Tile Tabs Configuration
Tile Tabs Configuration contains options for different ways to arrange Viewing Tabs in the Viewing Area.

Tile Tabs Configuration in Workbench Window
This section contains the tile tabs configuration for the selected Workbench Window. If a Scene is saved, the selected Configuration is saved to the Scene and is restored when the Scene is displayed.
Workbench Window
Selects the window for control of the window's Tile Tabs Configuration

Active Configuration Type

- **Automatic Grid** – This is the default selection and Workbench will adjust the number of rows and columns so that all tabs are displayed. The first tab will be in the top left corner with subsequent tabs appearing to the right and wrapping to the next row when a row is filled. Use Custom Grid or Manual when Automatic Grid does not produce the desired layout of tabs.

- **Custom Grid** – Allows the user to customize the configuration of the Tile Tabs grid layout including number of rows, number of columns, heights of the rows, and widths of the columns. If the Custom Configuration contains insufficient rows and columns for the Window's Tabs, some tabs will not be displayed. Conversely, there will be empty space at the bottom when the Tile Tabs Configuration contains space for more tabs than are currently in the Window. The user may also designate rows or columns as 'Spacers' that are typically used for text annotations row/column headers.

- **Manual** – A better name for "Manual Configuration" may be "No Configuration" as wb_view makes no effort to position and size tabs in the window. Instead, it requires the user to position and size all tabs, providing the utmost in layout flexibility. Tabs may be placed anywhere in the window including partially outside the window and a tab may overlap other tabs. Unlike the Custom Grid, there is no editing of the configuration to add or remove tabs. Adding a new tab (File Menu -> New Tab), places the new tab in the window and the user will need to adjust the position and size of the new tab. When a tab is removed (File Menu -> Close Tab, or clicking a tab's Close button in the tab bar), the tab is removed from the window opening up space for other tabs. The position and size of each tab is edited on the Tile Tabs Configuration Dialog or using the more powerful options in the Window’s “Tile” mode. To assist with creating a new Manual Configuration, options exist for initializing
the tab positions from the Automatic or Custom Grids. Lastly, in a Manual Configuration, the display of individual tabs can be disabled and may be useful when working with and possibly annotating overlapping tabs.

**Manual Set Button**

On the right side of the Manual Selection (Round) Button is a button titled "Set..". When "Set.." is clicked, a menu appears that allows the user set initialize the size and position of the tabs using using a grid.

- **Replace with Automatic Grid** – The position and size of the tabs is initialized with the Automatic Grid
- **Replace with Custom Grid** – The position and size of the tabs is initialized with the Custom Grid

- **Reset with Grid** – A dialog appears asking the user for the number of columns. The number of rows in the grid will be sufficient to contain all tabs and is used to set the position and size of all tabs.

Since a user may have tile tab configurations that are useful with other data sets, options are available to save the current configuration or initialize the current configuration with a previously saved User Configuration. In addition, Template Configurations are available to initialize the geometry of a configuration.

**Active Configuration Settings**
Custom Grid Rows/Columns Editing

- **Index** – The index of the row or column.
- **Construction Menu** – Allows the user to duplicate, move, or delete rows and columns.
- **Content** – The content of the row or column chosen from Space or Tab. The content of 'Space' is limited to annotations in "Spacer Coordinate Space" or "Window Space" Annotations. The content of 'Tab' is limited to display of a browser tab along with annotations in spaces other than "Spacer Coordinate Space."
- **Type** – The type of 'stretching' chosen from Percent and Weight.
- **Stretch** – The stretching value. When the Type is Percent this value is a percentage and when the Type is weight it is the weight for this...
row/column.

**Explanations of Stretching**

The space allocated to a row is determined by a combination of the Stretching Type and the Stretching Value. (Note that row and column stretching function identically but along different axes) as described below.

**Percentage Stretching Type**

When a row's Type is set to Percentage, that row is allocated the associated Percentage value of the window's height. Thus, if the row's Percentage Height is 20% and the Window is 1000 pixels in height, the row is 200 pixels in height. The Percentage value for each row should be in the range 0% to 100%. If the rows that use Percentage sum to more than 100%, then part or all of the last rows may not be displayed (likewise for columns). If there are no rows/columns that use Weight, then there may be blank unused space, depending on the percentages used."

**Example of Percentage Stretching**

- Row 1: 20%
- Row 2: 50%
- Row 3: 30%

Result for a Window 1000 pixels in height:

- Row 1 Height: 200 pixels (20% of 1000)
- Row 2 Height: 500 pixels (50% of 1000)
- Row 3 Height: 300 pixels (30% of 1000)

**Weighted Stretching Type**

When a row's Type is set to Weight, the Height of the row is affected by Stretching Values of all Rows with the Stretching Type set to Weight. To determine the height of the a row, the weights from all rows are summed and the row's weight is divided by the sum. This result (row's weight divided by sum) becomes the percentage of the window's height allocated to the row.
Example of Weighted Stretching

- Row 1: 1.0
- Row 2: 2.0
- Row 3: 1.0

Result for a Window 1000 pixels in height (Note: sum of weights is 4.0):

- Row 1 Height: 250 pixels \((1.0 / 4.0) * 1000 = 250\)
- Row 2 Height: 500 pixels \((2.0 / 4.0) * 1000 = 500\)
- Row 3 Height: 250 pixels \((1.0 / 4.0) * 1000 = 250\)

Combination of Percentage and Weighted Stretching

When both Percentage and Weighted Stretching are used, rows with Percentage stretching are assigned their requested height percentage and any remaining space is allocated to rows with weighted Stretching.

Example of Percentage and Weighted Stretching

- Row 1: Percentage, 20%
- Row 2: Percentage, 30%
- Row 3: Weighted, 1.0
- Row 4: Weighted, 2.0

Result for a Window 1000 pixels in height (Note: Sum of Percentages is 50% and Sum of Weights is 3.0):

- Row 1 Height: 200 pixels \((20\% \text{ of } 1000)\)
- Row 2 Height: 300 pixels \((30\% \text{ of } 1000)\)
- Row 3 Height: 166 pixels \(((1.0 / 3.0) * 50\% \text{ of } 1000)\)
- Row 4 Height: 334 pixels \(((2.0 / 3.0) * 50\% \text{ of } 1000)\)

Now Suppose a 5th row is added with a Weight of 1.0 (the Sum of Weights is 4.0). Notice that the Percentage Type rows remain the same height and the Weighted Type rows shrink in height to accommodate the new row:

- Row 1 Height: 200 pixels \((20\% \text{ of } 1000)\)
- Row 2 Height: 300 pixels \((30\% \text{ of } 1000)\)
Summary of Percentage and Weighted Stretching

The advantage of using Percentage stretching is that the row will be allocated the requested percentage of the window's height. The disadvantage of Percentage Stretching is that if all rows use Percentage Stretching, and a row is added or removed, the user will need to adjust the stretching percentages to ensure all rows are visible (when a row is added) or to remove empty space (when a row is removed).

The advantage of Weighted stretching is that all of the vertical space will be used and the available space is automatically reallocated when a row is added or removed. The disadvantage is that if rows use different weights, calculations are required to get the desired row heights.

In some instances using both Percentage and Weighted Stretching may be best. One such instance is when the first row's Content is set to Spacer and Annotation are added to the Spacer Row for use as Column Titles. In this case, the recommendation is to use Percentage for this Row and Weight for the Rows below containing the Brain Models. As Rows for Brain Models are added as removed, the Column Titles will remain the same size and the Rows containing the Brain Models will occupy all of the remaining vertical space.

Manual Editing
In a manual configuration, the user is responsible for the placement and sizing of the tab.

- **Show** - Checkbox enables or disables the drawing of a tab in the window
- **Tab Name** - Name of the tab
- **Left** - Left side of the tab. Value is a window percentage ranging 0% (left side of window) to 100% (right side of window)
- **Right** - Right side of the tab
- **Bottom** - Bottom of the tab
- **Top** - Top of the tab
- **Background** - Opaque (hides any tabs behind 'this' tab) or Transparent (no background drawn so tabs behind 'this' tab may be visible)
- **Order** - A numerical value that sets the back to front order of the tab (larger numerical values are in front of smaller numerical values). When tabs overlay, the Order value is used to control the overlap of
tabs (which tab is in front or other tab(s)).
More powerful controls for editing a manual layout are available in Tile Mode (Select "Tile" in Mode section of the Toolbar).

**Configuration Library**
The Configurations Library section contains configurations that have been created by the user and configurations provided by wb_view. These User Configurations are saved in the user's preferences and thus are available in future Workbench sessions for that user. The Template Configurations are provided by wb_view. While the Template Configurations are not editable by the user, the user may load a Template Configuration as the Current Configuration, edit it, and then save it as a User Configuration. The name of each configuration is followed by a letter and number in parenthesis. The number indicates the number of tabs in the configuration and the letter indicates the type of configuration, G=Grid, M=Manual.

- **Rename** – Click this button to rename the selected User Configuration (Disabled for Template)
- **Delete** – Click this button to delete the selected User Configuration (Disabled for Template)

**Configuration Loading and Saving**
- **Add** – Adds the Active Configuration to the User Configurations that are saved to Preferences. A dialog prompts the user for the name of the new configuration.
- **Replace** – Replaces (saves) the selected User Configuration with the content of the Active Configuration
- **Load** – Copies the selected User Configuration into the Active Configuration using the Type from the User Configuration or the Template Configuration. If the configuration is a Custom Grid and there are more tabs viewed than in the Custom Grid, a dialog is displayed to warn the user. If the configuration is a Manual Configuration and the number of tabs in the window is different that the number of tabs in the configuration, a dialog warns the user with the option to expand or contract the number of tabs in the window.

**Configuration Preview**
The preview shows an outline of the tabs in the selected Template or User Configuration so that the user can see the resulting layout of tabs.

**Manual Configuration Editing Toolbar in Main Window**

The toolbar is visible when a manual configuration is active and "Tile" mode is selected.

Located in the Mode section of the Toolbar is new mode named “Tile”. When Tile Tabs is enabled and the Active Configuration is a Manual, “Tile” is enabled. When in Tile Mode, controls are added at the bottom of the Toolbar for editing the position and size of the selected tab(s). All numerical values in the editing controls are in Window Percentages with zero percent at the bottom/left and one-hundred percent at the right/top.

- **Bounds** – Controls for changing the size of the tab by moving the tab’s sides. Moving one of the bounds will change the width or height of the tab.
- **Center** – Controls for setting the position of the tab by moving the center of the tab. Width and height will not change.
- **Size** – Controls for setting the width or height of the tab.
- **Format** – Displays a menu for performing placement options on the selected tab(s)
• **Edit** – Allows one to undo or redo a tab position or size modification.

If multiple tabs are selected and the tabs have a different values for one of the numerical values, the numerical value is followed by a plus (+) sign. When one of the numerical values is changed, it is applied to all selected tabs. This may be useful in some situations. Suppose one wants two tabs to have the same left bound. Simply select both tabs (click tabs while holding down the SHIFT key), type the desired value in the Left numerical control, and press the Return key.

**Format Menu**
- **Align Left** – When two or more tabs are selected, align the tabs so the left edges are the same as the left-most tab
- **Align Center** – When two or more tabs are selected, align the tabs so that the center X-coordinates are the same
- **Align Right** – When two or more tabs are selected, align the tabs so the right edges are the same as the right-most tab
- **Align Top** – When two or more tabs are selected, align the tabs so the
top edges are the same as the top-most tab
• **Align Middle** – When two or more tabs are selected, align the tabs so that the center Y-coordinates are the same
• **Align Bottom** – When two or more tabs are selected, align the tabs so the bottom edges are the same as the bottom-most tab
• **Distribute Horizontally** – When three or more tabs are selected, adjust the positions and sizes of the tabs horizontally so that they do not overlap but fill the horizontal axis of the window
• **Distribute Vertically** - When three or more tabs are selected, adjust the positions and sizes of the tabs vertically so that they do not overlap but fill the vertical axis of the window
• **Bring to Front** – When one tab is selected and the tab overlaps with other tabs, move this tab forward so that this tab is front of all other tabs
• **Bring Forward** – When one tab is selected and the tab overlaps with other tabs, move this tab forward one position
• **Send to Back** - When one tab is selected and the tab overlaps with other tabs, move this tab backward one position
• **Send Backward** – When one tab is selected and the tab overlaps with other tabs, move this tab backward so that it is behind all other tabs
• **Expand Tab to Fill Empty Space** – When one tab is selected expand this tab so that it fills available empty space around itself

**Context Sensitive Menu on Tabs in Tab Bar**
This menu is displayed by right-clicking a tab in the tab bar at the top of the window. The selections at the top of the menu are new.

The Active Tab is the tab that is selected and may be different than the tab that is under the mouse.

- **Select for Manual Layout Editing** – Selects the tab so that its layout
attributes are editable

- **Show (or Hide) Tab Content in Window** – Enables/Disables display of tab in window and may be useful for editing overlapping tabs or annotating overlapping tabs
- **Create New Tab Before This Tab** - Create a new tab and insert it into the tab bar on the left of the tab under the mouse
- **Create New Tab After This Tab** - Create a new tab and insert it into the tab bar on the right of the tab under the mouse
- **Duplicate This Tab at Beginning** - Duplicate the tab under the mouse and insert it at the far left position in the tab bar
- **Duplicate This Tab Before Active Tab** - Duplicate the tab under the mouse and insert it on the left of the active tab in the tab bar
- **Duplicate This Tab After Active Tab** - Duplicate the tab under the mouse and insert it on the right of the active tab in the tab bar
- **Duplicate This Tab at End** - Duplicate the tab under the mouse and insert it at the far right position in the tab bar
- **Move This Tab to Beginning** - Move the tab under the mouse to the far left position in the tab bar
- **Move This Tab to Before Active Tab** - Move the tab under the mouse to the left of the active tab
- **Move This Tab to After Active Tab** - Move the tab under the mouse to the right of active tab
- **Move This Tab to End** - Move the tab under the mouse to the far right side of the tab bar
- **Delete This Tab** - Delete the tab under the mouse

**Context Sensitive (right-click) Menu in Window**
This menu is displayed by right-clicking in the graphics region (area where brain models are drawn).

- **Select All** – Selects all displayed tabs for editing
- **Brain to Front** – Functionality documented in Arrange Menu
- **Bring Forward** – Functionality documented in Arrange Menu
- **Send to Back** – Functionality documented in Arrange Menu
- **Send Backward** – Functionality documented in Arrange Menu
- **Insert New Tab** – Inserts a new tab at the mouse position.
- **Expand Tab to Fill Empty Space** – Functionality documented in Arrange Menu

**Moving and Resizing Tabs with Mouse**

**Select a Tab using the Mouse**
• Enable Tile Tabs (View Menu -> Enter Tile Tabs)
• Click "Tile" in the Mode section of the Toolbar
• Notice that tabs are enclosed in thin dashed lines delineating the bounds of the tabs
• Move the mouse over a tab and notice that the cursor transforms from an arrow to four arrows indicating that the mouse is over a tab.
• Click the mouse over a tab to select the tab.
• Notice that the tab is now delineated by solid lines with sizing handles (squares at the corners and sides) indicating that it is selected. The sizing handles at the corners allow changing the width and/or height of the tab while. The sizing handles along the sides vertical sides allow changing only the width and the sizing handles on the horizontal edges allow changing only the height.

Move a Tab using the Mouse

• Select a tab.
• Drag the mouse (hold down the left mouse button while moving the mouse) to move the tab.

Resize a Tab using the Mouse

• Select a tab.
• Move the mouse over one of the sizing handles. The mouse cursor will transform to a two-arrow cursor and the arrows indicate the direction of mouse movement that will resize the tab
• Drag the mouse to resize the tab.

Moving Multiple Tabs using the Mouse

• To select multiple tabs, first select one tab.
• To select another tab, move the mouse over a tab, hold down the SHIFT key and click the mouse.
• Drag the mouse to move the selected tabs.
• Note that resizing of multiple tabs is allowed at this time and may be added at a later time.

**Redo/Undo**

The Tile Toolbar contains Redo and Undo button in the Edit section. If a mistake is made while editing changing at tab's geometry, clicking the Undo button will revert the most recent modification and may be clicked again to further revert modifications.