



PI Vision 2017

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Our Commitment to YOUR Needs

You told us...

Where Control center, Desktop, Mobile

When Real-time: Past, Present, Future

How Operational Intelligence
Advanced Analytics
Business Intelligence
Enterprise Reporting

Requirements

SEAMLESS

Unified experience

UBIQUITOUS

Empowering for all users

ON – DEMAND

Intuitive, self-service, off the shelf



PI Vision

We are embarking on a **unified visualization infrastructure** to deliver a seamless, powerful, extensible experience.

Create
Beautiful
Information
Displays &
Dashboards

Monitor and
Optimize
Complex
Processes

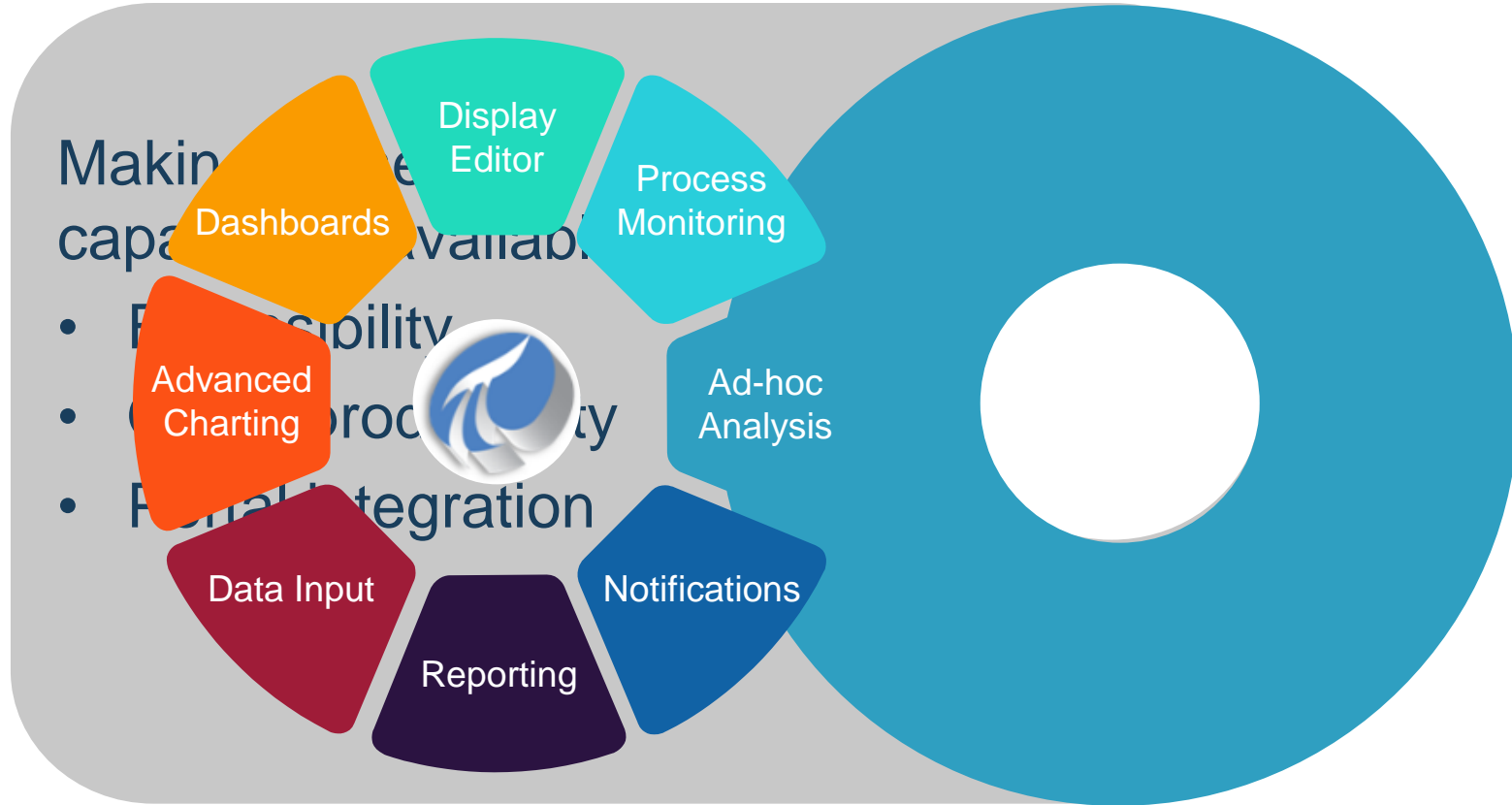
Analyze and
Compare
Important
Events

Input Critical
Data in
Context

Your window into operational intelligence



Unified Visualization Infrastructure: Core Capabilities



OSIsoft's Visualization Execution Strategy: Focus & Goals

Modern architecture

Leverage the latest technology to stay relevant



Value-add features

Enable customers to solve new problems and derive more value



Process Graphics

Provide PI ProcessBook customers a path forward



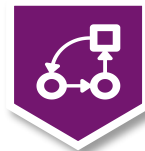
Partner enablement

Actively support partners to develop solutions on our platform



Extensibility

Enable the community-at-large to build customizations & extensions



Superior data access

Ensure PI Web API is focused to meet the service layer needs



Major Changes Are Underway

2016

- ✓ HTML 5: View on any phone/tablet
- ✓ **New Display Editor**
- ✓ **PI ProcessBook Viewer**
- ✓ **Event Comparison (Gantt chart + overlay trend)**

2016 R2

- ✓ **Event Search**
- ✓ **Trend Configuration**
- ✓ Event Comparison Displays
- ✓ **Event Details and Acknowledgement**

2017

- ✓ Collections
- ✓ Graphics Library
- ✓ Pinned Events
- ✓ Drill-in Navigation



New Display Editor



PI ProcessBook Viewer



Overlays & Gantt charts



Major Changes Are Underway

2016

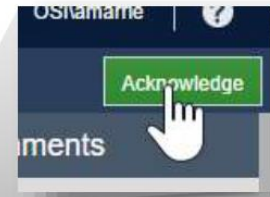
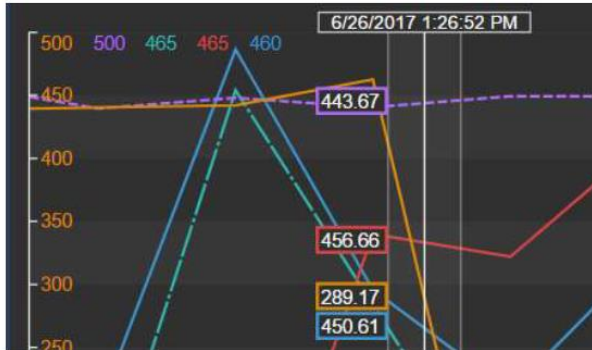
- ✓ HTML 5: View on any phone/tablet
- ✓ **New Display Editor**
- ✓ **PI ProcessBook Viewer**
- ✓ **Event Comparison (Gantt chart + overlay trend)**

2016 R2

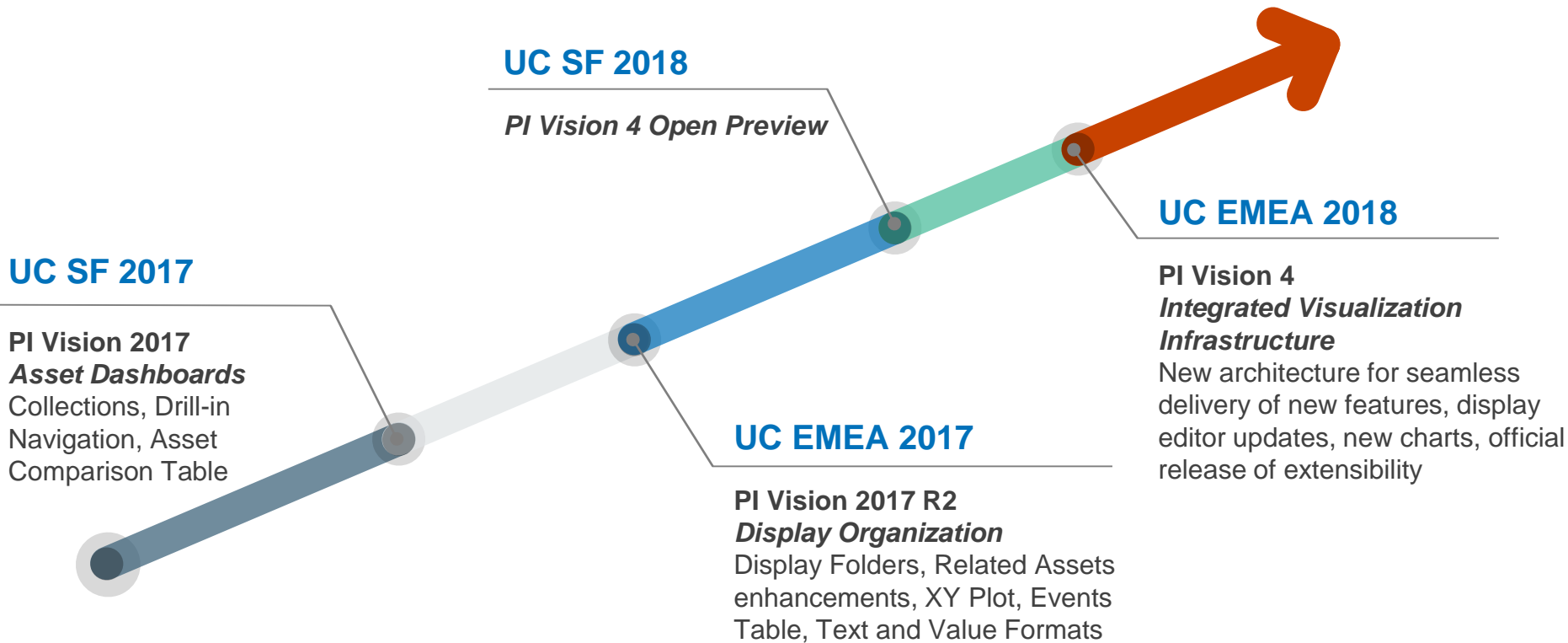
- ✓ **Trend Configuration**
- ✓ **Event Search**
- ✓ Event Comparison Displays
- ✓ **Event Details and Acknowledgement**

2017

- ✓ Collections
- ✓ Graphics Library
- ✓ Pinned Events
- ✓ Drill-in Navigation

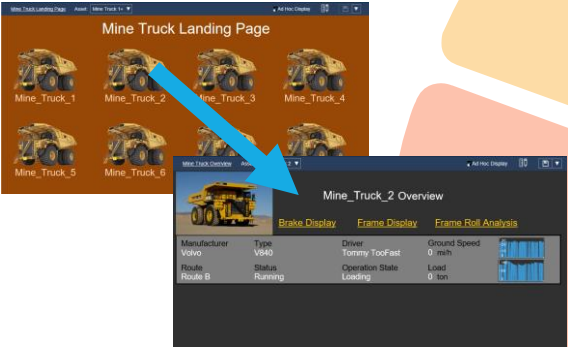


PI Vision Roadmap



PI Vision 2017

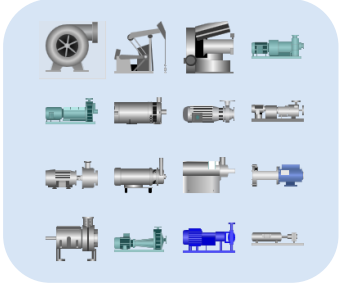
Drill-in Navigation



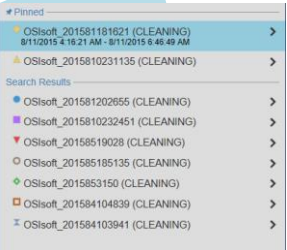
Collections



Graphic Library



Pinned Events



Events Table

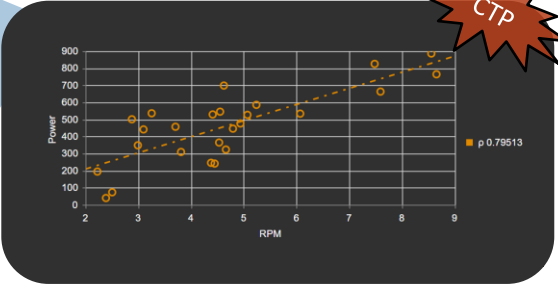
CTP

Start Time	End Time	Acknowledgment
2017-01-26 06:21:43.000	2017-01-26 07:14:43.000	Acknowledge
2017-01-26 07:14:43.000	2017-01-26 08:22:43.000	Acknowledge
2017-01-26 07:23:43.000	2017-01-26 07:32:43.000	Acknowledged
2017-01-26 07:34:13.000	2017-01-26 07:36:13.000	Acknowledged
2017-01-26 08:25:13.000	2017-01-26 08:25:43.000	Acknowledged
2017-01-26 08:29:13.000	2017-01-26 08:57:13.000	Acknowledge

Asset Comparison Table

Asset	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 1	Caterpillar	Jason Rice	0	0	Running
Mine Truck 2	Volvo	Tommy TooFast	0	0	Running
Mine Truck 3	Komatsu	Edna Thompson	1,682.6	159.87	Running
Mine Truck 4	Caterpillar	Revill Swivel	0	0	Running
Mine Truck 5	Volvo	John Sintilas	0	0	Running
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 7	Volvo	Brian Bostwick	0	0	Running
Mine Truck 8	Caterpillar	Steve Kia	0	0	Running
Mine Truck 9	Caterpillar	Justin Brown	0	0	Running
Mine Truck 10	Volvo	Bob Bonkers	1,719.7	157.74	Running

XY Plot



Presented by Dan Lopez

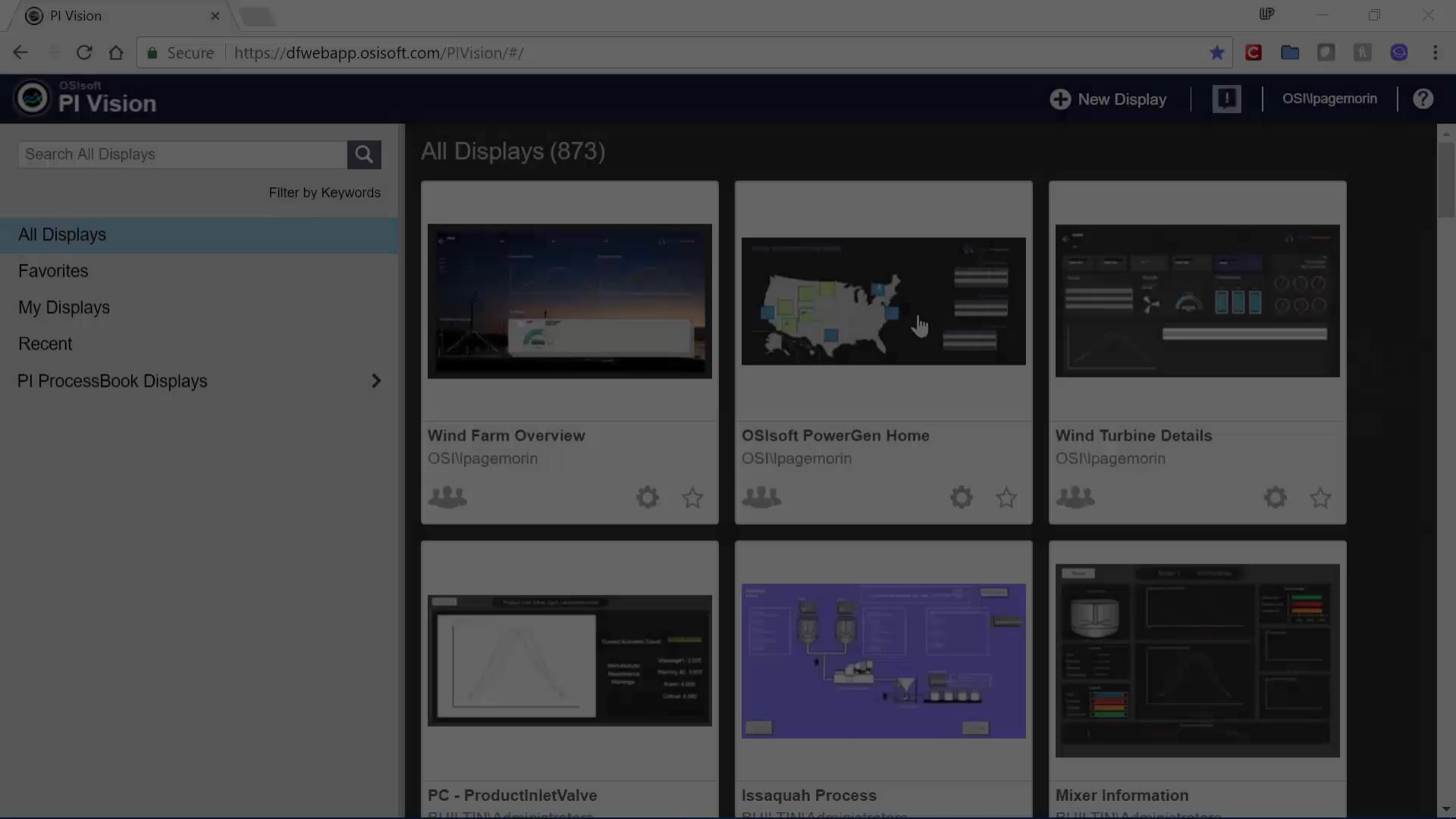
PI Vision Demonstration

PI Vision Demonstration Part I



- Graphically rich dashboards via the new display editor
- Drill-down navigation links
- Future data charting
- Using symbol collections
- Viewing Event Frame table symbols





Search All Displays

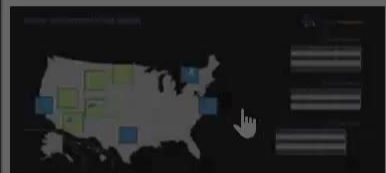
Filter by Keywords

- All Displays
- Favorites
- My Displays
- Recent
- PI ProcessBook Displays

All Displays (873)



Wind Farm Overview
OS!npagemorin



OS!soft PowerGen Home
OS!npagemorin



Wind Turbine Details
OS!npagemorin



PC - ProductInletValve
OS!npagemorin



Issaquah Process
OS!npagemorin



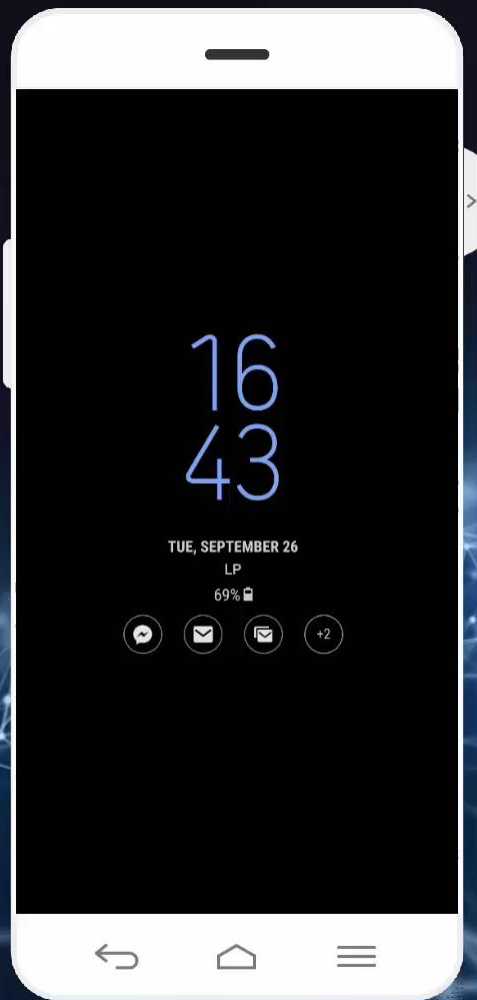
Mixer Information
OS!npagemorin

PI Vision Demonstration Part II



- Notifications and data input via a mobile device
- Ad-hoc analysis from a mobile device
- Uploading photos
- Synchronized desktop and mobile dashboards
- Event Frame reporting: overlays, comparisons, and pinned events



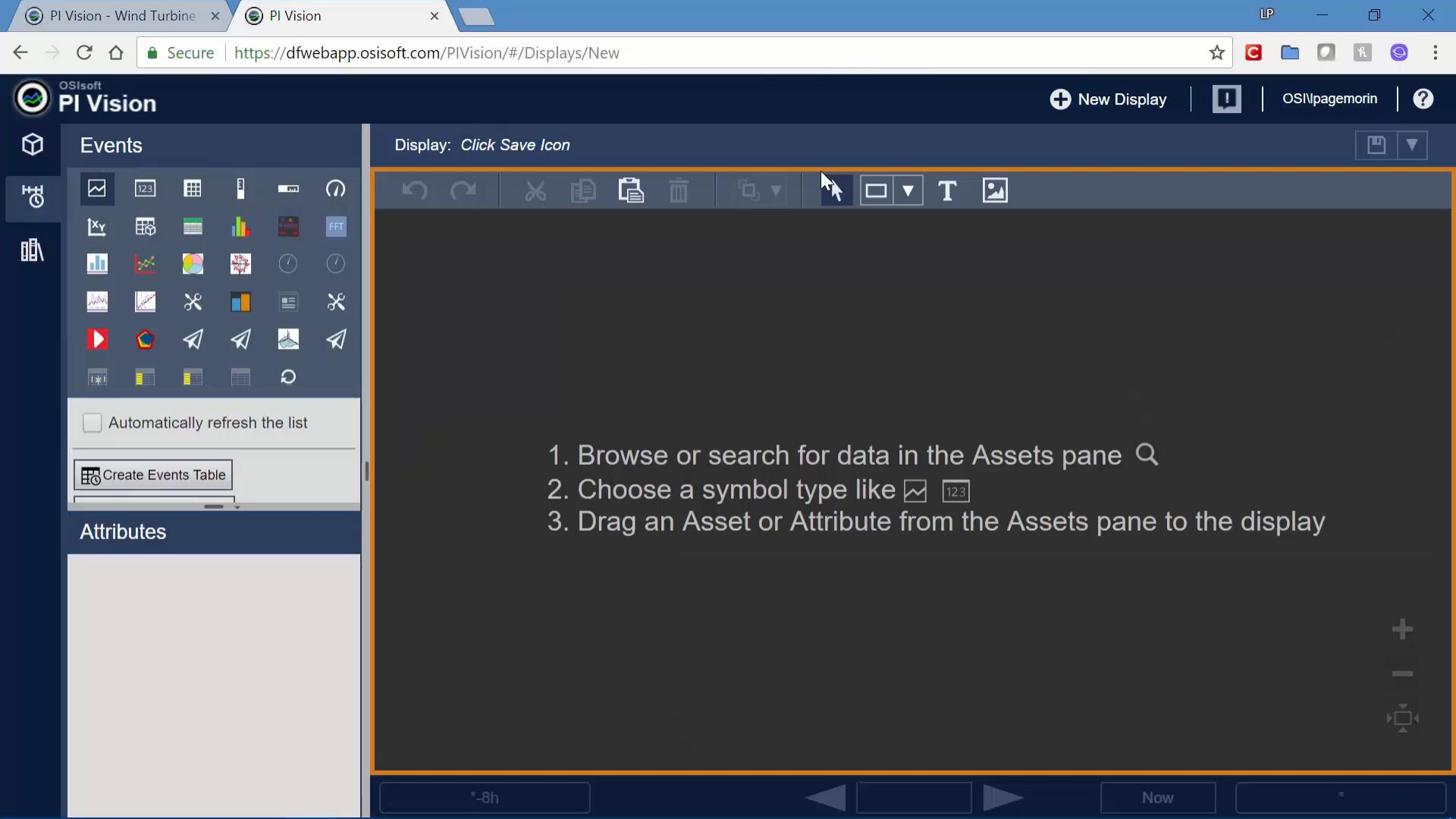


PI Vision Demonstration Part III



- Creating displays from scratch using the new display editor
- Comparing multiple assets using symbol collections
- Using the new graphic library
- Customizing dashboards by editing collection criteria





Events




☐ Automatically refresh the list

Create Events Table

Attributes

Display: *Click Save Icon*



1. Browse or search for data in the Assets pane 🔍
2. Choose a symbol type like  123
3. Drag an Asset or Attribute from the Assets pane to the display



PI Vision Demonstration Part IV



- Comparing attributes across multiple assets via asset comparison tables
- Configuring navigation links
- Customizing asset comparison table search criteria using limits
- Creating and configuring an events table symbol from scratch



Assets



Attributes

- [-] Circuit Breaker Cut-ins
- [+] Current L1
- [+] Current L2
- [+] Current L3
- [+] Expected Power
- [+] Generator 1 Temperature >
- [+] Generator 1 Temperature Av...
- [+] Generator 2 Temperature >
- [+] Generator 2 Temperature Av...
- [+] Generator Cooling Air Tempe...
- [+] Generator Speed (CCU)
- [+] Generator Speed (PLC)
- [+] Generator Speed, Set Value 1
- [+] Generator Speed, Set Value 2
- [+] L1-N Voltage
- [+] L2-N Voltage
- [+] L3-N Voltage

Display: Click Save Icon*

Ad Hoc Display



Presented by Mike Sloves

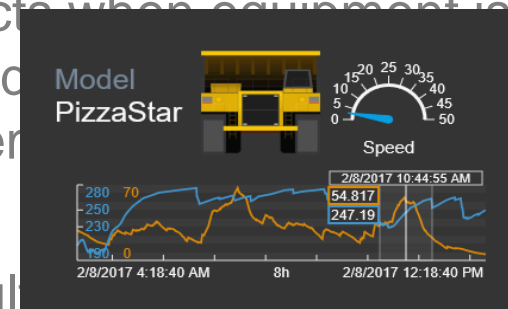
Demonstration Review

Collections: Spend Less Time Updating Displays



Group one or more symbols as a “collection” then add a context filter so the display reflects the assets you are interested in.

- The collection automatically reflects when equipment is added to the system



- Result is a collection of live data values



Asset and Events Table Symbols



Asset Table: easily view and compare asset performance in a table format.

- Add dynamic search criteria to have the assets on the table update automatically

Asset	CIP Acid Tank Level	CIP Caustic Tank Level	CIP Supply Tank Level	recirculation EPWash State
CIP_123_SKID	31.82	63.221	0	non recirc
CIP_124_SKID	88.382	36.977	0.013409	non recirc
CIP_422_SKID	39.44	22.573	-0.0062218	non recirc
CIP_432_SKID	No Data	No Data	-0.0081825	non recirc

Event Table: always see the most important and relevant events.

- Use search criteria to show events based on asset type, severity, hierarchy, and more.

Event Name	Asset	Start Time	End Time	Acknowledgement
Engine Temperature High 2017-01-07 03:56:21.000	Sp6	1/7/2017 3:56:21 AM	In Progress	Acknowledge
Engine Temperature High 2017-01-07 10:45:51.000	Sp5	1/7/2017 10:45:51 AM	In Progress	Acknowledge
Gas Tank Level Low 2017- 03-09 06:49:13.000	Sp4	3/9/2017 6:49:13 AM	3/9/2017 9:24:13 AM	Acknowledged
Gas Tank Level Low 2017- 03-09 06:49:13.000	Sp4	3/9/2017 6:49:13 AM	3/9/2017 9:24:13 AM	Acknowledged



Asset Table: View and Compare Assets



Asset ▼	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 7	Volvo	Eric Bonshnick	0	0	Running
Mine Truck 8	Caterpillar	Steve Kia	0	0	Running
Mine Truck 9	Caterpillar	Justin Brown	0	0	Running
Mine Truck 10	Volvo	Bob Bonkers	1,719.7	157.74	Running

Add search and filter options to make the content of the table dynamic

Asset Type

Mining_Mine Truck ▼

Asset Attribute

Status ▼ = ▼ Running ▼ -

Load ▼ > ▼ 100 -

+

Now the table shows only the mine trucks that are running and have a load of a certain weight



New PI Vision User Types



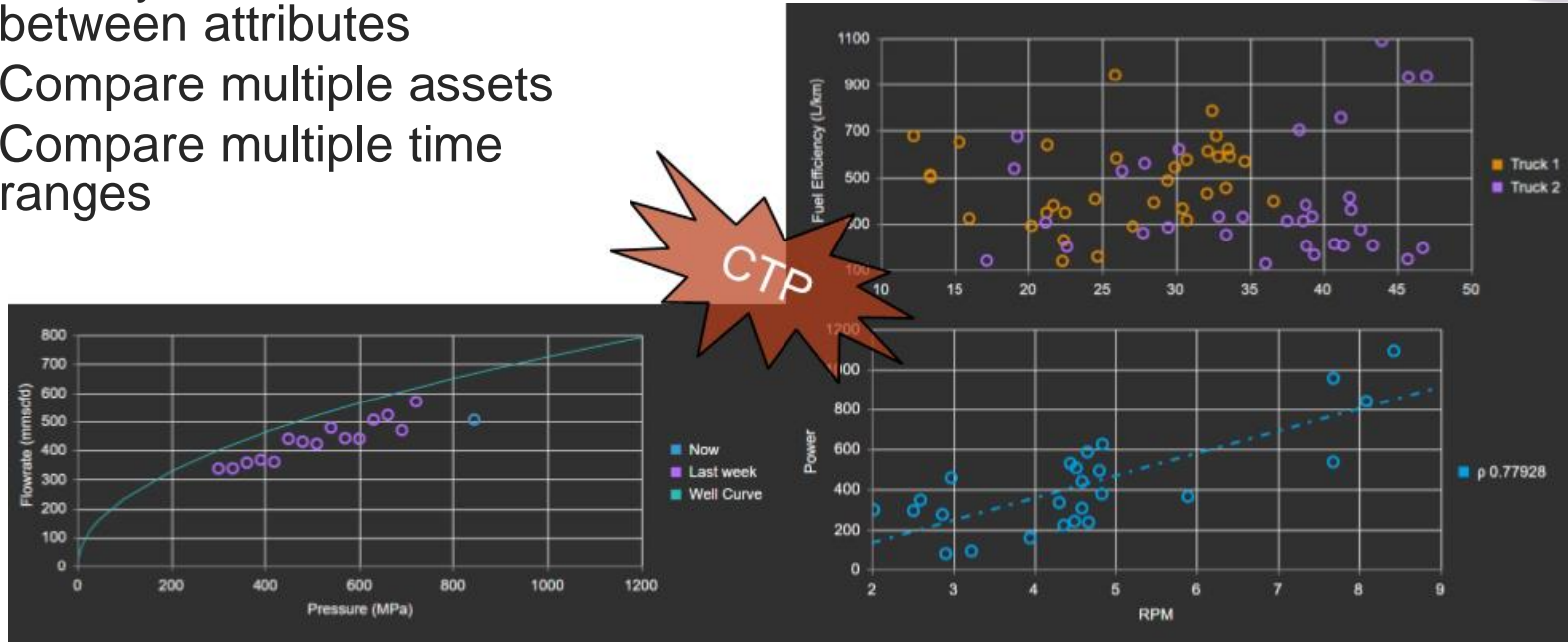
- **Publisher**
 - Targeted for content creators who need the ability to create and save new dashboards and analysis views.
 - The Publisher user type is equivalent to the traditional PI Coresight user that has existed in all previous versions of the product.
- **Explorer**
 - The Explorer user type can not save any new displays or changes to existing displays.
 - An Explorer can use the full power of existing displays to switch context, adjust time and investigate events. Explorers can even create ad-hoc displays but they do not have the ability to save any of this work.



XY Plot: Correlated Data



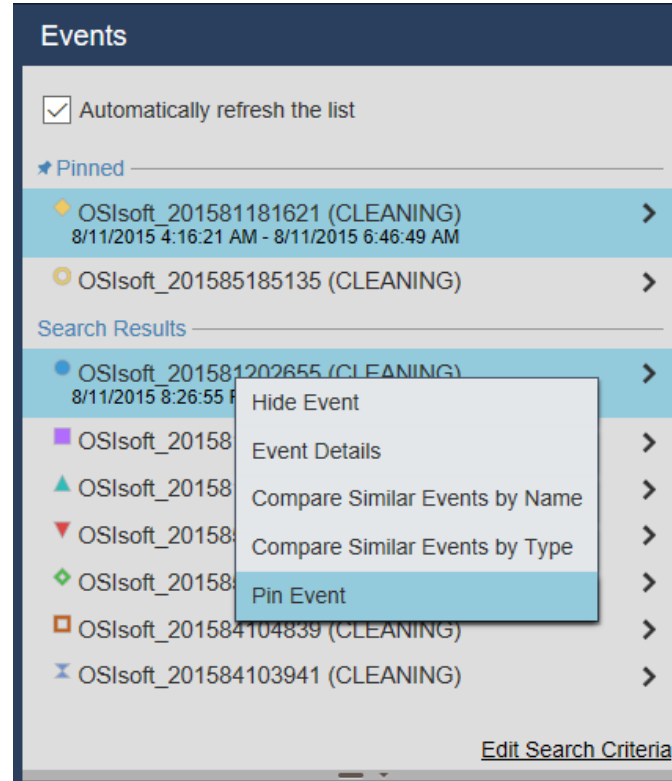
- Identify correlations between attributes
- Compare multiple assets
- Compare multiple time ranges



Pinned Events

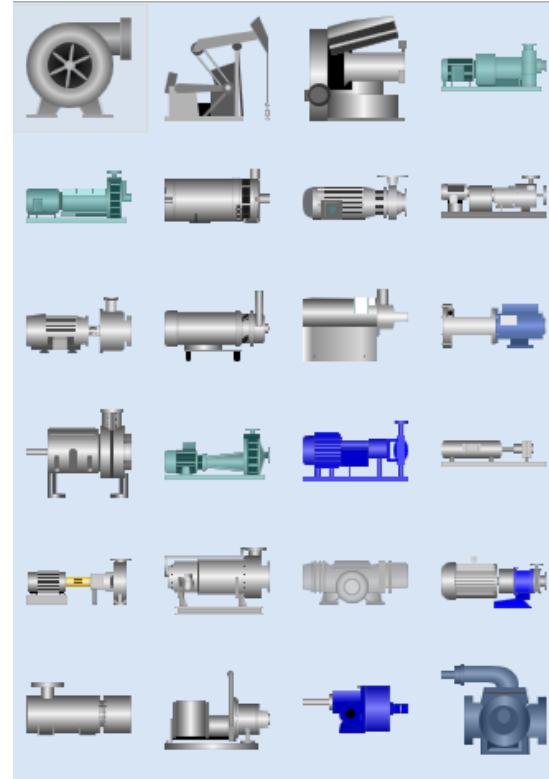


- Identify batch process deviations by comparing to a reference
 - “Pin” one or more events, to be used as a reference
 - Pinned events are saved with the display



Graphics Library

- Use an extensive library of graphic symbols to enhance a display



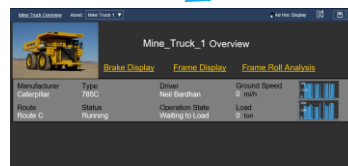
Drill-in Navigation

- Configure a URL link on any symbol
 - Link to another display or another website.
 - When connecting to another display, the context (time and/or selected asset) can be passed as part of the link

Overview display



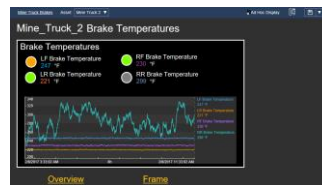
Truck1



Truck2



Truck2 Brakes

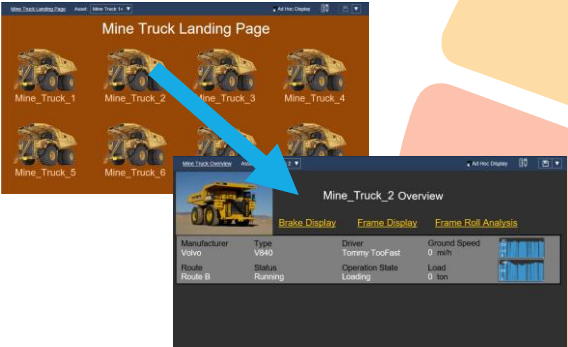


Truck2 Frame



PI Vision 2017

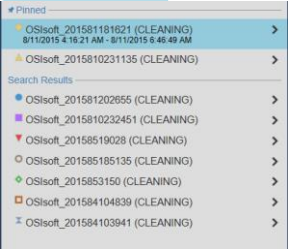
Drill-in Navigation



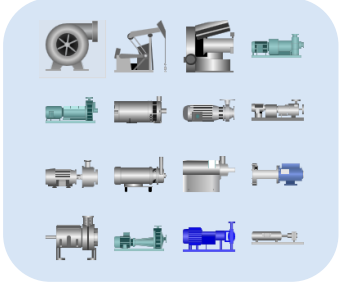
Collections



Pinned Events



Graphic Library



Events Table

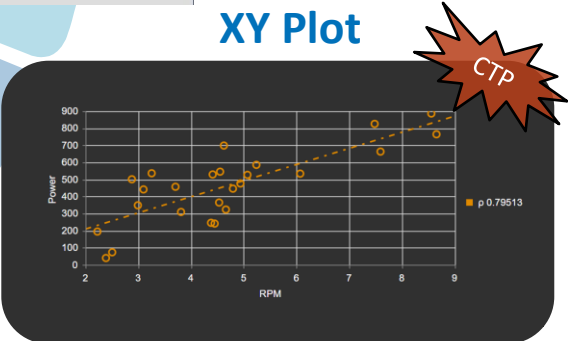
CTP

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Gas Tank Level Low 2017-01-26 07:23:43.000	SP8	1/26/2017 7:14:43 AM	1/26/2017 8:22:43 AM	Acknowledge
Gas Tank Level Low 2017-01-26 07:34:13.000	SP8	1/26/2017 7:23:43 AM	1/26/2017 7:32:13 AM	Acknowledged
Engine Temperature High 2017-01-26 08:25:13.000	SP6	1/26/2017 7:34:13 AM	1/26/2017 7:36:13 AM	Acknowledged
Engine Temperature High 2017-01-26 08:29:13.000	SP6	1/26/2017 8:25:13 AM	1/26/2017 8:25:43 AM	Acknowledged
Engine Temperature High 2017-01-26 08:29:13.000	SP6	1/26/2017 8:29:13 AM	1/26/2017 8:57:13 AM	Acknowledge

Asset Comparison Table

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XY Plot



- Organization of PI Vision displays in folders
- Related Assets updates
- Refinements and release of XY Plot and Events Table
- Other improvements
 - Improved font size and number formatting control
 - Attribute value hyperlinks
 - Multi-state on the Asset Comparison Table



Display Organization: What We Heard

Administrator

I want to maintain an **organized repository** for **standard displays**

I want to allow users who **publish standard displays** to **organize displays**



Display Author

I want to **organize** the **standard displays** I build for my organization



Display User

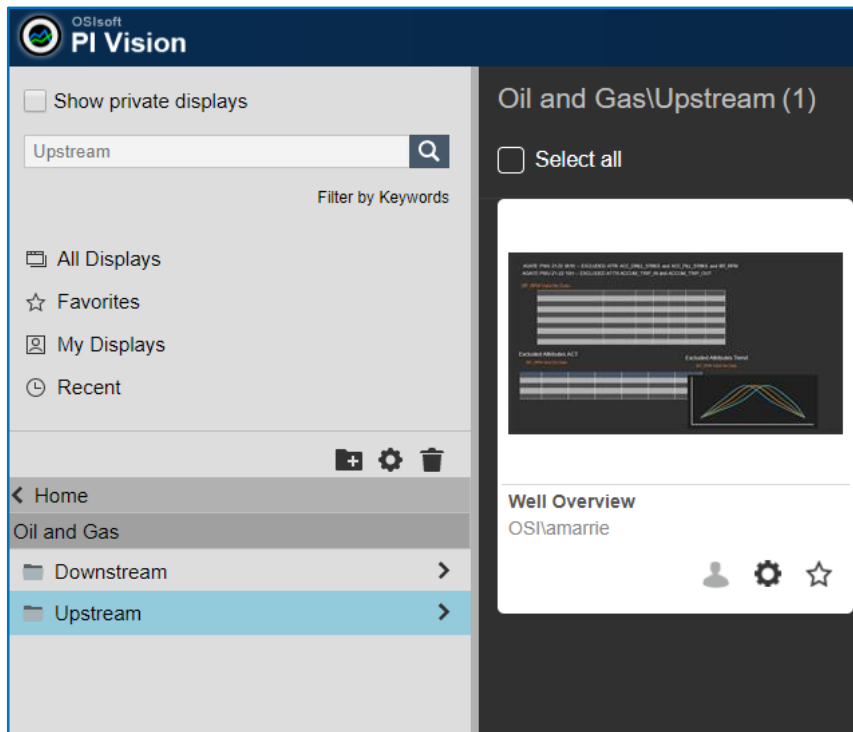
I want to see a **consistent view** of displays on the PI Vision home page

I want to **navigate** to the **standard displays** that I use frequently



Display Organization: What We Built

- **Display Users**
 - Can navigate to important displays
- **Display Authors**
 - Organize production displays into folders
 - Move displays right from the PI Vision Displays page
- **Administrators**
 - Control read and write access to folders
 - Can view private displays



Related Assets: What We Heard

Display Author

I want more control over **which Related Assets are displayed to the User**. I want to **configure a dynamic search** to drive the Related Assets list

For some displays, I want to **disable the Related Assets** feature



Display User

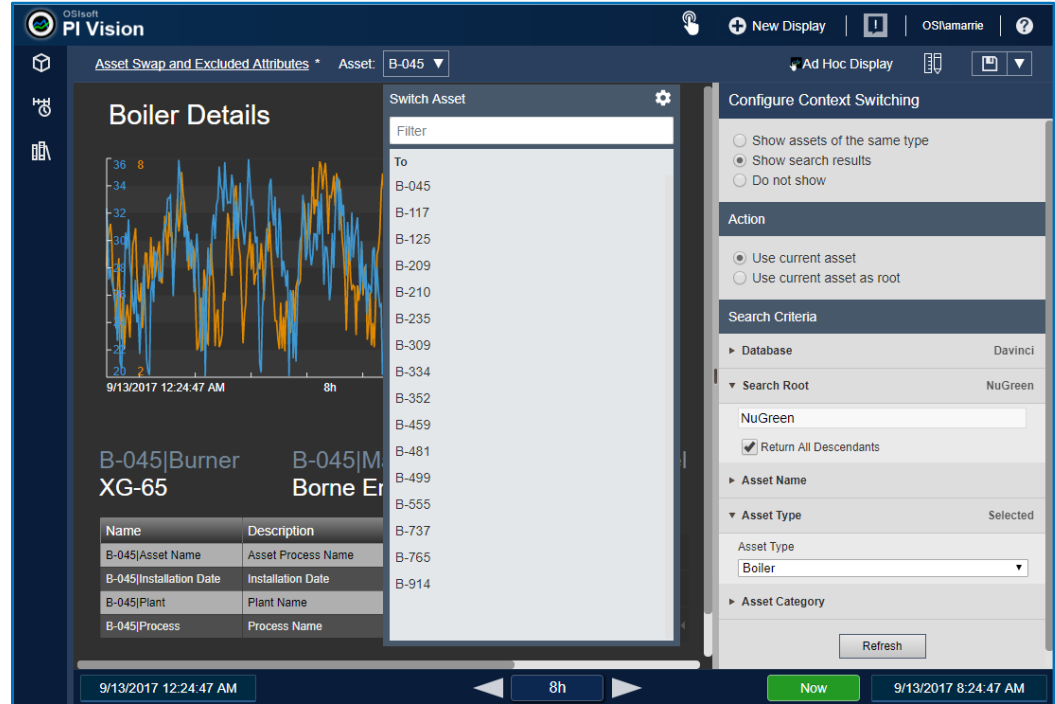
Sometimes the number of Related Assets can be large and I want to **intuitively search the list**.

When switching between Related Assets I want the display to **hide the Excluded Attributes** on that Asset



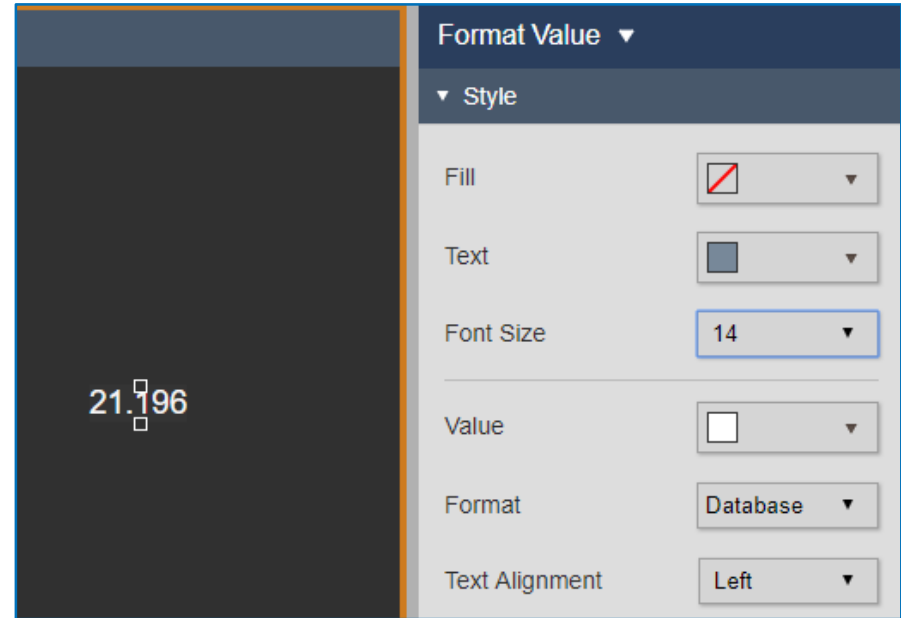
Related Assets: What We Built

- **Display Authors**
 - Specify asset criteria to define context switching for a display
 - Choose to swap a single asset or the asset path for parent-child asset relationships
 - Disable asset context switching
- **Display Users**
 - Filter related assets by name







Display Authoring: Sizing and Alignment

- **Precisely configure the size** of text and values on a display
- Configure value **alignment**
- Format **multiple symbols** at once



Display Authoring: Attribute Value Hyperlinks

Links to external pages can now be element relative: attribute values containing a URL act as hyperlinks on a display

Name	Description	Value
Mine Truck 5 User Manual	Link to PDF of truck's operating instructions	
Mine Truck 5 Log Sheet	Link to Excel workbook containing truck log	
Mine Truck 5 Route Map	Map showing typical routes	
Mine Truck 5 Manufacturer Website	URI for Truck manufacturer's website	

Log Sheet

User Manual

Route Map

Manufacturer Website

\\CSAFB\BUILD\EF_MiningSim\OSIsoft Mining\Trucks\Mine Truck 5\Log Sheet

Time: 9/19/2017 11:14:29 AM

Value: https://osisoft1980.sharepoint.com/teams/Engineering/pivision/_layouts/15/WopiFrame.aspx?sourcedoc=%7BC9E34B6B-2EC0-412C-BE6B-8A75F3A7AA4D%7D&file=Truck%205%20Log%20Sheet.xlsx&action=default



감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado



Contact Information

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Questions?

Please wait for the
microphone before asking
your questions



Please state your
name & company

Please remember to...

Complete the
Post Event
Survey

