Slot Text Annotations in RiverWare 5.2

User Notes

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This document describes the revised support in RiverWare for applying textual annotations ("notes") to individual timesteps on SeriesSlots.

0.1 Document Status

6-22-2009: Ready for review.

0.2 Overview

Support for Text Notes on SeriesSlot Timesteps ("Annotations" or just "Notes") has been redesigned in RiverWare 5.2. Notes are still organized within Note Groups, but notes are now individually, directly applied to individual SeriesSlot Timesteps rather than by associating their containing Note Groups with whole Series Slots. Additionally, multiple notes can be associated with an individual timestep on an individual SeriesSlot.

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1/5/96	Fri	House Pets		N 51.68	31.09	40.63	34.29				
1/6/96	Sat	House Pets		44.93	54.58	44.11	37.78				
1/7/96	Sun	House Pets		House Pets	48.50	58.03	41.69				
1/8/96	Mon	House Pets		42.45	44.61	54.15	57.81				
1/9/96	Tue	Kayak Races; House Pets		42.90	42.31	51.84	45.51				
1/10/96	Wed	House Pets		39.18	51.53	61.06	E 44.73				
1/11/96	Thu			34.57	46.92	56.45	40.12 🥃				
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0.4 Related Documents

•	(USBR RiverWare) Green Book Functionality
	Draft Design (Neil Wilson, 5-13-2009, 18
	pages)
	/projects/riverware/doc/accounting/GreenBook/
	GreenBookDraftDesign.fm

- Slot Text Annotations in RiverWare 5.2: Internal Design (Phil Weinstein, 5-24-2009, 8 pages) /projects/riverware/doc/guiGeneral/Annotations/SlotAnnotations2009InternalDesign.fm
- Previous RiverWare Annotations Implementation:

Series Slot Text Annotations in RiverWare, Requirements and High-Level Design (Phil Weinstein, 2-17-2007, 8 pages) .. /projects/riverware/doc/accounting/simlib/SeriesSlotAnnotations.fm.

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01-18-199	6 Thu	34.57	0.0		Ξ	Conserv	е		
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1.0 Open Slot Dialog, and related Edit Account Dialogs

In the Open SeriesSlot dialog and the related Account Series Editor dialogs, the easiest way to add a note to a timestep is via the "context" (right-click) menu. *See image to the right*.

The "Add Note..." context menu item brings up the Note Group Manager Dialog for the purpose of adding a note. *That dialog is described in a subsequent section.* The Note Group Manager Dialog will be initialized with the Slot and Timestep selections corresponding to the clicked cell.

The Note Group Manager Dialog can also be shown from the Open SeriesSlot Dialog's View menu, **Note Groups** menu item. Selecting one of the enumerated Note Groups causes that group to be pre-selected. *See the following image:*

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When a note is present on a SeriesSlot timestep, a "note" icon appears in that Slot/Timestep cell. For cells having a single note, the color of the note icon is a property of the Note Group containing the note.

The text of the note can be seen as a "ToolTip" popup by hovering the mouse over a cell having a note icon.

Cells having more than one note have a special icon suggesting one note stacked on the other. *See image to the left.* That icon does not reflect the color of any of the corresponding Note Groups.

In the Open SeriesSlot dialog, a separate Notes column *(see below)* can be shown with the **[x] Show Notes Column** toggle in the View menu *(see image above)*.

🕻 Muddy Reservoir. Outflow									
File Edit View	TimeStep I/O	Ad	just						
Outflow Value: 51.6818458332 cfs									
Scroll: Jan 3, 19	96			<u>l~</u>					
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01-04-1996 Thu	24.61	0 0							
01-05-1996 Fri	51.68	0	🔳 House Pets						
01-06-1996 Sat	44.93	0							

When one or more notes exist on a particular Slot/Timestep, the context menu on the cell includes a submenu for each note. See the image to the right. The title of the submenu shows the Note Group icon and the Note Text. The submenu contains two operations:

- Edit Note ...
- Remove Note

The **Edit Note...** menu item shows the Note Group Manager Dialog, with the indicated Note pre-selected. The user may change the note text, or move the note to a different Note Group (potentially having a different Note Group icon).

The **Remove Note** menu item removes the indicated note from the selected Slot/Timestep (only). This does not effect the appearance of the same note at other timesteps on the same Slot, or on any other Slot.

The dialog can be scrolled to the timestep of a note on the Slot via the **Note Navigation menu.** *(See image to the right).*

Items in the Note Navigation menu having a bullet indicate that the timestep of the note matches that of the timestep spinner.

Holding down the **Shift Key** while selecting an item causes a Global Time Scroll (scrolling all open series-related dialogs to the corresponding timestep).





2.0 Open RPL Expression Series Slot Dialog

Support for Annotations in the RPL Expression Series Slot Dialog is similar to that for other Series dialogs.

This dialog supports the prior sortable "Series List" display mode and, now also the "Series Table" display used in the other Open Series Slot dialog. Annotations are supported only in the latter display mode. This display mode is selected under the dialog's View menu. *See the image to the right*.

The RPL Expression Series Slot Dialog's "Series Table" display supports Annotations only via "tooltips" and the the context (right-click) menu described in previous sections.



Rafting Data. Yah	ooFlowAugment		Rafting Data. Yahoo FlowAugment
File View Evaluation	n Expression		File View Evaluation Expression
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Time 🔽 Fla	ags Value	A 1	cms 🛆
Jan 01 1996 24:00	0	1.32	01-01-1996 Mon 1.32 O
Jan 02 1996-24:00	0	1.28	01-02-1996 Tue 1.28 O
Jan 03 1996 24:00	0	1.47	01-03-1996 Wed 1.47 O
Jan 04 1996 24:00	0	1.58	
Jan 05 1996 24:00	0	1.38	1,36 0
Jan 06 1996 24:00	0	1.50	01-05-1996 Fri 1.38 O
Jan 07 1996 24:00	0	1.97	01-06-1996 Sat 1,50 O
Jan 08 1996 24:00	0	1.84	01-07-1996 Sun 🗉 🗸 1.97 0
Jan 09 1996 24:00	0	1./6	01-08-1996 Mon N2 1 84 0
Jan 10 1996 24:00	0	2.07	House Pets
			01-09-1996 Tue

3.0 The SCT Dialog

The SCT supports timestep annotations on the series data table (on the Series Slots tab). Operations on annotations are performed via the context menu -- with the same operations as those available in the Open SeriesSlot dialog.

K	🕻 SCT BartlettBasin.sct.gz (BartlettBasin.mdl.gz)												
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	12/31/95	Sun					19.95		32.2	9	41.83	35.49	9
	1/1/96	Mon					16.93		29.2	3	38.81	32.43	7
	1/2/96	Tue					15.77		28.1		37.64	31.3	L
	1/3/96	Wed					21.29		33.6	3	43.17	36.83	3
	1/4/96	Thu					24.61		36.9	i i	46.49	40.16	5
	1/5/96	Fri	House Pets		Ξ		51.68		31.0	9	40.63	34.29	9
	1/6/96	Sat	House Pets				44.93	=	54.5	3	44.11	37.78	3
	1/7/96	Sun	House Pets				42.00	=	48.50) 🔳	58.03	41.69	9
	1/8/96	Mon	House Pets				42.45		44.6		54.15	57.8	L
	1/9/96	Tue	Kayak Races; House P	ets			42.90		42.3	. 🔳	51.84	45.5:	L
	1/10/96	Wed	House Pets				39.18		51.5	3	61.06	E 44.7:	3
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When the SCT is in the Non-Aggregated Vertical Timestep view (shown above), the text for all of the notes in each timestep row are shown in a row header column.

If a single cell is selected, the note text associated with that cell are displayed in the SCT's selection status bar, at the bottom of the SCT.

As with the series data shown in an SCT, the notes are associated with the SeriesSlots shown in the SCT, and not with the SCT itself.

4.0 Note Group Manager Dialog

The Note Group Manager Dialog, and supporting subdialogs are used to maintain the set of annotations on SeriesSlots.

This dialog is arranged vertically in three hierarchically defined panels:

- 1. Note Group Selection
- 2. Note Selection
- 3. Slot Note Associations

The item selection in the first and second panels filters the items in subordinate panels.

These first two panels can show either a list or a combobox, controlled by the triangle arrow button in each panel. The Comboboxes allow for the selection of a single item (Note Group or Note), or "All" items.

The **Note Groups panel** supports three operations:

- Create Note Group...
- Edit Selected Group...
- Delete Selected Groups

These operations bring up popup dialogs for creating or editing (changing the name and icon color), or confirming deletion of Note Groups, *illustrated below:*



🕻 Create Note Group 🛛 🔹 🛛	🕻 Edit Note Group 🛛 🛛 🗙	C Delete Selected Note Groups? 🔀
Icon: Note Group Name: Image: Yellow Image: Yellow OK Cancel	Icon: Note Group Name: Magenta Recreation Events OK Cancel	Delete 2 Selected Note Groups?

The Notes panel in the Note Group Manager Dialog supports three operations:

- Create Note...
- Edit Selected Note...
- Delete Selected Notes...

	Contemporary Edit Note	?×
Create Note Note Group Recreation Events Note Text New: OK Cancel	Note Group Original Selection: Recreation Events New Selection: Recreation Events Note Text Original: Camp Red Tent Races New: Camp Red Tent Races OK Restore Cancel	

The **Slots panel** shows the associations of single notes to particular SeriesSlot timesteps:

Slots		_			
Add Slot Entries Delete Selected Entries 1 of 3 Selected					
Slot	🔶 🕺 Timestep	No	te	Group	
🕅 🛛 Bartlett Reservo	ir.Outflow 24:00 Ja	n 9 1996 🛛 🔳	Kayak Races	Recreation Events	
IC Delivery.Gage	e Inflow 24:00 Ja	n 91996 🛛 🧧	Kayak Races	Recreation Events	
Muddy Reservoi	.Outflow 24:00 Ja	n 11 1996 🔳	Conserve	🗉 Guide	
<				>	
Add Entry Using Context: 🕅 Muddy Reservoir.Outflow / 24:00 Jan 11 1996					

Both the "Add Slot Entries..." and "Add Entry Using Context:" buttons bring up the "Apply Notes to Slots" dialog described in the next section. These differ only in the initial selections used in that dialog. The "... Using Context" button and information is available when the manager dialog is shown from the context of a particular Slot and Timestep.

5.0 Apply Note to Slots Dialog

The Apply Note to Slots Dialog allows the user to associate a particular note with one or more Slots at one or more contiguous timesteps.

The list of slots and the timestep selections are sometimes preselected, depending on how the Apply Note to Slots Dialog is shown. These selections can be modified before creating the new Note/Slot/Timestep associations.

The Group and Note comboboxes can be modified to select a different note. Only one note can be selected at any one time.

Additional Slots can be added to the Slot List by clicking the "Add Slots..." button. This brings up the RiverWare Slot Selector.

Slots can be removed from the Slot List by selecting items in the list and clicking the **"Remove Selected Slots"** button. Doing so has no effect on any existing Note/Slot/ Timestep associations.

The "association creation" operation

Apply Note to Slots					
Apply Note to Slots at Timesteps					
Group: 🔳 Guide	~				
Note: Conserve					
Slots Add Slots Remove Selected Slots					
Slot Step Size					
1 Slots (1 selected). Timestep Size: 1 Day					
Timesteps					
January 11, 1996 🗢					
Apply Over Timestep Range:					
Last Timestep: January 14, 1996 🛟					
Timestep Count: 4					
Apply selected note to 4 Slot/Timesteps OK Apply Close					

(performed by clicking the **OK** or **Apply** buttons) is enabled only if the inputs specify a valid state representing Note/Slot/Timestep associations not yet existing. For one thing, all of the Slots in the Slot list must have the same timestep size. If enabled, the **OK** and **Apply** buttons create a Note/Slot/Timestep association for all of the Slots in the list (i.e. not just the selected Slot items). The **OK** button also closes the dialog.

Status lines under the Slot List and above the bottom buttons indicate the state of the inputs. Examples of the various messages shown in the bottom status line are as follows. (The OK and Apply buttons are enabled only in the 4th example):

- No defined Note is selected.
- The Slot list is empty.
- The Slot list includes Slots having different timestep sizes.
- Apply selected note to 6 Slot/Timesteps ... [enabled state]
- The selected note has been applied to 6 Slot/Timesteps.

--- (end) ----