II. RiverWare Software Maintenance

**Releases , Patches and Snapshots**

The RiverWare 6.8 Pre-release was sent to all users on 12/22/2015 for testing and acceptance. This involved writing release notes, regenerating the help PDFs, updating the builds areas, creating the release executable, updating the website, and sending out the release notification. Release notes can be found on the RiverWare.org website.

**Bug Fixes**

Bug 5656: Output data in table series slots is not cleared when saving a model with no output. On the reach there are 14 table series slots that are used for the distributed routing methods (Kinematic, Mackormic, Muskingum Cunge…). These slots have a column for each segment or section of the reach, so there can be many columns in each slot. Since these are Table Series Slots, they are saved in the model file like Table slots, that is, they are saved regardless of the user's “Save Output” preference. This leads to very large model files. In one example, these slots accounted for 198MB of a 200MB model file. These slots are intermediate computed values; any values are cleared at beginning of run. They do not need to be saved in the model file. Therefore, these slots were converted into temporary slots. The slots are still available and are viewable to the user after a run, but they are not saved in the model file.

**Regression Tests**

The regression tests continue to be maintained on a daily basis. This involves updating the regression tests to exercise new developments in the code. Also, as new code is added to the development area, the model comparisons performed in the nightly regression tests usually show differences (for example, because a new method category may have been added). When this occurs, the regression tests need to be updated to reflect the current state of the development area so model comparisons do not fail. In addition, every week, the daily history of each regression test is analyzed to determine if the run time or model size has significantly changed because of new development. In December, the slowdown of certain tests that occurred in previous months was further monitored and found to be improved after the TCL version was updated to the current version. In addition, the tests were updated and or restarted after the version number was increased for the pre-release.

**Plotting and Output Architectural Proposal**

Users have expressed the desire to have more user-friendly and better looking plotting in RiverWare. Sponsors have allocated funds for improvements, but before these are implemented, it seemed prudent to revisit the way that users create, save, and edit plots and other output devices. For example, there are multiple dialogs where the user can select slots to plot and configure the layout (E.g. 2X1 curves) of the plot. In both places, the user can edit the plot and the interaction between them is not very intuitive. In addition, the plots use a “Save” paradigm which has never been easy to explain or use. In December, two documents were produced:

* A conceptual document describing a proposal for a new configuration of the user interface dialogs. /projects/riverware/doc/plotting/PlottingArchitecture.fm
* A document describing deficiencies and issues with the current plotting package. The document can be found in: /projects/riverware/doc/plotting/PlottingInterfaceDeficiencies.fm