Phil Weinstein / Accomplishments -- August 2014 -- Edit 9-02-2014

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| **General Development Accomplishments** |

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[I.A] New/Enhanced Software / BOR Truckee  
   Teacup diagram and Output Visualization / Design and Development  
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We are developing a new RiverWare "Output Canvas" output device to illustrate water storage levels and water flows over a period of time. "Tea cups" and "Flow Lines" will depict these entities in a timestep animation. The new Output Canvas graphical output device will also support multiple images (usable as a background map image) and text items. In August, the design was progressively developed and reviewed in three iterations:

* Design 1 (started in July) presented a conventional custom GUI dialog approach for the configuration of Tea Cups and Flow Lines.
* Design 2 presented a more generic Object Tree / Property Editor approach for configuring these objects. This was based on the configuration GUI for RiverWare Model Reports.
* Design 3 incorporated the following changes and added a higher level overview of provided graphics capabilities:
  1. "Factoring" of slot references for teacup graphical components. Instead of specifying individual slot associations for *every* dynamic component of *every* teacup, local slot names are identified at the "teacup group" level, and teacups each identify one simulation object and companion data object to which the slot names are applied for the identification of absolute slots. (The original idea was that we would provide a high-level teacup creation operation to create a set of coherent teacups for a set of simulation objects. Such a feature is not needed in the revised design).
  2. Distinct Configuration and Viewer dialogs for the Output Canvas -- similar to the support for Pie Chart graphical output device.
  3. An explicit design for Teacup Legends.

The three designs are documented here:

1. RiverWare Output Canvas: Tea Cup and Flow Animations: Functional Design [16 pp.]  
   R:\doc\Output\OutputCanvas\2014\OutputCanvFuncDesign-2014-08-07.docx
2. RiverWare Output Canvas: Tea Cup and Flow Animations: Design 2 [27 pp.]  
   R:\doc\Output\OutputCanvas\2014\OutputCanvDesign2-2014-08-21.docx
3. RiverWare Output Canvas: Tea Cup and Flow Animations: Design 2 [31 pp.]  
   R:\doc\Output\OutputCanvas\2014\OutputCanvDesign3-2014-08-25.docx

Also, a development analysis and estimate was prepared identifying six distinct development phases.We started "phase I" of this development which will provide a prototype level of teacup graphics on a canvas. (We will reevaluate the subsequent phases after phase I is completed). The development plan and estimate are documented here:

* RiverWare Output Canvas: Teacup Storage and Flow Animation: Development Plan [16 pp.]  
  R:\doc\Output\OutputCanvas\2014\OutputCanvDevPlan-2014-08-27.docx

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| **Maintenance Accomplishments / August 2014** |

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[II.C] RiverWare Software Maintenance / Development Tools  
   Maelstrom Decommissioning (SUN Solaris machine)  
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* Confirmed usability of Flex/Bison (parsing library) tools on Alamosa

(Note: Bill also has a couple "Maelstrom Decommissioning" accomplishments).

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