

OSIsoft REGIONAL S SEMINARS S The Power of Data

OSIsoft. REGIONAL SEMINARS 2012

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Find Opportunities, Gain Insights, Generate Value – what you can do with access to PI System data

Presented by OSIsoft

"Data is your only weapon for improved performance."

Dr. Don Paul, Vice President CTO, Chevron

Who Uses the PI System?

- Renewable Energy Dispatch Operator
- Control Room Operator
- Operations Supervisor
- Operations Lead
- Transmission Dispatcher
- System Dispatch
- Pipeline Controller
- Planning/Reliability Engineer
- SCADA Engineer
- Power Operations Engineer
- Automation Engineer
- Project Engineer
- Control Systems Engineer
- Process Engineer
- Process Control Engineer
- Commercial Engineer
- MES/PIMS Engineer
- Technical Service Engineer
- PI System Engineer
- Real Time Systems Engineer
- Instrument and Control Engineer

- Gas Engineer
- Performance Engineer
- Operations Engineer
- Systems Engineer
- Electrical Engineer
- Utility Engineer
- Power Systems Engineer
- Reconciliation Engineer
- Reservoir Engineer
- Reliability Engineer
- Generation Engineer
- Plant Engineer
- Bioprocess Equipment Engineer
- Mechanical Engineer
- Domain Expert Engineering
- EMS Engineer
- Automation MES Engineer
- Process Development Engineer

More PI System Users

- PI Application Engineer
- Sr. Manager, O&M IT Applications
- IT Manager Mill Applications
- Refining I.T. Manager
- Data Systems Administrator
- Application Support Analyst
- Manufacturing IT Architect
- Data Systems Analyst
- Director of Application Development
- Tech Support for Operations
- IT Director, Consumer Packaging
- Global PI Business Solutions Architect
- Process Systems Application Engineer
- IT Business Partner
- Applications Support Lead
- Director, Sustainable IT
- Information Security Engineer
- Product Line Manager
- Control System Supervisor
- System performance manager
- DCS Supervisor

- IT Applications Manager
- Plant Manager
- Maintenance Manager
- Global Production Volumes Manager
- PI System Manager
- Development Manager
- Maintenance Team Leader
- Product Engineering Mgr
- IT Operations Manager
- Managing Director
- Operations Manager
- Business Development Manager
- Central Heating & Cooling Plant Manager
- Global Production Services Manager
- Director, Midstream Operations North
- Director, Smart Network Operations
- IT Director
- Hydro Generation Supervisor
- Manager, Data Analytics
- Infrastructure Manager
- Manufacturing Process Information Manager
- Program Manager

And the list goes on...

- Market sales Manager Utilities
- EMS Supervisor
- Asset Management Program
- Mine Superintendent
- Division Manager
- Business Development Manager
- Supply Operations Supt.
- Program Manager, Pipeline & Power Industrial Control & Operating Environment
- Supervisor, EMS SCADA Systems
- Mgr, Plant I.T.
- Manager, Process Control & EIT Program, XPS
- Plant Optimization & NERC CIP Compliance Manager
- Process Controls Software Manager
- Director of Platform Product Management
- Electrical & Control Systems Manager
- Business Relationship Manager
- Control Syst. Suprv.
- Technical Services Supervisor
- Scada & Process Control Supervisor
- Maintenance Supervisor Process control/IT

- Financial Systems Analyst
- Reliability Analyst
- Principal Operations Systems Analyst
- Business Systems Analyst
- Senior Sustainability Advisor
- Business Analyst
- Energy Systems Analyst
- Performance Analysis
- Real-Time Analyst
- Senior Sourcing Analyst
- Analyst Industrial IT
- IT Analyst
- Energy Analyst
- Engineering Analyst
- Wind Resource Data Analyst
- Hydro Analyst
- Quality Analyst
- EMS Analyst
- Process Systems Analyst
- Mill Application Analyst
- Process Computing Analyst
- Operations Analyst

Typical Users of the PI System

- Operators
- Supervisors
- Process Engineers
- Maintenance

How Does PI System Data Help?

- Provide current status outside of control room
- Allow Situational Awareness for quick decisionmaking
- Support troubleshooting operations problems
- Measure effectiveness over time
- Compare performance
- Monitor equipment health
- Measure quality

RockTenn

- Needed to bring Users together
 - Interesting use cases emerging from mills
 - Corporate provided some ideas but Mills were interested in developing their own
- PI System Power User Group
 - Build cross Mill relationships
 - Promote idea sharing
 - Friendly competition promotes learning and initiative



PM#1 Dry End Display 🗡 (Fired Only)

Production Rate



Description

1d lw imp

4/17/2012 9:00 AM

PMI Caliper Real 2 Sig

Ph/1 Back Weight Reel, 2 Sig Ph/1 Molanum Reel, 2 Sig

78.821

SC[Moisture



StdDev

0.075061

0.45412

0.025518

0.86738

3.8925

0.43212

2146

Maximum

2148

31 AH

1.051

4.2564

0.4684

2145

Minimum

0.78772

2,8524

0.408

2:50

30.00 minutes

2:53





2.54

"Operators are afraid of full blown PC Applications, PI Coresight will give them easy to use Ad hoc capabilities" – Matt Corcoran

2.58

12.57

2:54

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Trend

2144

10 AM

1.051

0.4684

2643

Average

2:45

Value

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4/17/2012 2:00 PM

Local intranet | Protected Model Off

3.00 004

2:59

RockTenn Water Bill in Excel



- Real time water usage stored in the PI System and analyzed in Excel using PI DataLink
- Found a faulty water meter installed by Utility company
- Overcharging for Effluent treatment due to a build up on the Effluent meter

RockTenn Waste Control

- Slab calculator helps operators calculate what they trim to reduce waste
- Operators assign reason codes and comments

	A	В	С	D	E	F	G
1	PIServer	NT327002	3270				Ready
2	PaperMachine	PM1					
3	StartTime	3/12/2012 7:00	Get Data				
4	EndTime	3/19/2012 7:00					
6		Loss (Feet)	161,099			4.45%	% Total Loss
7	Total	AS400 Lineal Feet	3,457,307			2.07%	% Unaccounted for Loss
8	Total	PI Reel Lineal Feet	3,618,406	193	86,194	74,905	Unaccounted for Loss
9							
10	ID	Start Time	Reel #	Min	Slab	Cause	Comments
11		13-Mar-12 16:35	RT512C1304	14.9	7,576	Grade Change	.020unc018 mill
12		13-Mar-12 21:07	RT512C1312	4.4	2,309	Other	cut 1.5" clayoff / cut 5" off e roll c.s.
13		13-Mar-12 21:44	RT512C1313	5.4	2,832	Coating AK	clayoff c.s.
14		14-Mar-12 00:14	RT512C1317	1.8	952	Hole	holes
15		14-Mar-12 02:02	RT512C1320	0.0	0	Coating AK	set 1 b.r. clayoff c.s.
16		14-Mar-12 02:52	RT512C1321	7.0	3,683	Coating AK	clayoff c.s.
17		14-Mar-12 03:45	RT512C1322	7.3	3,843	Other	cleaning backing roll and scraping oven roll
18		14-Mar-12 04:28	RT512C1323	7.5	3,931	Caliper Change	.018016
19		14-Mar-12 05:03	RT512C1324	0.0	0	Caliper Change	no set

RockTenn Equipment Run Time

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Glatfelter Paper Lab Technician

- Contest where multiple unique user-created projects were aimed at making the job easier, improving product quality, tracking costs and saving money
- Wants to see status of operations without leaving the lab
- Built his own display that checks additives and other key properties



Amonix Remote Asset Monitoring

- Needed to monitor performance of remote equipment, starting with nothing
- Wanted an easy, low cost data system
 - Low Cost of maintenance
 - Easy to maintain from Remote (unmanned) locations
 - Full end-to-end system

Amonix Field monitoring

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Amonix Standard Reporting

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Amonix Expertise

- New to the PI System
- No formal training
- Made use of YouTube learning channel

Other Audiences for PI Data

• Executives

- CFO
- CEO
- President
- Chief Sustainability Officer
- Vice President
- Director
- Chief Technical Officer
- VP Field Operations
- VP, Marketing
- CIO Manufacturing
- Vice President Product Development
- Vice President of Sales
- Chairman
- VP of Operations and COO
- Board Member
- Vice President of Technical Services
- Vice President Global Sales and Marketing
- Vice President of Engineering
- Vice President, Marketing
- Vice President Condition Monitoring
- Vice President Corporate Communications
- Vice President of Marketing & Business Dev.
- Vice President Predictive Equipment Health Management
- Vice President Program Management
- Vice President Global Strategies and Solutions
- Vice President, Operations and Business Development
- Executive in Information Management for Production Operation

- Business Analysts
- Customers
- Public
- Contractors
- Vendors

Some Atypical Uses of the PI System

- Feeding into cost/profit Alcoa Demand Response
- Sustainability initiatives Seattle Mariners facility management
- Reducing energy use across businesses in Vermont – IBM
- Monitoring a computing infrastructure Weill Cornell
- Managing Critical Facilities Harvard Medical School
- Sharing Utility Data Northeast Utilities

Alcoa Power Markets Coordinator

- Wanted to balance plant power needs against ability to generate revenue from local ISO
- Must coordinate both demand and capability
- Needs real time data to work

Alcoa Demand Response Data

Warrick Demand Response



Communicating with Alcoa Operations

Power Plant Operating Tools



Facility Operations

- Vice President of Ballpark Operations
- Wanted to reduce the amount of waste (recycling) and utility use (power, water)
- Data and competition (with other similar facitlities) driving change
- PI System data shows him when the roof is opened, when there is a lot of kitchen exhaust, the difference made by changing parking garage lighting...

Stadium Sustainability



Stadium Sustainability



Ballpark Operations

- Making data available to Engineers, Security, and Control Room Operators allows them to gauge current performance
- Seeing results drives process improvement
- Must be easy to get to
- Seeing performance data allows them to adjust operations to improve over time

Facility Monitoring

Utility Dashboard

- Real time information
- Automated event reports
- Share and compare with MLB

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Vermont Businesses

- Collaboration among businesses in Vermont to reduce power use
- Part of smart grid initiative
- Sharing data across business entities
- Data viewed by business analysts, facility operators and administrators to affect usage patterns by reducing system demands, improving efficiency and providing a financial return
- Sharing best practices within a community

Business Collaboration



Weill Cornell Medical College

- High power computers used for research
- Needed to monitor and publish availability
- Wanted to conserve power used by compute clusters







Many more stories on the **OSIsoft** web site

Providing Data for Your Users

- Some users need data they can work with to investigate
- Some users need to see previous data
- Some users just need to see current data

Pick the Tool that Best Suits









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5	Turbo Extraction Plate Time	135	25	1/7/2011	Holes in extraction plate, shut down to change	5/22/2011							
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15	Liner Secondary Screen Basket Time	360	318	3/10/2010	Date updated by JBrans	3/15/2011							
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17	Hydrapurge Rotor Time	180	90	10/29/2010	Date updated by jbrahs	5/1/2011							

PI WebParts

- You have a SharePoint environment and want to make use of its support by IT
- Your users need to see a collection of information from different sources, including the PI System
- Your users don't want to build new displays
- You want to provide navigation that guides different audiences to the content they need



PI Coresight

- Your users need to explore data quickly or look at quick displays built by others
- Your users don't want to install anything
- You have no SharePoint environment



PLEASE PAUSE FOR DEMO

PI DataLink

- Your users expect to work with numbers
- Your users want to build their own reports
- Your users are comfortable with Excel
- Your users want Excel charts

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PI ProcessBook

 Your users want to build their own graphical displays

Or

- You have a group that builds displays for others
- Your users need to monitor how the process is progressing
- Your users need customized behavior or layout



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Who Should Be Using PI System Data?

- Renewable Energy Dispatch Operator
- Control Room Operator
- Operations Supervisor
- Operations Lead
- Transmission Dispatcher
- System Dispatch
- Pipeline Controller
- Planning/Reliability Engineer
- SCADA Engineer
- Power Operations Engineer
- Automation Engineer
- Project Engineer
- Control Systems Engineer Process Engineer
- Process Control Engineer
- Commercial Engineer MES/PIMS Engineer
- Technical Service Engineer
- PI System Engineer
- Real Time Systems Engineer
- Instrument and Control Engineer
- Market sales Manager Utilities
- EMS Supervisor
- Asset Management Program
- Mine SuperIntendent
- Division Manager
- **Business Development Manager**
- Supply Operations Supt.
- Program Manager, Pipeline & Power Industrial Control & Operating Environment Supervisor, EMS SCADA Systems
- Mor. Plant I.T.
- Manager, Process Control & EIT Program, XPS
- Plant Optimization & NERC CIP Compliance Manager
- Process Controls Software Manager
- Director of Platform Product Management
- Electrical & Control Systems Manager
- **Business Relationship Manager**
- Control Syst. Supry.
- Technical Services Supervisor
- Scada & Process Control Supervisor
- Maintenance Supervisor Process control/IT

Operations Analyst

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- Gas Engineer Performance Engineer
- Operations Engineer
- Systems Engineer

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- Electrical Engineer
- Utility Engineer
- Power Systems Engineer
- Reconciliation Engineer
- Reservoir Engineer
- Reliability Engineer
- Generation Engineer
- Plant Engineer
- Bioprocess Equipment Engineer
- Mechanical Engineer
- Domain Expert Engineering
- EMS Engineer
- Automation MES Engineer
- Process Development Engineer
- . Financial Systems Analyst
- Reliability Analyst
- Principal Operations Systems Analyst
- Business Systems Analyst
- Senior Sustainability Advisor **Rusiness Analyst**
- Energy Systems Analyst
- Performance Analysis
- Real-Time Analyst
- Senior Sourcing Analyst
- Analyst Industrial IT
- IT Analyst
- Energy Analyst
- Engineering Analyst
- Wind Resource Data Analyst
- Hydro Analyst
- Quality Analyst
- EMS Analyst
- Process Systems Analyst
- MIII Application Analyst
- Process Computing Analyst

- PI Application Engineer
- Sr. Manager, OSM IT Applications

IT Applications Manager

Maintenance Manager

PI System Manager

Development Manager

IT Operations Manager

Managing Director

IT - Director

Operations Manager

Maintenance Team Leader

Business Development Manager

Central Heating & Cooling Plant Manager

Manufacturing Process Information Manager

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Global Production Services Manager

Director, Midstream Operations North

Director, Smart Network Operations

Hydro Generation Supervisor

Manager, Data Analytics

Infrastructure Manager

Program Manager

Business Analysts

Customers

Contractors

Public

Vendors

Product Engineering Mar

Global Production Volumes Manager

Plant Manager

- IT Manager Mill Applications
- Refining I.T. Manager
- Data Systems, Administrator
- Application Support Applyst
- Manufacturing IT Architect
- Data Systems Analyst
- Director of Application Development
- Tech Support for Operations
- IT Director, Consumer Packaging
- Global PI Business Solutions Architect
- Process Systems Application Engineer
- IT Business Partner
- Applications Support Lead
- Director, Sustainable IT
- Information Security Engineer

Control System Supervisor

System performance manager

Product Line Manager

DCS Supervisor

Executives

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View President of Roles

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VP Public Consideration



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PI System Data Everywhere

- Cloud options for sharing data
- Support for PI System displays on a variety of devices

PI Coresight with Mobile Clients





PI Coresight – ProcessBook Display Viewer



Stay Up-To-Date on the Web

• PI System Roadmap on OSIsoft Technical Support Site

http://techsupport.osisoft.com/techsupport/NonTemplates/roadmap.aspx

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	System Manager Resources
	Known Issues
	Enhancements
OSISOTT Tech Support Site Features	PI System Roadmap

OSIsoft Learning Channel on YouTube





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