



PI Vision 2017

Unified Visualization Infrastructure

Presented by
Sam Clark, Field Service Engineer
November 2nd, 2017



PI Vision

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



Your window into operational intelligence

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

Empower all Operations users

ON – DEMAND

Intuitive, self-service, off the shelf

Visualization Execution Strategy – Focus & Goals

Modern architecture

Leverage 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



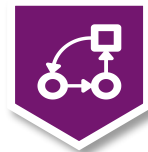
Partner enablement

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 Have Been 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 Have Been Underway

2016

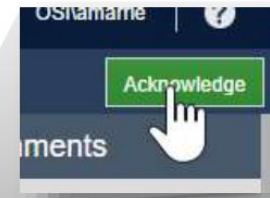
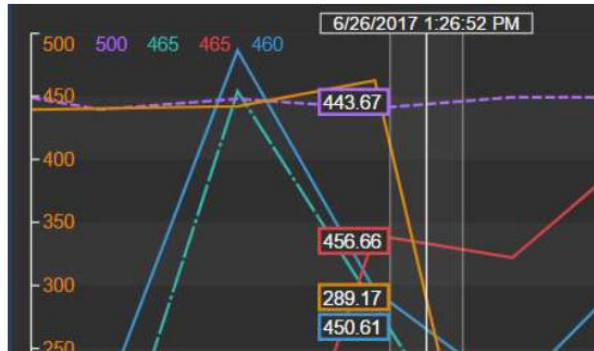
- ✓ HTML 5: View on any phone/tablet
- ✓ **New Display Editor**
- ✓ **PI ProcessBook Viewer**
- ✓ **Event Comparison (Gantt chart + overlay trend)**

2016 R2

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

2017

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



PI Vision 2017

Drill-in Navigation

Mine Truck Landing Page

Mine Truck 2 Overview

Manufacturer	Type	Driver	Ground Speed
Volvo	V940	Tommy TooFast	0 mph
Route B	Running	Operation State	Load 0 ton

Collections

Model PizzaStar Speed

Model Jcar SuperVan Speed

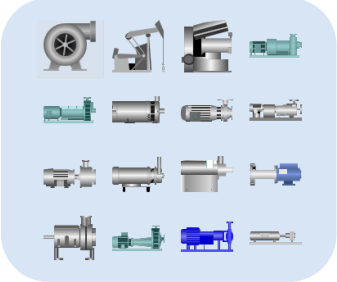
Model StoreRunner Speed

Pinned Events

Search Results

- OSisoft_201581181621 (CLEANING)
- OSisoft_2015810231135 (CLEANING)
- OSisoft_201581202655 (CLEANING)
- OSisoft_2015810232451 (CLEANING)
- OSisoft_20158519028 (CLEANING)
- OSisoft_201585185135 (CLEANING)
- OSisoft_2015853150 (CLEANING)
- OSisoft_201584104839 (CLEANING)
- OSisoft_201584103941 (CLEANING)

Graphic Library



Events Table

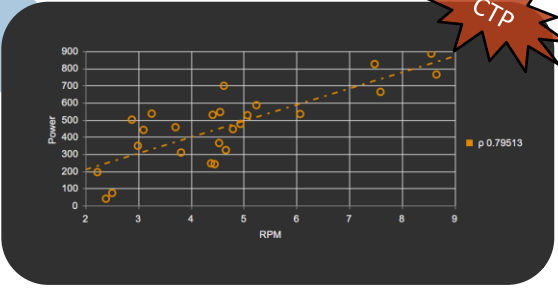
CTP

Start Time	End Time	Acknowledgement
High 2017-01-26 08:21:43.000	1/26/2017 6:21:43 AM - 1/26/2017 7:57:43 AM	Acknowledge
Engine Temperature High 2017-01-26 07:14:43.000	1/26/2017 7:14:43 AM - 1/26/2017 8:22:43 AM	Acknowledge
Gas Tank Level Low 2017-01-26 07:23:43.000	1/26/2017 7:23:43 AM - 1/26/2017 7:32:13 AM	Acknowledged
Gas Tank Level Low 2017-01-26 07:34:13.000	1/26/2017 7:34:13 AM - 1/26/2017 7:36:13 AM	Acknowledged
Engine Temperature High 2017-01-26 08:25:13.000	1/26/2017 8:25:13 AM - 1/26/2017 8:25:43 AM	Acknowledged
Engine Temperature High 2017-01-26 08:29:43.000	1/26/2017 8:29:13 AM - 1/26/2017 8:57:13 AM	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 Sintias	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

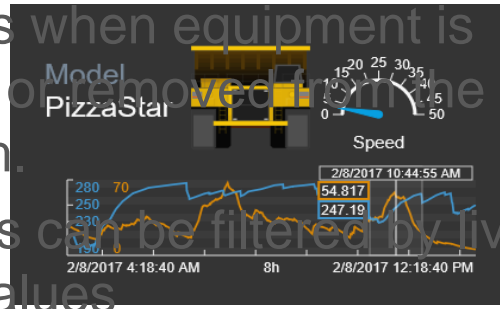


Collection – Spend less time manually updating displays



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 or removed from the system.
- Results can be filtered by live data values



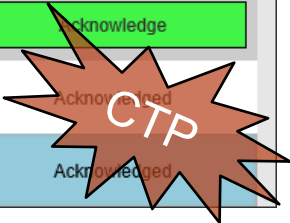


Event Table and Asset Table

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	<input type="button" value="Acknowledge"/>
Engine Temperature High 2017-01-07 10:45:51.000	Sp5	1/7/2017 10:45:51 AM	In Progress	<input type="button" value="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	<input type="button" value="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	<input type="button" value="Acknowledge"/>



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



Asset Table- Easily view and compare asset performance

Asset	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 3	Komatsu	Laura Thompson	1,682.6	159.87	Running
Mine Truck 8	Volvo	Bob Bonkers	1,719.7	157.74	Running
Mine Truck 4	Caterpillar	Reville Swivel	0	0	Stopped
Mine Truck 5	Volvo	John Sintilas	0	0	Stopped
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 Kwan	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.



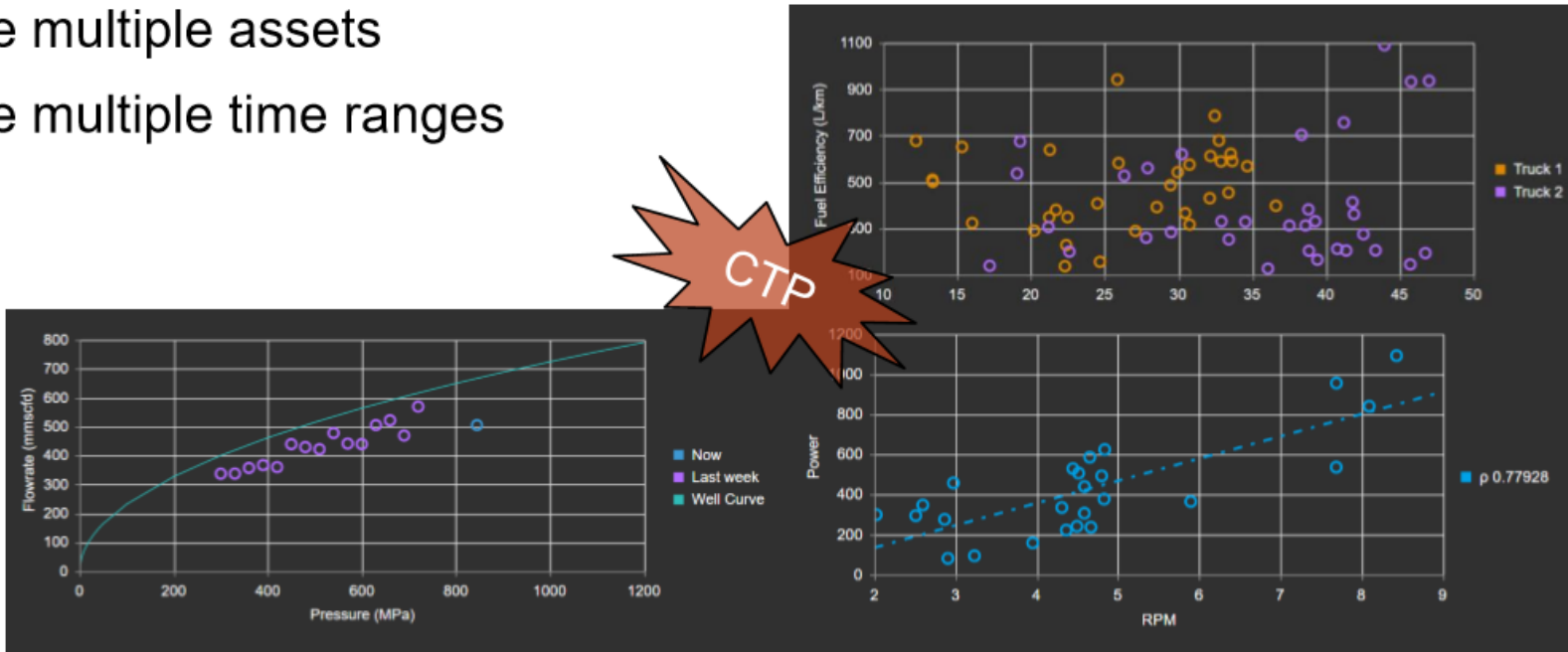
User Types

- **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



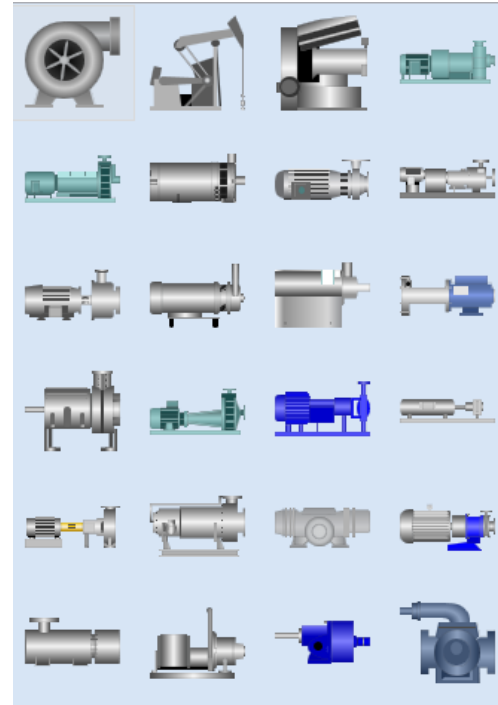
- Correlations between attributes
- Compare multiple assets
- Compare multiple time ranges





Graphics Library

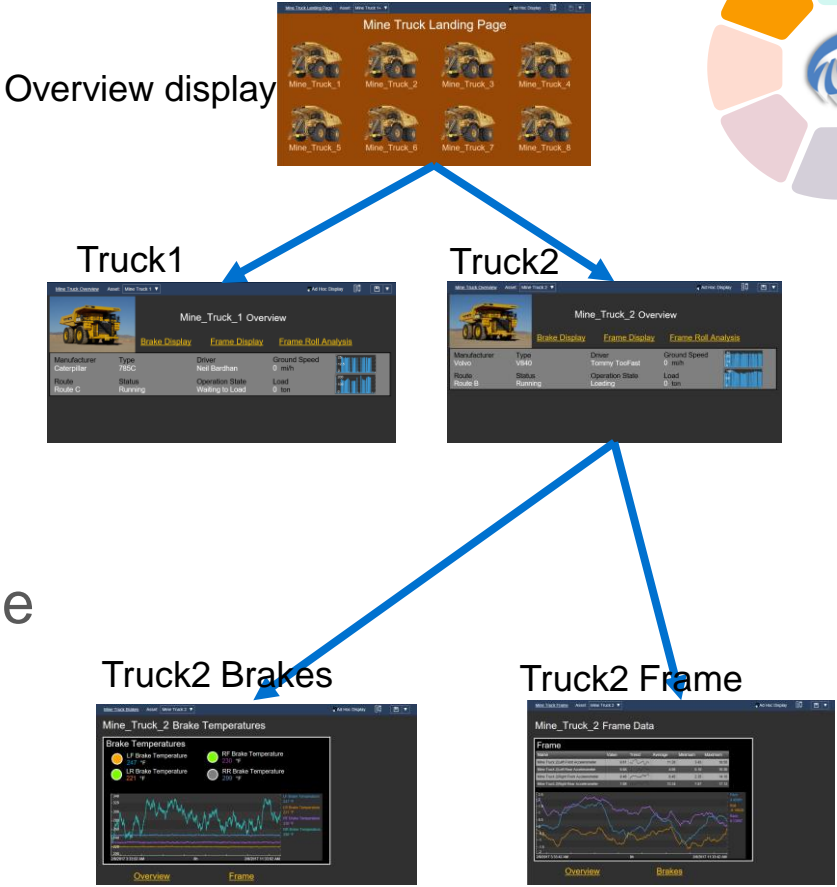
- Use an extensive library of graphic symbols to enhance a display



Drill-down 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



What's coming next...

- Refinements for XY Plot and Events Table
- Server side enhancements for PI Web API
 - Performance and Scalability
 - Groundwork for client side data access
- Editor improvements
 - Snap to Grid
 - Display printing
 - Improved font size control
 - Display level number format





PI Vision 2017

Unified
Visualization
Infrastructure

Presented By: Sam Clark (Field Service Engineer)

Questions?

Please wait for the **microphone** before asking your questions



Please state your **name & company**

Please remember to...

Complete the
Post Event
Survey

Contact Information

Sam Clark

sclark@osisoft.com

Field Service Engineer

OSIsoft

