# SCT Edit Series Slot List Mode in RiverWare 6.1

Functional Description / Revision-1 Phil Weinstein, CADSWES, 8-29-2011 See also: <u>Original Proposal</u>; <u>Review One Changes</u>

Document Status:

- 8-29-2011: Updated for <u>Review One Changes</u> and Slot Clipboard functions.
- 8-22-2011: Initial Writing, Webpage / PDF (6 pages).

#### Overview

RiverWare 6.1 supports a new way of defining an SCT's list of series slots and table series slot columns shown in the series slot data table. The SCT's new "Edit Series Slot List" mode is initiated by selected that operation from the SCT's "Slots" menu. This mode supports operations on:

- 1. slot items and dividers as individual items,
- 2. groups of slot items.



The convention used for the SCT's "Go To" menu of defining *groups of slots* as slot items separated by *dividers* has been extended to operations for editing the series slot list.



The new Edit Series Slot List mode shows a two-level **"tree view"** with dividers as top-level items and subsequent slot items as children of the divider. (Note: Dividers which don't have text are shown with the text of the following slot item when the divider's "tree" is closed).

Operations on the series slot list are accessible as:

- Context menu operations,
- Buttons below the slot list,
- SCT "Slots" menu items (shown only when the SCT is in Edit Series Slot List mode),
- In-cell editing of slot and divider item text.

Operations on groups include:

- "Open Group" and "Close Group" (trees) ... either just the selected groups or all groups.
- Remove, Copy and Cut Group.
- Move selected groups up or down, relative to the other groups.
- "Create Similar Groups" ... Using a selected group made up of slots from *one simulation object* or *one account* -- multiple other groups can be created with the same set of slots from *other* simulation objects or accounts.

Operations on single selected items include:

- Insert Slots. This brings up the slot selector dialog to pick new slots to add to the SCT. When operated on a selected *divider*, picked slots are added below the divider (to be part of the divider's group). When operated on a selected *slot*, picked slots are inserted *above* that slot.
- Insert Divider.
- Insert Copied/Cut Items (Slots / Dividers / Groups) from the Slot Clipboard
- Reassign a slot item with a different slot.
- In-cell editing of slot and divider item text.

Operations on both single and multiple selected items include:

- Remove selected items (Slots / Dividers / Groups),
- Copy and Cut selected items (Slots / Dividers / Groups) to the Slot Clipboard

• Move selected items up or down (without regard to item groups),

Other generally available operations include:

- Append Slots (picked with the slot selector) to the end of the series slot list.
- Append Divider to the end of the series slot list.
- Append Copied/Cut Items (Slots / Dividers / Groups) from the Slot Clipboard
- Show or hide a "Slot Name" column. This is provided because the slot item labels don't necessarily have to be the actual slot names -- slot item labels can be edited by the user.

When operating the slot selector, within a single "slot selector *session*", the user can iteratively pick individual or multiple slots and "Apply" them to the SCT. Also -- from the slot selector -- an intervening divider can be inserted by clicking the "Divider" button.

The SCT series slot table still supports these two context menu operations:

- Insert Divider
- Remove Slot / Divider

All other series slot list editing operations have been removed from the series slot table.

# "Edit Series Slot List" Panel

When selecting the "Edit Series Slot List..." operation from the SCT's "Slots" menu, the "Series Slots" tab is selected, and the series slot data table is temporarily replaced with the Edit Series Slot list.

- The SCT must be "unlocked" for this operation to be enabled.
- When the Edit Series Slot List panel is initially shown, the slots in the series slot data table which had selected cells are selected in the slot list panel.

The Edit Series Slot List panel ensures that the slot list has an initial divider item. So, there is always at least one group, and all slots are within one group (i.e. the group defined with the preceding divider).

Two different "move" modes are supported. The user can switch between these two modes by toggling the "Move Groups" checkbox. Selected items or groups are moved up or down one logical position (defined by the mode) by clicking the up or down arrow buttons.

• "Move Groups" ON: The up and down arrow buttons are enabled only when at least one divider is selected (and only when the divider selection doesn't include an item already at the top or bottom, for the two respective move directions). In this mode, the order of the slots within each group is preserved.

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Series Slots Scalar Slots Other Slots					
Edit Series Slot List					
Slot or Divider Label	Unit Type				
El Vado Reservoir.Storage El Vado Reservoir.Pool Elevation El Vado Reservoir.Inflow	Volume Length Flow Flow				
Abiquiu Reservoir.Storage Abiquiu Reservoir.Hydro Capacity	Volume Power				
	Leng <sup>44</sup> Close All Groups				
	Flow Insert Slots Flow Insert Divider				
Abiquiu Reservoir.Power	Pow Remove 4 Slots				
Stream Gages M Rio Chama blw El Vado.Gage Outflow Rio Chama abv Abiquiu.Gage Outflow	Flow Append 1 Copied Group				
Image: Chama blw Abiquiu.Gage Outflow   Flow     Image: Chama blw Abiquiu.Gage Outflow   Flow					
Append Slots   Create Similar Groups   Revert Cancel					

• "Move Groups" OFF: Selected slot and divider items are moved up or down without respect to the "grouping" defined by the dividers. This is useful for placing dividers at a different position, and for moving slot items within a group, or between different groups.

The **context menu** within the Edit Series Slot List supports the following operations. Many of the menu item labels are dynamic, generally indicating the number and types of items being operated on.

RiverWare 6.1: SCT Series Slot List Composition Mode

- Open Groups -- shown only if at least one of the selected groups is closed.
- Open All Groups -- shown only if at least one of the groups is closed.
- Close Groups -- shown only if at least one of the selected groups is open.
- Close All Groups -- shown only if at least one of the groups is open. \_\_\_\_\_
- Insert Slots... -- (enabled only when one item is selected) ... brings up the slot selector dialog.
- Insert Divider -- (enabled only when one item is selected).
- Remove Slots/Dividers/Items -- removes the selected items. The menu item label indicates the number of "dividers" or "slots" or "items" (if both dividers and slots are selected) ... see the sample image.
- Remove Groups -- removes the selected dividers and their "child" slot items. Shown only when at least one divider is selected.
- Copy Slots/Dividers/Items -- copies the selected items to the Slot Clipboard. The menu item label indicates the number of "dividers" or "slots" or "items" (if both dividers and slots are selected) ... see the sample image.
- Copy Groups -- copies the selected dividers and their "child" slot items to the Slot Clipboard. Shown only when at least one divider is selected.
- Cut Slots/Dividers/Items -- same as a "Copy" followed by a "Remove"
- Cut Groups -- -- same as a "Copy" followed by a "Remove"
- Insert Copied/Cut Items -- (enabled only when one item is selected) ... inserts the Slots, Dividers, or whole Groups in the Slot Clipboard.
- Append Copied/Cut Items -- appends the Slots, Dividers, or whole Groups in the Slot Clipboard to the end of the slot list.

Note: When all groups are closed, the "Move Groups" checkbox is forced on, and is disabled.

The Edit Series Slot List ensures that the list always starts with a divider item. So, there is implicitly always at least one "group".

Since the text label for a slot item does not have to be the name of the slot, the user has the option of showing a "Slot Names" column. This is done by turning on the "Show both Slot Labels and Slot Names" checkbox. (See the image below, and compare with the prior image).

The Edit Series Slot List panel provides the following **push button** operations:

- Append Slots... -- brings up the slot selector to add new slots (and dividers) at the end of the list.
- Create Similar Groups... -- special operation for groups containing slots on a single simulation object or account -- see below.
- Revert -- discards changes made to the series slot list since the series slot list edit mode was started. This button is enabled only if changes have been made.
- Accept / Cancel -- restores the Series Slot tab to showing the normal series slot data table. If any changes to the slot list had been made, the button label will be "Accept", and clicking the button applies those changes to the series slot data table. If no

changes had been made (or if changes

Series Slots Scalar Slots Other Slots					
Slot or Divide	r Label	Slot Name	Unit Type	^	
- WATAUG	iA				
- M	Adjustment	Watauga.Hydrologic Inflow Adjust	Flow		
- M	Total local	Watauga.Hydrologic Inflow	Flow		
m	Total inflow	Watauga.Total Inflows	Flow		
- 50	Storage	Watauga.Storage	Volume		
- 🕅	Elevation	Watauga.Pool Elevation	Length		
	Energy	Watauga.Energy	Energy		
UNILBUR					
- 14	Total local	Wilbur.Hydrologic Inflow	Flow		
- M	Total inflow	Wilbur. Total Inflows	Flow		
- 201	Storage	Wilbur.Storage	Volume	~	
Append Slots	Move Groups	Show both Slot L	abels and Slot N	lames 😡 pt	

had been reverted), the button label is "Cancel" -- see prior image -- and clicking the button has no effect on the series slot data table.

# "Create Similar Groups..." Operation

The "Create Similar Groups..." button is enabled when the Edit Series Slot List item selection is limited to items within one simulation object or account. Clicking on that button brings up either the Simulation Object selector or Account selector to allow the user to select any number of objects or accounts.



In the case of simulation objects, the object selector is limited to the type of the object of the originally selected group -- with the exception that all reservoir types can be picked for any reservoir.

After picking one or more simulation objects or accounts, **a new group is created** for each of those objects (immediately below the originally selected group in the Edit Series Slot List) with the slots in the original group -- to the extent that those exist in the picked objects. The *order of the slots* in the original group is used for the new groups.

In the illustrated example, the original group has slots from one particular *power* reservoir (Abiquiu Reservoir). This includes slots not present in the two *storage* reservoirs

C Select Reservoirs for r	new SCT slot group	s. ? 🔀
Object Types: 4 (of 4)	Objects: 2 (of 3)	All Invert
Obj Type	Type	Object
Reservoir PowerReservoir LevelPowerReservoir StorageReservoir	LevelPow StorageR StorageR	Abiquiu Reservoir El Vado Reservoir HeronReservoir
	Ok	Cancel

subsequently picked with the simulation object selector. The slots from the original group which are not present in the picked reservoirs are not included in the new groups.



If the original group's divider's text label contains the name of the group's simulation object or account, that name will also be substituted in the divider labels for the new groups.

The "Create Similar Groups" operation is available only when all the slots within the selected group are from one simulation object or one account. Additionally, all the slot items in the group must correspond to existing slots in the model. (In the Edit Series Slot List, slot items for a slots which don't current exist are shown with a "question mark" slot type icon).

# SCT "Slots" Menu

When the SCT is in "Edit Series Slot List" mode, the following operations appear in the "Slots" menu.

- Insert Slots ...
- Append Slots ...
- Reassign Slots ...
- Insert Slot Divider
- Append Slot Divider
- Copy Items (to Slot Clipboard)
- Cut Items (to Slot Clipboard)
- Insert Copied Items (from Slot Clipboard)
- Append Copied Items (from Slot Clipboard)

The "Insert" and "Reassign" operations are enabled only when exactly one item is selected in the Edit Series Slot List.



# Other SCT controls which operate on the Edit Series Slot List

#### Column Resize Toolbar Buttons

The three Column Resize toolbar buttons in the SCT -- which have different functions in the SCT's series slot data table -- all perform an automatic column width adjustment within the Edit Series Slot List.

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Series Slots Scalar Slots Other Slots	Resize Columns: Fit All				
Edit Series Slot List					
Slot or Divider Label	Unit Type				
Abiquiu Reservoir Summary					
Abiquiu Reservoir.Storage	Volume				

### Special Behavior when Creating a New SCT

When creating a new SCT, the following popup dialog is shown. If the user clicks the "Add Slots" button, the "Edit Series Slot List" mode is initiated and the slot selector is shown.



### **Other SCT Enhancements**

#### SCT Lock Toggle

The SCT "Lock" toggle (leftmost tool button in the SCT toolbar) is now persistent. The SCT used to be unconditionally locked when loading an SCT File. Now, the lock state is whatever it had been the last time the SCT was saved.

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