RiverWare / DSS Interface And Future Directions In DMIs and Output

Overview

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Formal Requirement

- Allow RiverWare to connect directly to the USACE Data Storage System (DSS)
- For the purpose of integrating RiverWare into the Corps. Water Management System (CWMS)

General Requirement

■ Allow RiverWare to connect directly to a variety of data sources and destinations:

- DSS
- HDB
- GPAT
- Excel
- Flat (text) files
- External applications

Terminology

- Technology – A database technology, for example DSS

- Database – An instantiation of a technology, for example a DSS file

- Dataset – A subset of a database, for example a DSS file and Part F value
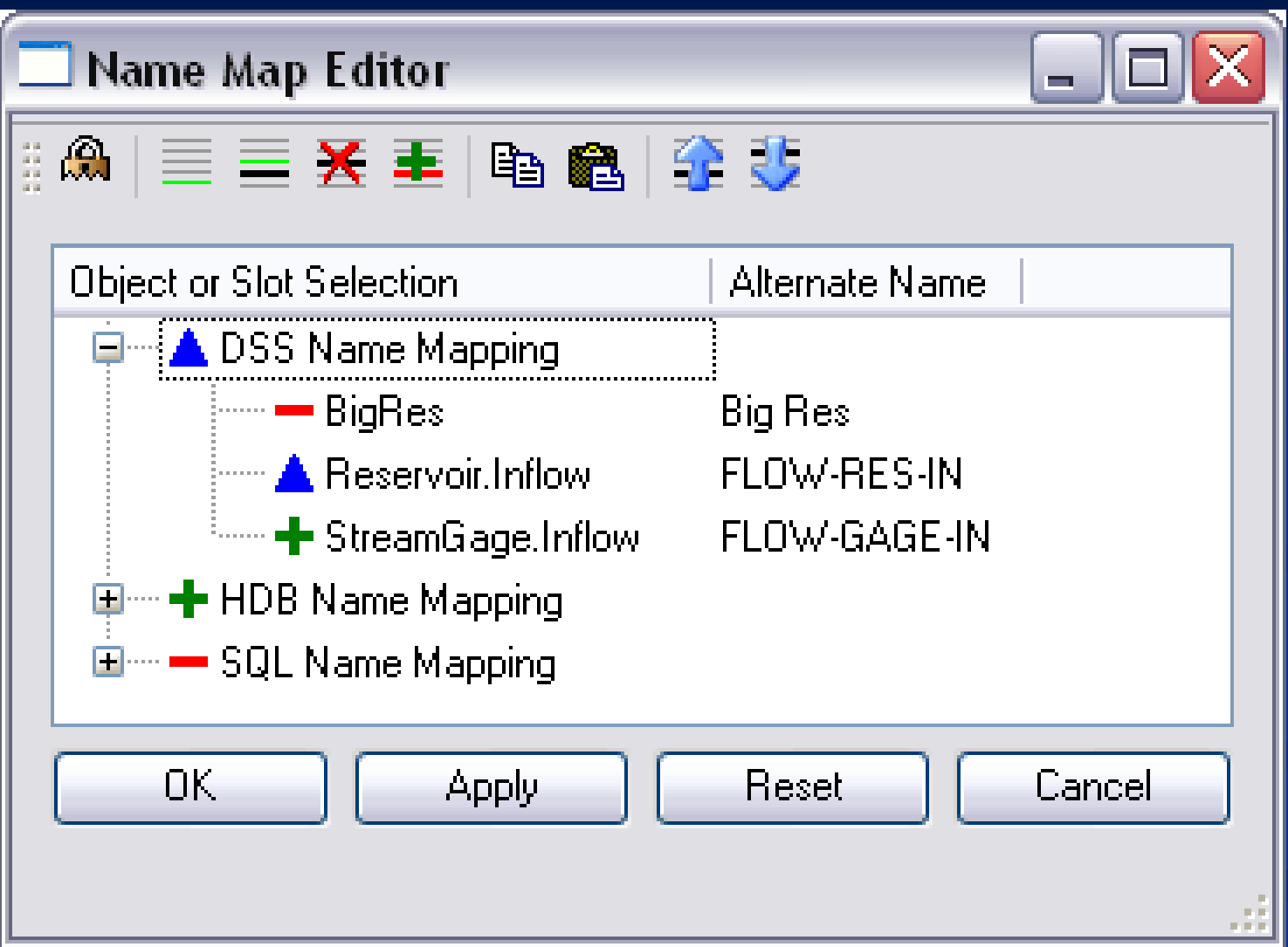
General Approach

- Technology-neutral front end which identifies the slots and time intervals to import data to or export data from
- Technology-specific back ends which connect to a database and read or write data
- Association of slots and time intervals with back ends

General Approach (Cont)

- Improved wildcarding
- Name mapping
- All configuration is through the user interface
- Elimination of control files and DMI executables

Name Mapping

- Multiple named name-mappings
- Each mapping maps object and slot names to their database names

Name Map Editor

Object or Slot Selection	Alternate Name
▲ DSS Name Mapping	
▬ BigRes	Big Res
▲ Reservoir.Inflow	FLOW-RES-IN
✚ StreamGage.Inflow	FLOW-GAGE-IN
✚ HDB Name Mapping	
▬ SQL Name Mapping	

OK   Apply   Reset   Cancel

Datasets

- Technology specific
- A subset of a database; as such, it identifies both the database and the subset
- Name mapping
- Scale and unit information

Dataset Editor

Dataset Name: DSS Observed Data

[General] **[DSS]**

DSS File: DSS Observed Data

DSS Default Part Information:

DSS Default Part Information

Part A	Part B	Part C	Part D	Part E	Part F
Neosho	OBJECT_NAME	SLOT_NAME			AvgFlow

[OK] [Apply] [Reset] [Cancel]

Database DMIs

- Manages list of slots and time intervals data will be imported to or exported from
- Manages list of datasets which will import or export the data
- Manages the relationships between the slots and the datasets
- Controls the importing and exporting of the data

Database DMI Editor

Database DMI Name: Daily Op Inputs

Type
- ⦿ Input
- ○ Output

☑ Confirm Warnings

Duration: 28

Slots and Time Intervals

Slot Selection	Start Offset	Start Base	End Offset	End Base

Datasets

Datasets and Associated Slots	Start Offset	Start Base	End Offset	End Base

OK	Apply	Revert	Cancel

Slots and Time Intervals

Slot Selection	Start Offset	Start Base	End Offset	End Base	
⊞ Reach.Outflow	0	Start	0	End	
⊟ ▲ Reservoir.Storage	0	Initial	0	Initial	
BigRes.Inflow					
HugeRes.Inflow					
SmallRes.Inflow					
TinyRes.Inflow					
⊞ ✚ StreamGage.Outflow	0	Start	0	End	