

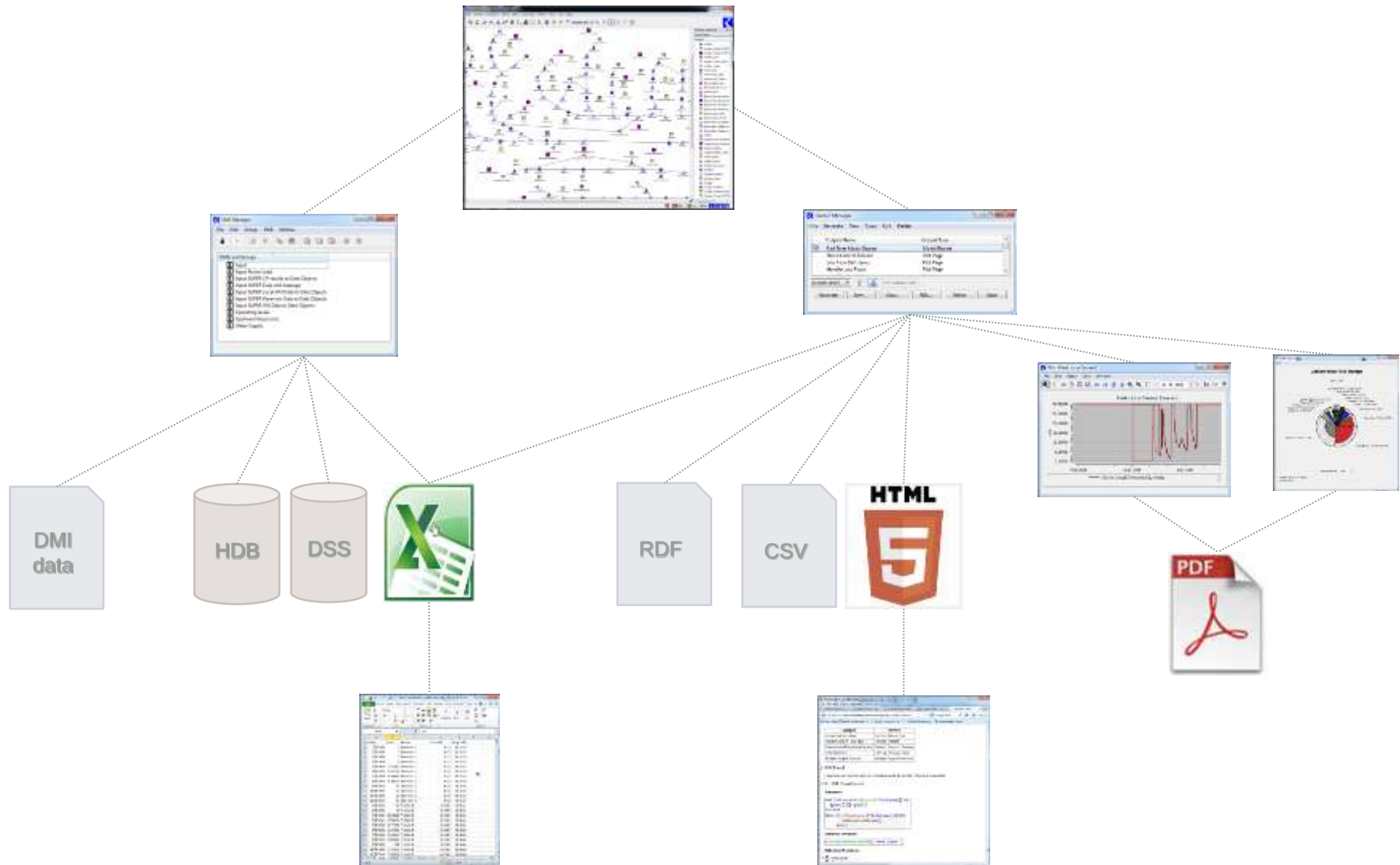


Model Report: A new output device type

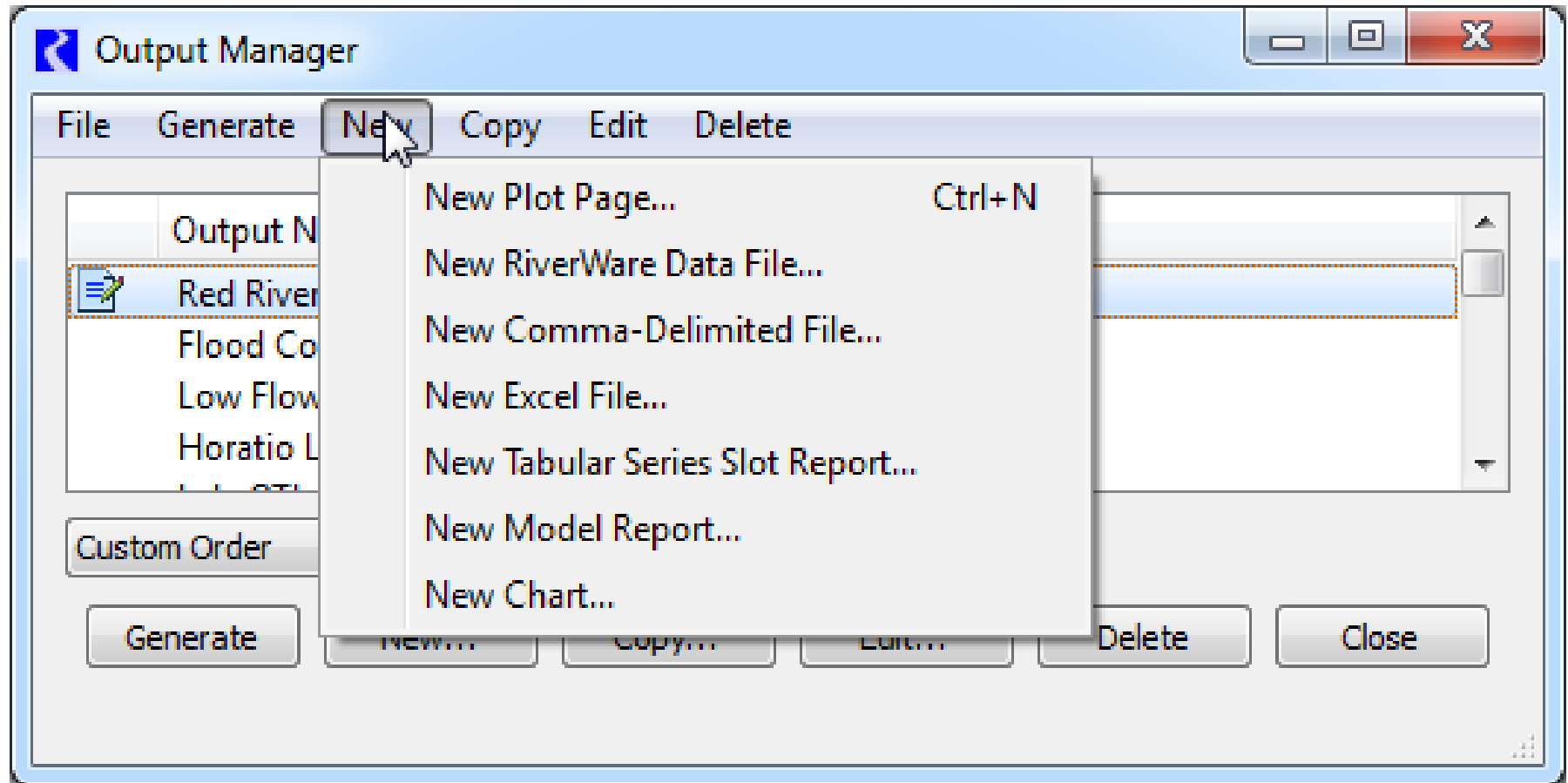
Presenter: Patrick Lynn

2013 RiverWare User Group Meeting
August 27, 2013

Some Output Options



RiverWare Output



Model Reports

- Generate HTML documents
- Flexible content & appearance
- Extensible framework
- Current content types:
 - Table of Contents
 - Model Information
 - Run Control
 - Section
 - Object Section
 - Slot
 - Slot Table
 - Method Table
 - Subbasin
 - Text
 - RPL Set
 - RPL Group
 - Plot Page (6.4)

Possible enhancements

- Other output devices: Pie charts, SCTs, ...
- Workspace image
- Interactive web map
- Links to external documents, images
- Bibliography
- Additional formatting options
- Undo/Redo
- HTML5 output
- ...



Unit Schemes: Controlling how numbers are displayed

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We are fundamentally changing the way you control how RiverWare displays numbers.

Where numbers are displayed

Open Object - Broken Bow

Object Name: Broken Bow
Land Power Reservoir Object

Slot	Method	Account	Accounting Method	Description
July 2, 1956				
Slot Name	Value	Units		
Inflow	0.00	cfs		
Outflow	380.85	cfs		
Storage	913,962.40	acre-ft		
Pool Elevation	5394+02	ft		
Flow FROM Pumped Storage	NaN	cfs		
Flow TO Pumped Storage	NaN	cfs		
Canal Flow	NaN	cfs		
Total Inflows	-72.00	cfs		
Inflow Sum	0.23	cms		
Discharge	80.00	cfs		

Order: Default

Broken Bow Storage

File Edit View TimeStep I/O Adjust

Storage

Value: 913962.399240 acre-ft

Scroll: Jul 2, 1956

	acre-ft
07-01-1956 Sun	917,105.23
07-02-1956 Mon	913,962.40
07-03-1956 Tue	914,817.46
07-04-1956 Wed	913,672.41
07-05-1956 Thu	913,283.75
07-06-1956 Fri	912,897.30
07-07-1956 Sat	911,756.31
07-08-1956 Sun	910,621.16

Shower: Description

Diagnostics Console - RiverWare 6.3 - RedRiverDemo63.mrk1.gp

Content

184358	24.80 June 24, 1957 SLOD: Lukfata Dam Site Determining	Set value = 4.138893 * 1.0cms = 4.138893 * 1.0cms.
184360	24.80 June 25, 1957 SLOD: Lukfata Dam Site Determining	Set value = 3.384754 * 1.0cms = 3.384754 * 1.0cms.
184362	24.80 June 26, 1957 SLOD: Lukfata Dam Site Determining	Set value = 2.528186 * 1.0cms = 2.528186 * 1.0cms.
184363	24.80 June 27, 1957 SLOD: Lukfata Dam Site Determining	Set value = 2.208714 * 1.0cms = 2.208714 * 1.0cms.
184364	24.80 June 28, 1957 SLOD: Lukfata Dam Site Determining	Set value = 1.868862 * 1.0cms = 1.868862 * 1.0cms.
184365	24.80 June 29, 1957 SLOD: Lukfata Dam Site Determining	Set value = 1.642377 * 1.0cms = 1.642377 * 1.0cms.
184366	24.80 June 30, 1957 SLOD: Lukfata Dam Site Determining	Set value = 1.444159 * 1.0cms = 1.444159 * 1.0cms.
184368	24.80 July 1, 1957 SLOD: Lukfata Dam Site Determining	Set value = 1.444159 * 1.0cms = 1.444159 * 1.0cms.
184369	24.80 July 2, 1957 SLOD: Lukfata Dam Site Determining	Set value = 1.444159 * 1.0cms = 1.444159 * 1.0cms.
184368	24.80 July 3, 1956 SLOD: Lukfata Dam Site Local Inflow	Set value = 8.080000 * 1.0cms = 8.080000 * 1.0cms.
194379	24.80 July 1, 1956 SLOD: Lukfata Dam Site Local Inflow	Set value = 13.080000 * 1.0cms = 0.368219 * 1.0cms.

Diagnostics Message

Model Report - Red River Model Report

File Output Edit Layout

Report Settings

Format Setting Value

Report Name Red River Model Report

Output File C:\temp\RedRiverReport.html

Save Icons Yes

Save RedRiverControls Yes

Report Preview (HTML)

Preview Only Selected Item

	ft	ft	ft
0:00 Jan 1	4.28e+02	4.64e+02	4.65e+02

Operating Level Storage Table

	1.00 NONE	2.00 NONE	3.00 NONE	4.00 NONE
0:00 Jan 1	0.00	3,700.00	3,700.00	18,400.00

Conservation Pool Storage Frac

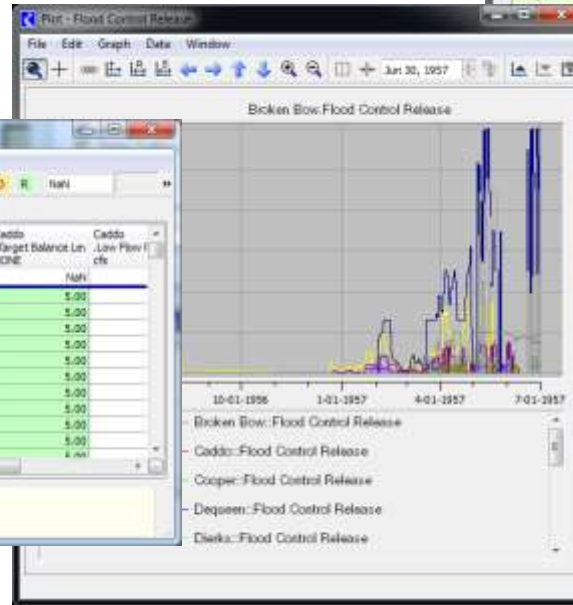
	1.00 NONE	2.00 NONE	3.00 NONE	4.00 NONE
0:00 Jan 1	0.00	0.00	0.00	0.00

SCT (RedRiverDemo63.mrk1.gp)

File Edit Slots Aggregation View Config DME Run Diagnostics Go To

Series Slots

Timeseries	Dev	Caddo Conservation Pool acre-ft	Caddo Conservation Pool acre-ft	Caddo Flood Control HI cms	Caddo Flood Control HI cfs	Caddo Target Balance Lin NONE	Caddo Low Flow cfs
6/30/56	Sat						
7/1/56	Sun	128,635.00	128,277.64	0.00	0.00	5.00	5.00
7/2/56	Mon	128,635.00	127,796.72	0.00	0.00	5.00	5.00
7/3/56	Tue	128,635.00	127,360.46	0.00	0.00	5.00	5.00
7/4/56	Wed	128,635.00	126,918.34	0.00	0.00	5.00	5.00
7/5/56	Thu	128,635.00	126,473.36	0.00	0.00	5.00	5.00
7/6/56	Fri	128,635.00	126,026.67	0.00	0.00	5.00	5.00
7/7/56	Sat	128,635.00	125,576.35	0.00	0.00	5.00	5.00
7/8/56	Sun	128,635.00	125,127.39	0.00	0.00	5.00	5.00
7/9/56	Mon	128,635.00	124,676.23	0.00	0.00	5.00	5.00
7/10/56	Tue	128,635.00	124,225.16	0.00	0.00	5.00	5.00
7/11/56	Wed	128,635.00	123,774.97	0.00	0.00	5.00	5.00



Display attributes:

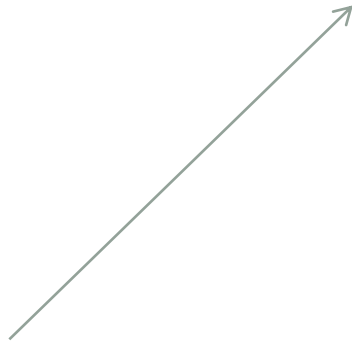
Controlling how a number is displayed

1,234.567 1000 cfs

Precision: 3

Scale: 1000

Units: cfs



Another display attribute: Format

Float: 1,234.567 1000 cfs

Scientific: 1.234e+03 1000 cfs

Unit Schemes

- Set of rules for displaying numbers
 - One rule for each unit type
- Exceptions allow unusual slots to be displayed differently
 - For all slots with a given name (E.g., “Evaporation Rate” as in/day)
 - Specific slots and slot columns

Unit Scheme Manager

- Default scheme is SI units
- Can create multiple custom schemes
- Named and saved in model file
- Easy to switch between schemes
- Sharable

Updating Old Models

- Transitional Scheme
 - Automatically created on load
 - The most common display unit is used for each unit type rule
 - Clean up by deleting unnecessary exceptions
- Create a unit scheme from a resource database (riverwareDb file)
 - Resource databases not otherwise used

Summary

- The Unit Scheme Manager allows you to define numeric display settings and easily switch between schemes
- Unit schemes can be as complicated or as simple as is appropriate
- Old models automatically carry previous settings forward by creating a transitional scheme