

The Power of PdP

There are a number of compelling reasons to consider PdP for protecting your plant or fleet. The value of predictive analytics lies in your ability to gain greater control over your operation by receiving clear, advance warning of equipment or process degradation. PdP works to your advantage by:

- **Addressing equipment and instrument problems early** – to reduce control room alarms and enhance plant productivity
- **Shifting outages into planned maintenance work** – to help you better manage operating expenses
- **Lessening the likelihood of property loss** and serious injury caused by catastrophic failure
- **Providing your energy traders with better intelligence** by managing risks and evaluating market opportunities
- **Allowing you to proactively schedule repairs** and reduce the chances of forced shutdowns caused by equipment failure

PdP – A Critical Piece of Your Risk Prevention Strategy

PdP is a superior, advanced pattern recognition monitoring application that utilizes existing data signals available through installed DCS systems, historians, and other monitoring systems to detect abnormal operating conditions.

The System State Analyzer algorithm embodied in PdP produces very accurate estimates of the expected values of sensors utilizing models that have “learned” the normal operation of the equipment based on historical performance.

The estimated values are compared to the real time values to evaluate overall system operation before extreme problems take hold of your operation

17-JUN-08 9:04:46		DAD: 8 Health		PdP UNIT OVERVIEW		
MAIN		Scientech Unit 3		Gross MW 415	#Notifications 8	
PdP	3 TURBINE MECH	ABNORMAL 10	3A PULV & FEEDER	NORMAL 3	31 HP FWH	NORMAL 3
CMAX	3 TURBINE PERF	NORMAL 2	3B PULV & FEEDER	NORMAL 1	32 HP FWH	NORMAL 3
PMAX	3 GENERATOR	NORMAL 2	3C PULV & FEEDER	ABNORMAL 2	33 LP FWH	ABNORMAL 2
DIAG	3A BFP	ABNORMAL 2	3D PULV & FEEDER	NORMAL 1	34 LP FWH	NORMAL 1
ALARM	3A BFP TURB	NORMAL 2	3E PULV & FEEDER	NORMAL 1	35 LP FWH	NORMAL 1
UTIL	3B BFP	ABNORMAL 3	3F PULV & FEEDER	ABNORMAL 2	36 LP FWH	ABNORMAL 1
	3B BFP TURB	NORMAL 2	3G PULV & FEEDER	NORMAL 1	37 LP FWH	ABNORMAL 1
	3A COND PUMP	NORMAL 1	3A AIR HEATER	ABNORMAL 1		
	3B COND PUMP	NORMAL 1	3B AIR HEATER	NORMAL 3		
	3 CONDENSER	NORMAL 1	3A FD FAN	NORMAL 1		
	3A SBAC	ABNORMAL 3	3B FD FAN	NORMAL 1		
	3B SBAC	NORMAL 3	3A ID FAN	NORMAL 3		
	3C SBAC	NORMAL 1	3B ID FAN	NORMAL 2		
			3 BOILER	NORMAL 1		
			3 WATER CHEM	NORMAL 1		

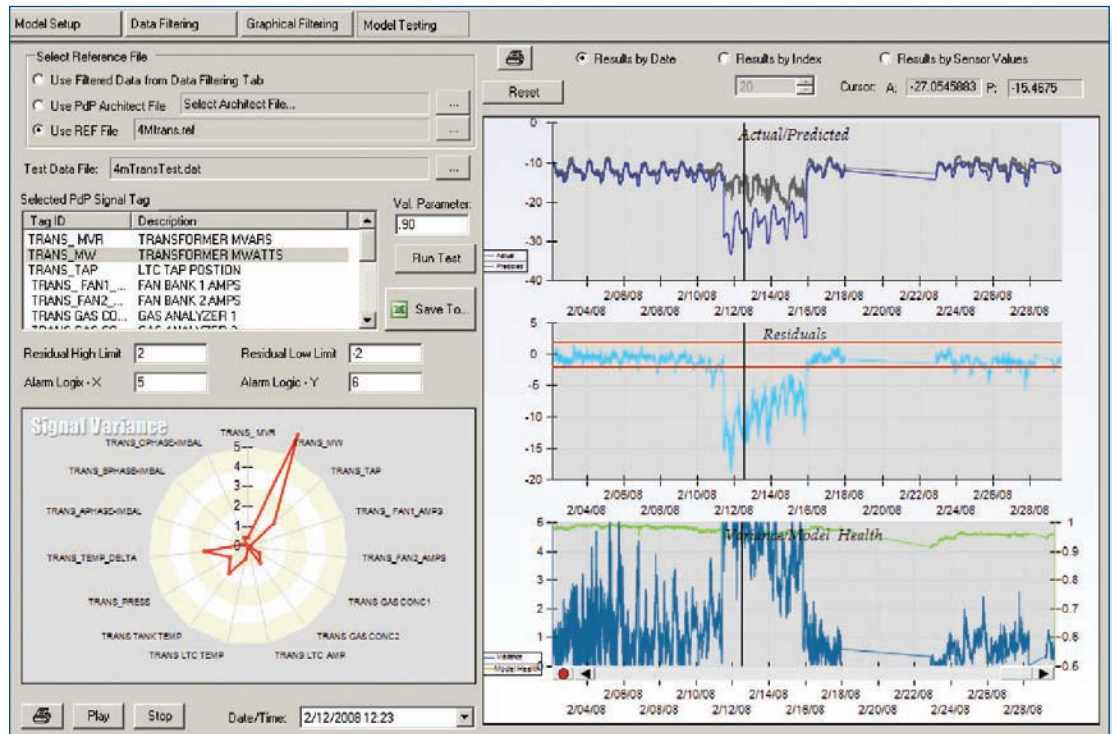
NOTE: Click on Status indication for additional component information.

Application Features that Enhance Utility

Every application in the FAMOS™ suite is readily deployed and designed to ensure ease of use and utility. Product features that help deliver a maximum return on your investment include:

- Straightforward alarms that identify system and equipment anomalies
- Clear equipment and process displays that outline remedies and simplify corrective action planning
- Exceptional reporting and review functionality via web, e-mail, and/or console
- A user-friendly “PdP Architect” graphical tool for ease in building, training and testing models

Because PdP is created by the same developers as other FAMOS suite products – when installed as part of the suite, it creates an integrated and robust solution for your plant or entire fleet.



The screenshot displays the PdP Architect software interface. It shows a 'Fleet' summary table with columns for 'Unit', 'Point Summary', 'Assessment', 'Reports', 'Architect', 'CMAx', 'PMAx', and 'Utilities'. The 'Unit' is 'out3' and the 'Model' is '3HPTURmp'. The 'Assessment' section shows 'Processing Rate' of 300, 'Validation Parameter' of 0.900000, 'Total Points' of 39, 'Cutoff Point' of 3312801T, 'Cutoff Value' of 414.734, 'High Cutoff' of 440.000, 'Low Cutoff' of 105.000, 'Alarms X out of Y' of 18 out of 20, and 'Alarm On' of Residual. A 3D model of a piece of equipment is shown on the right. Below the summary table is a detailed table of sensor data.

Sensor	Description	Unit	Actual	Prediction	Variance	Residual	Res. High	Res. Low	Active	Trend
3V11001A	U3 1BRG VER	MILE	1.19	1.261022	1.133945	-0.1010219	0.5	-1	Yes	Trend
3V11001B	U3 1BRG HOR	MILE	0.62	0.8904291	3.393322	-0.2704291	0.5	-1	Yes	Trend
3V11002A	U3 2BRG VER	MILE	1.03	1.411403	5.602193	-0.3814031	0.5	-1	Yes	Trend
3V11002B	U3 2BRG HOR	MILE	0.6999999	0.9210749	4.595311	-0.2310749	0.5	-1	Yes	Trend
3V11003A	U3 3BRG VER	MILE	0.89	1.005473	1.732021	-0.1154728	0.5	-1	Yes	Trend
3V11003B	U3 3BRG HOR	MILE	0.42	0.4312144	0.1637802	-0.01121446	0.5	-1	Yes	Trend
3V11004A	U3 4BRG VER	MILE	1.15	1.444519	1.759669	-0.2945187	0.5	-1	Yes	Trend
3V11004B	U3 4BRG HOR	MILE	0.8299999	1.054538	2.504376	-0.2245386	0.5	-1	Yes	Trend
3T11001XAA	U3 NO.1 TURB	DEG	174.47	170.2763	1.573441	4.19371	7	-14	Yes	Trend
3T11001KBA	U3 NO.1 TURB	DEG	177.62	170.5543	3.094869	7.065735	7	-14	Yes	Trend

The Scientech Approach Optimizes Your Performance

Scientech's PdP product, in conjunction with the other FAMOS condition monitoring tools, brings efficiency, superior protection and a total system for effectively monitoring your operation.

For additional information contact Scientech at 208-524-9200 or visit <http://famos.scientech.us>.

