" to match any character string (see example illustrated below). The *Regular Expression* option allows you to use powerful regular expression syntax to match more complex text patterns. An explanation of regular expressions is beyond the scope of this document; see the web page referenced below for an explanation of the regular expressions available for use.

http://userguide.icu-project.org/strings/regexp
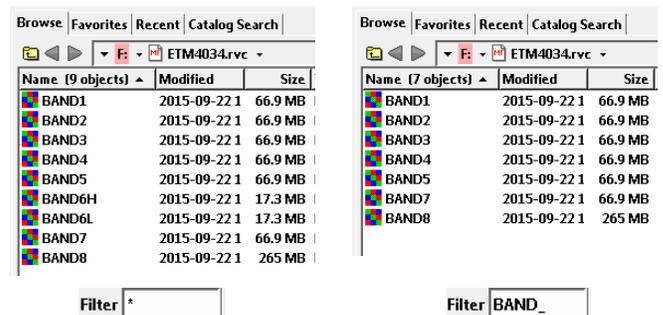
Left, object list unfiltered (Filter field set to match any character string using the "*" wildcard). Right: list filtered to show only object names consisting of "BAND" followed by a single character (using the "_" wildcard).

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If you use the File controls to filter by file type, the search string you enter in the Filter operates on the file name only and does not need to match the file extension.

Selected List

In processes that allow selection of multiple objects, the lower portion of the Select Objects window includes a list of the objects you have selected. You can add objects from the list of a file's contents (or single-object external files from a folder listing) to the selected list in several ways, as discussed in previous sections:

- left-click on the icon for the object/file in the browse list
- double-click on the name of the object/file in the browse list
- highlight one or more objects/files in the browse list and press the *Add* icon button on the Select pane toolbar
- press the *Add All* icon button on the Select pane toolbar to add all objects/files in the browse list (whether highlighted or not).

Add All Remove Remove All

Add ——— + ✚ — ✖ ⠿ ———Views

Name	Location
topereg	F:\States\Nebraska\NEtopoRegions.rvc
NebraskaCounties	F:\States\Nebraska\NebraskaCounties.rvc

OK   Cancel   Help
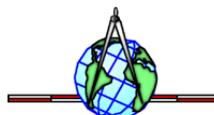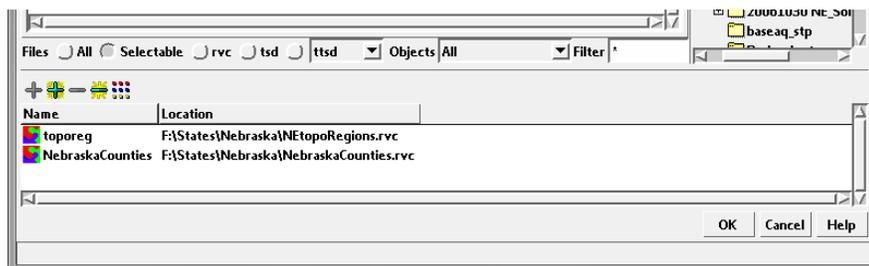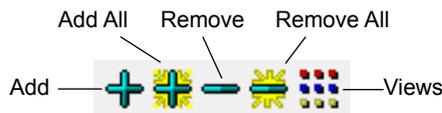
When the current browse level is a folder containing Project Files and/or external files with multiple objects, using the *Add* icon button for highlighted files (or the *Add All* button) adds all of the objects contained in the relevant file or files to the selected list. For example, highlighting a 4-band JP2 file in the browse list and pressing the *Add* icon button adds all four of its contained raster objects to the selected list. On the other hand, clicking on the file's icon button or double-clicking on its name navigates into the file, allowing selection of individual objects.

If you use the *Add All* option when the browse list includes folders, an Add window opens to let you specify how the folders should be handled (see illustration to the right). You have the option to skip the folders and only add the files at the current level; to

add files from the folders but not from any subfolders within them; or to add all files in the folders and any of their subfolders. You can enter a search string in the *File Names Matching* and/ or *Object Names Matching* field to filter the result by name and/ or extension. These fields use the filter mode you have set for the *Filters* field.
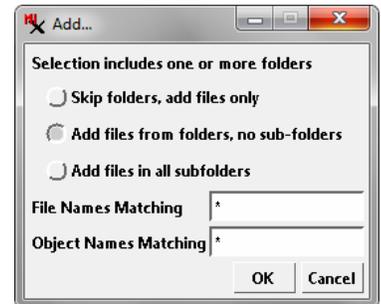
You can use the *Views* icon button menu on the Selected panel toolbar to switch the selected list between *Details* and *List* modes (see the previous discussion of the browse list). You can also remove items from the selected list if needed. To remove a single item, highlight it in the list and press the *Remove* icon button. Press the *Remove All* icon button to remove all items from the list.