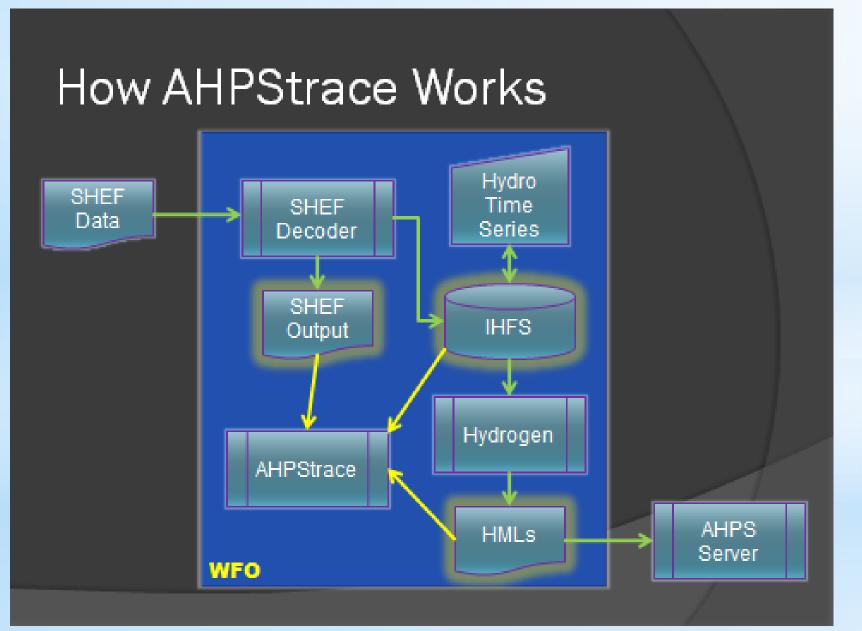
NEW TOOLS TO TRACK DATA THROUGH THE ADVANCED HYDROLOGIC PREDICTION SERVICE PROCESSES



AHPStrace

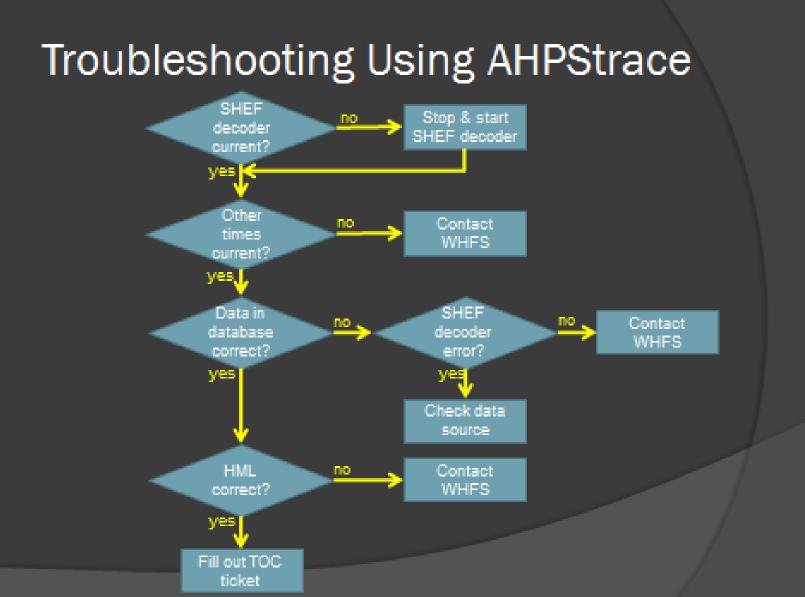
- **The Problem:** The AHPS data processing path inside a WFO AWIPS system is not easy to trace nor well understood by many. When problems develop, the usual solution is for the WFO to ask for external help. The external group must search inside the WFO system to determine the failure. This wastes time and resources.
- **The Solution:** AHPStrace quickly shows how data moves through a WFO AWIPS system. The interface is simple enough that anybody in the WFO with a basic knowledge of AHPS data can follow the data path and recognize any failures.



AHPStrace acts as a window for three critical WFO processes, the SHEF decoder, IHFS database, and Hydrogen. Using AHPStrace, one can examine SHEF decoder messages, look at records in the **IHFS** database, or locate a given section in a Hydrogen generated HML product. By looking at these three items, one can quickly determine breaks in the data flow.

Flowchart showing data flow of a WFO system

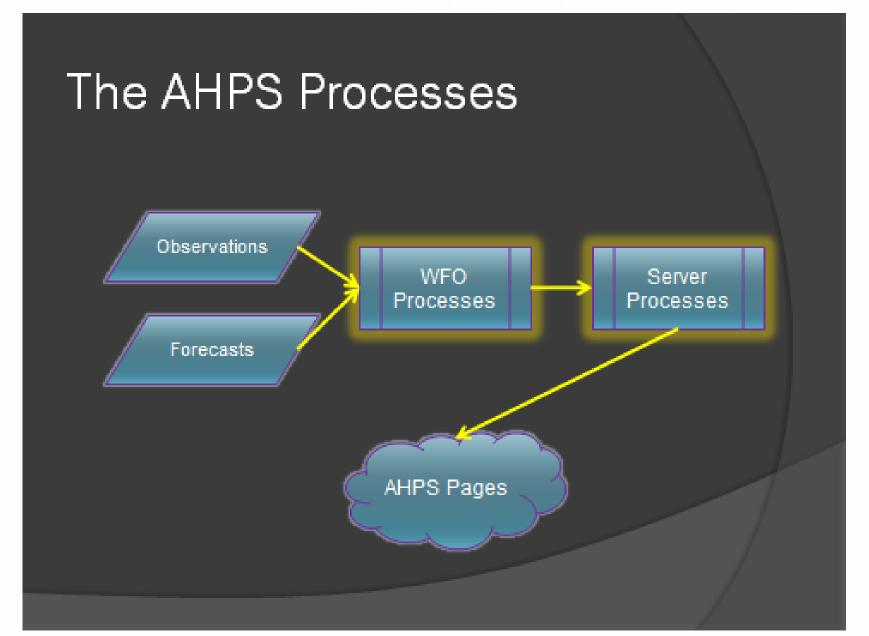
The graphical user interface of AHPStrace is simple. First, it shows all the locations set up for Hydrogen and their parameters. It contains a viewer for the three types of critical data. The time of the last execution of the processes is displayed. A tool for quickly locating the desired station inside lengthy data reports is included. Also, it is easy to examine the data for backup offices as well.



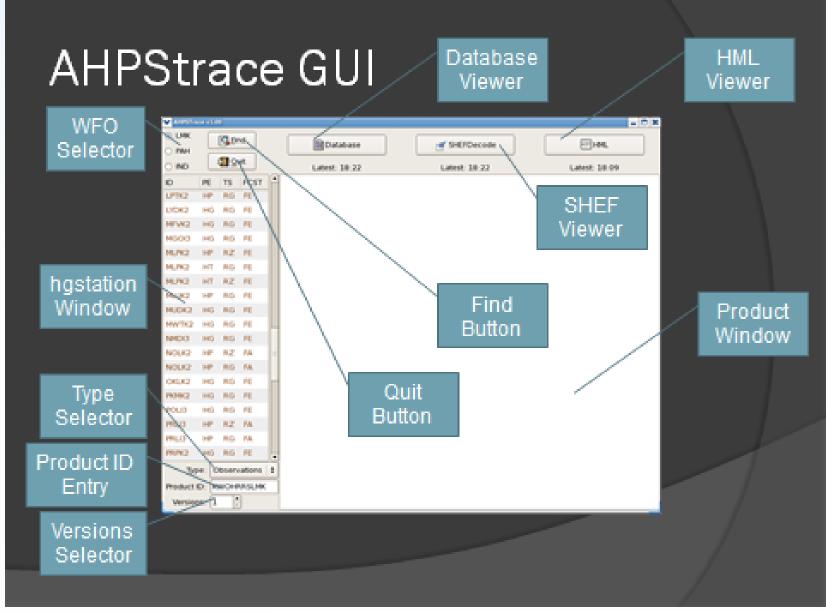
Decision tree for troubleshooting a WFO system using AHPStrace

Using this decision tree with AHPStrace, the user can quickly determine where the breakdown occurred. In simple cases, they may be able to fix the problem without external assistance. If not, they will know which group to contact and they will be able to give the external group valuable information which will expedite repairs.

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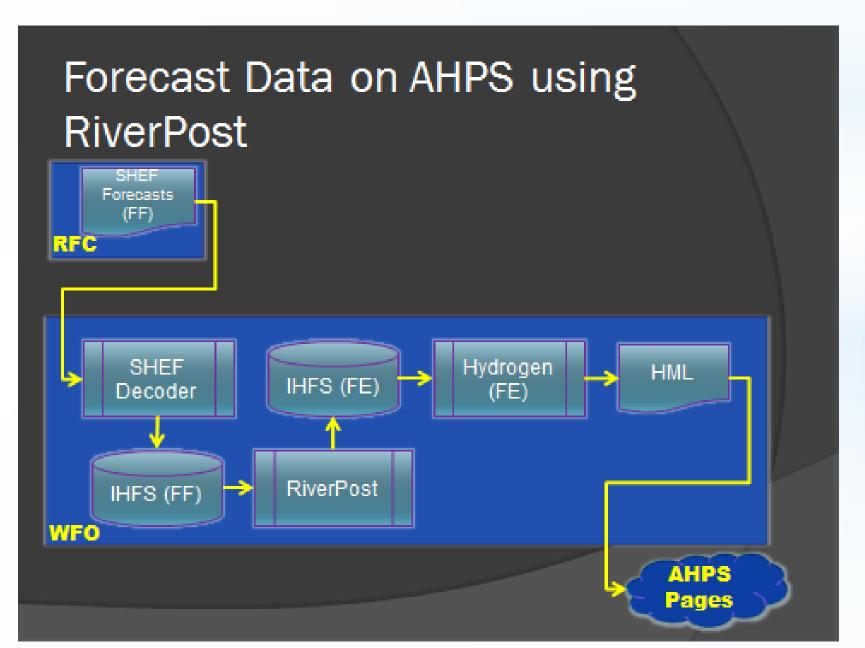
Flowchart showing an overview of NWS AHPS system



Graphical user interface of AHPStrace

RiverPost

The Problem:	The path of river forecasts through most systems does not allow for any exami- hydrographs before they appear on t errors have to be fixed after the public vie is difficult to quickly remove a bad forecast
The Solution:	RiverPost breaks the automatic path by WFO to examine the forecast before put



RiverPost works by taking advantage of the SHEF type code. RFC forecasts have type codes of "FF". Hydrogen can be set up to only issue forecasts with a type of "FE". Riverpost copies a forecast hydrograph from "FF" to "FE". The original RFC forecast is left unchanged in the database. Thus, the WFO is given complete control of which forecasts are automatically posted to the web by choosing which locations in Hydrogen are set to "FE" or "FF". RiverPost can also be programmed to ignore certain type codes.

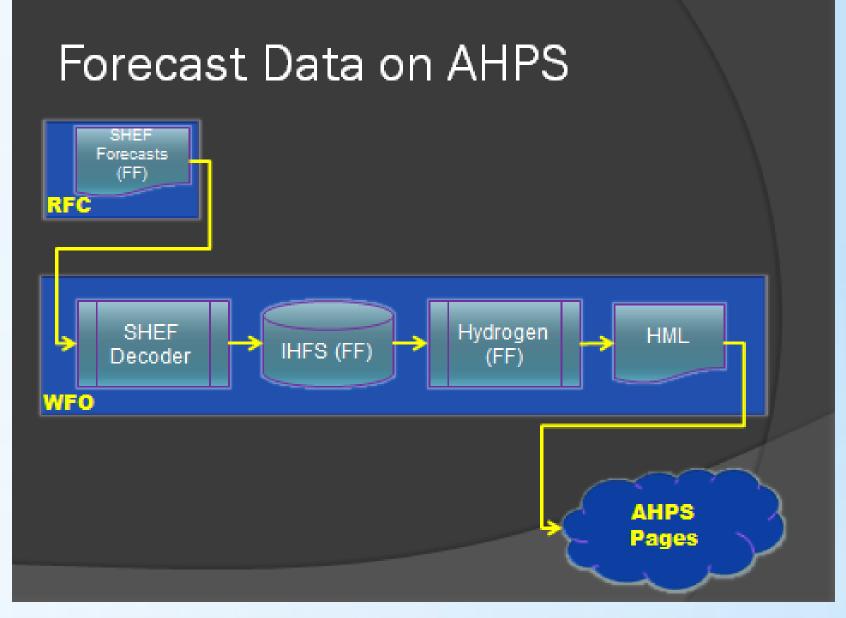
Flowchart showing forecast data flow through a WFO with RiverPost installed

The graphical user interface of RiverPost is simple. The user sees which forecasts are current in the database and their status. They can select which forecasts to issue either by location or forecast group without issuing all forecasts. The user can also remove bad forecasts from the web. If a forecast is removed by mistake, it is easy to restore. Any database problems can be cleaned up quickly. Moreover, switching over to support backup offices involves only a single mouse click.



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allowing the ublic issuance. Also, it is simple to remove a bad forecast.



Flowchart showing forecast data flow through a WFO

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Group	ID	Forecast Point	Age	AHPS Status
OHIO RIVER	MLPK2	McAlpine Lower	01:44	**Warting**
OHIO RIVER	CNNB	Cannelton Lock	01:44	**Waiting**
KENTUCKY RIVER	FODK2	Ford Lock	01:55	**Waiting**
KENTUCKY RIVER	HBK2	High Bridge Lock	01:55	**Waiting**
KENTUCKY RIVER	FFTK2	Frankfort Lock	01:55	**Walting**
SALT RIVER	SHPK2	Shepherdsville	01:55	**Walting**
	TVLK2	Taylorsville Lake	01:17	Posted
	NOLK2	Nolin River Lake	01:17	Posted
	PRILI3	Patoka Lake	01:17	Posted
	BRRK2	Barren River Lake	01:17	Posted
	RRLK2	Rough River Lake	01:17	Posted
	GRLK2	Green River Lake	00:07	Removed

Graphical user interface of RiverPost