Event Frames

Presented By:

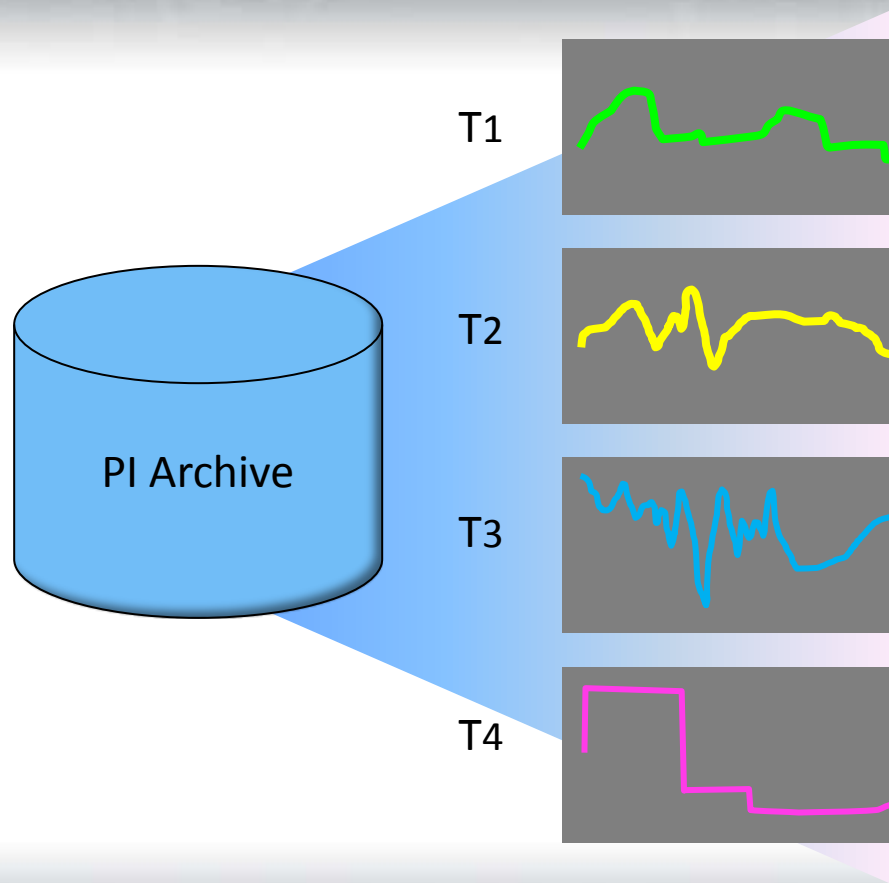Chris Nelson, OSIsoft
Chris Coen, OSIsoft

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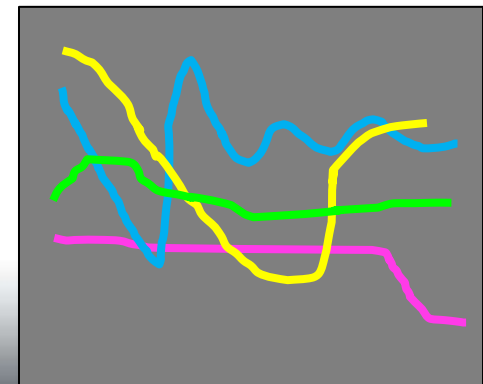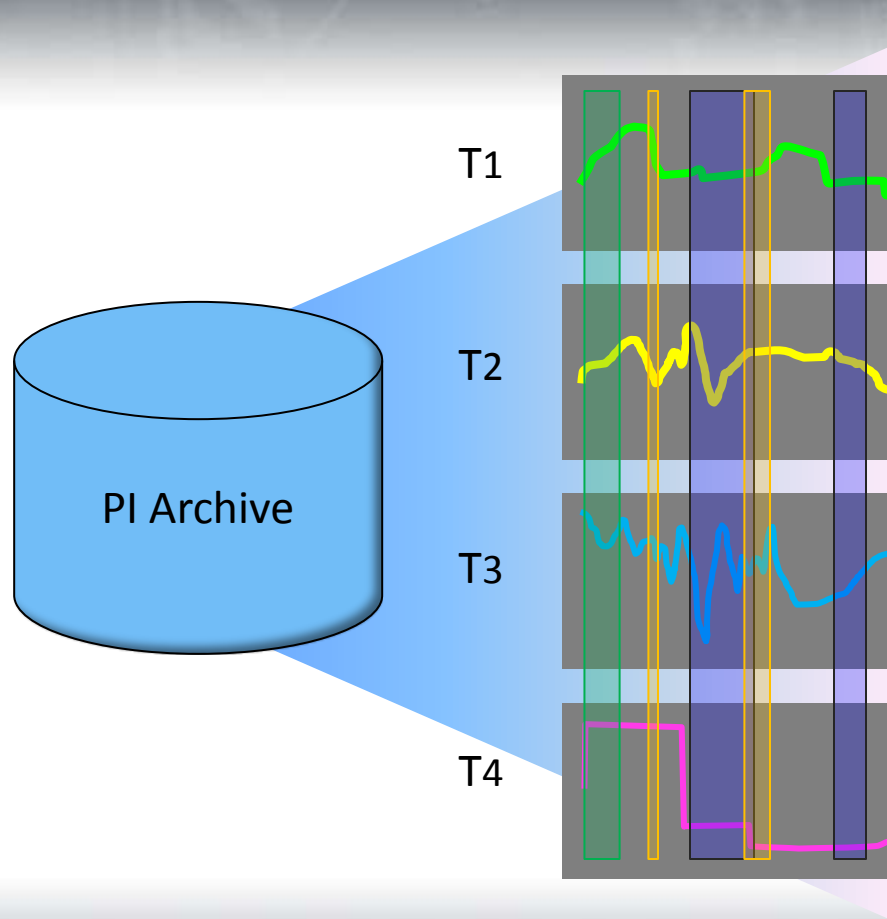# Agenda

- Vision

- Architecture

- Demonstration
  - Searching
  - Substitution Parameters
  - Security
  - Batch Interface Demonstration

- AF 2010 Update

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Event Frames provide context

PI Archive

T1

T2

T3

T4

Event Frames Vision

- Event Frames relate time series data to the events occurring on your plant floor and in your business.

- You can index the important events, look them up, analyze them and find trends across your events.

- This is ***the way*** to index your time series data.

Event Frame Definition

- A time series data type defined by two times and optionally accompanied by supporting data

- Any event in your process:

  - downtime event
  - incident event
  - material transfer event
  - equipment maintenance event
  - batch processing step
  - specific investigation
  - six-sigma project
  - electrical power outage
  - safety incident

- Any time range or repeatable set of time ranges:

  - shifts
  - day
  - week
  - month
  - year to date
  - etc.

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Templates (AF)

Template

- Compressor
  - RPM
  - Pre Pressure
  - Post Pressure
  - Pressure Delta
  - Manufacturer

Instance

- Compressor 3
  - C1-3.RPM
  - C1a-3.P
  - C1b-3.P
  - =Post Pressure – Pre Pressure
  - GE

Event Frame Templates

Template

- Downtime
  - Start time
  - End time
  - Asset
  - Reason Code
  - Comment

Instance

- Downtime
  - 9/13/2010 10:00am
  - 9/13/2010 10:30am
  - Compressor 3
  - Planned outage
  - Routine inspection

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Event Frame Templates

Template

- UnitProcedure
  - Lot number
  - Start time
  - End time
  - Unit
  - Product

Instance

- UnitProcedure
  - 45-5199-SP32
  - 9/10/2010 8:00am
  - 9/10/2010 10:30am
  - Reactor 3
  - Special prepolymer 32

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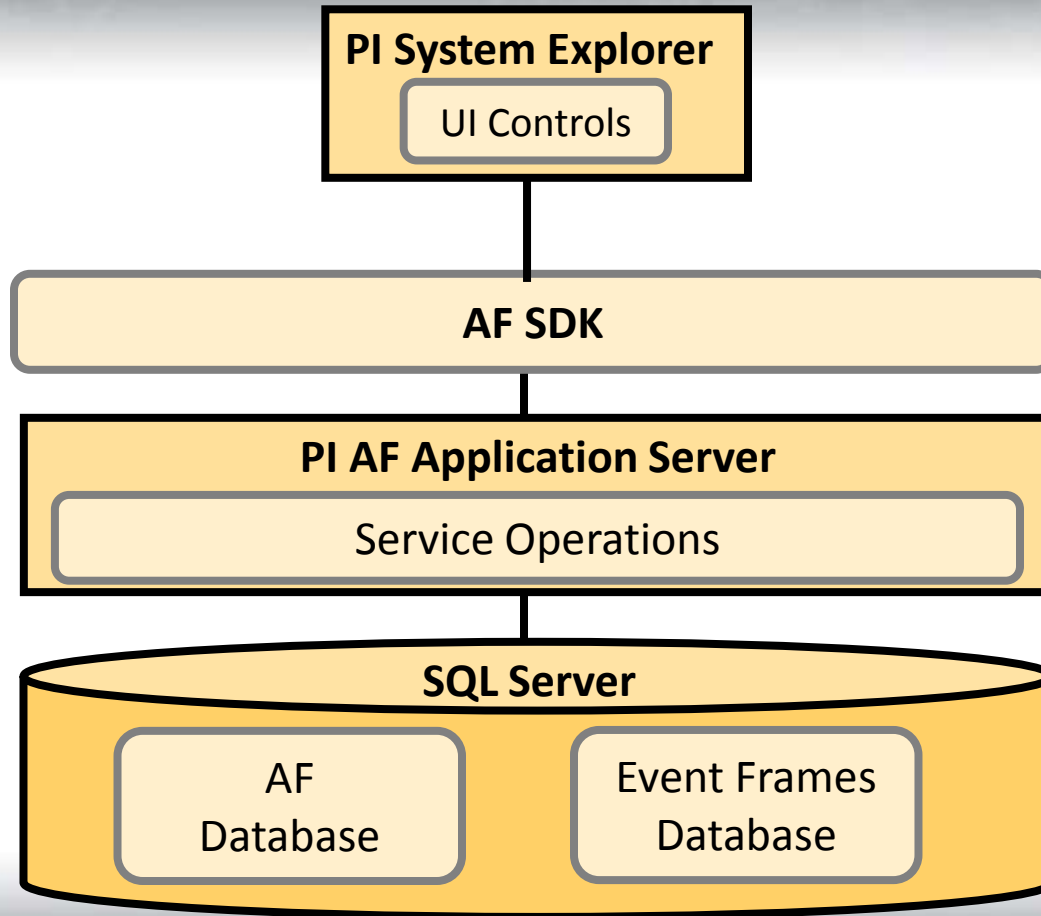
CTP on vCampus

AF 2.1 – Nov. 2009 @ vCampus Live!

- EventFrame Datatype
- EventFrame Templates
- Referenced Elements
- Allowed Reference Types
- EventFrame Search methods
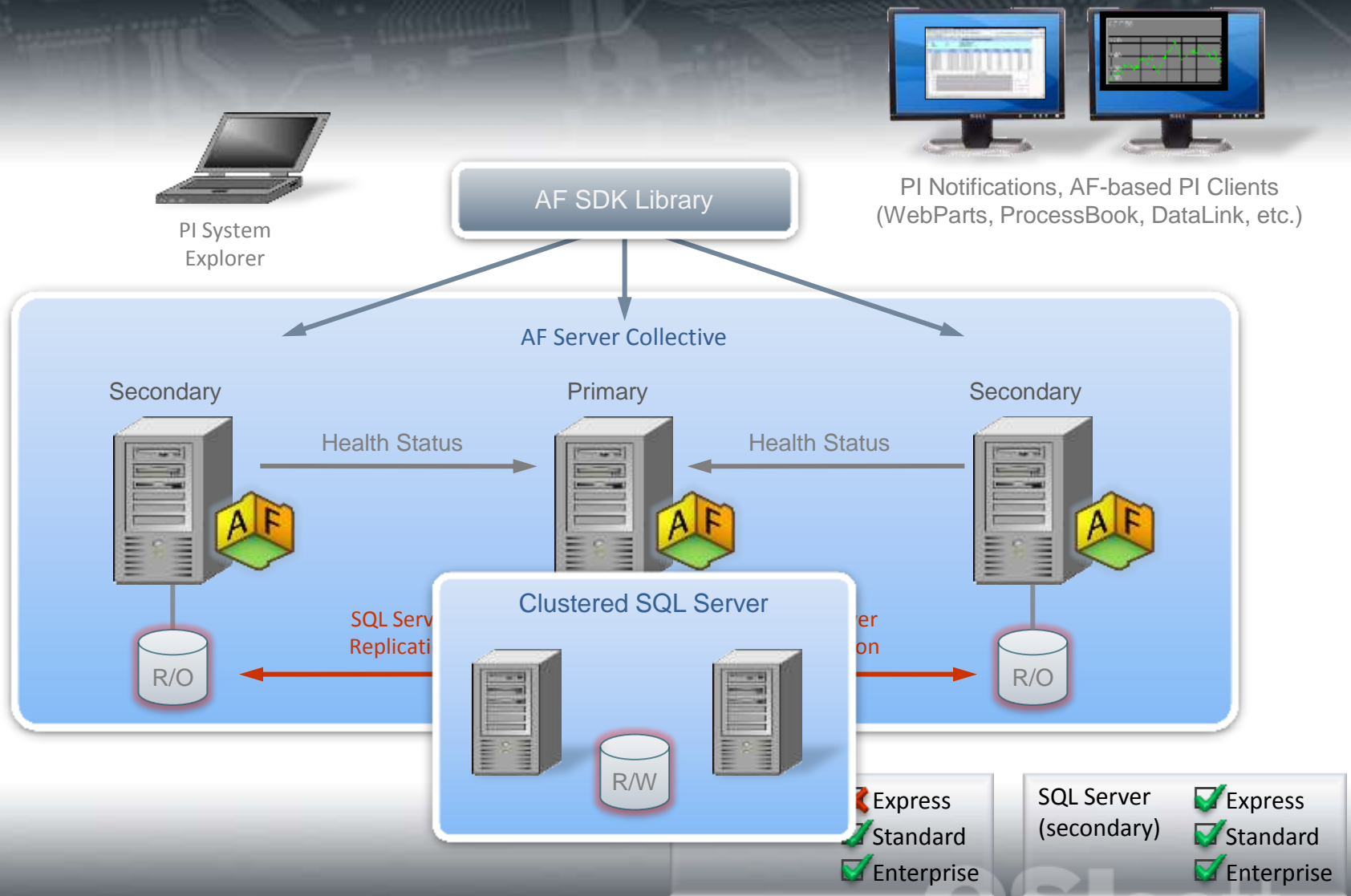- Enhanced database schema

AF 2010 (v2.2)

- FindDatabaseChanges()
- Bulk Loading enhancements
- LoadEventFramestoDepth
- Enhanced performance of FindEventFrames & FindEventFramesByAttribute
- Many more smaller defect resolutions and performance increases

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PI AF and Event Frames Architecture

PI System Explorer

UI Controls

AF SDK

PI AF Application Server

Service Operations

SQL Server

AF Database

Event Frames Database

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PI AF HA Architecture

PI System Explorer

AF SDK Library

PI Notifications, AF-based PI Clients (WebParts, ProcessBook, DataLink, etc.)

AF Server Collective

Secondary — Primary — Secondary

Health Status — Health Status

SQL Server Replication — SQL Server Replication

Clustered SQL Server

R/O — R/W — R/O

SQL Server (primary)		SQL Server (secondary)	
✗ Express		✓ Express	
✓ Standard		✓ Standard	
✓ Enterprise		✓ Enterprise	

Demonstration Agenda

- Event Frame Downtime Simulator Overview

- Event Frame Search Examples

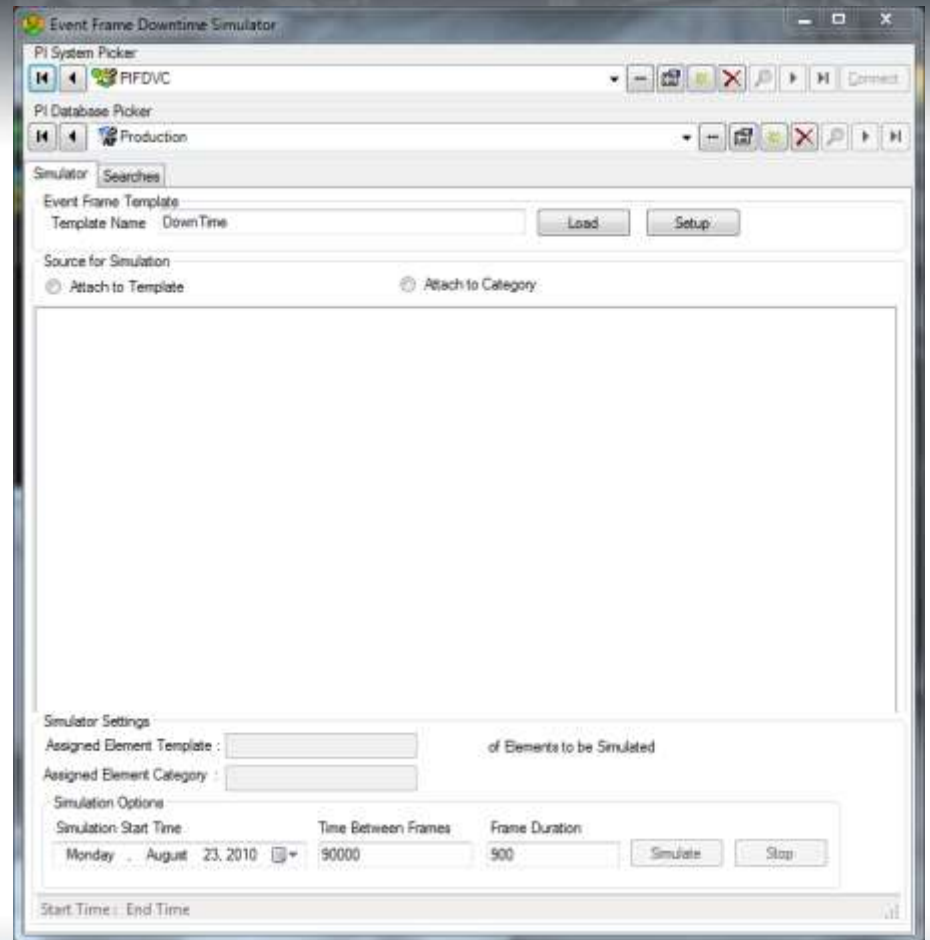- Using Substitution Parameters

- Event Frame Security

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Substitution Parameters

- Requested Feature on vCampus!

- [Discussion Hall › Development with OSIsoft SDKs › Event Frames Development › Using Substitution Parameters](#)

- %Element% - resolves to the PrimaryReferencedElement Property

- %EventFrame% - resolves to the Event Frame Name

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Event Frame Downtime Simulator

Event Frames Resources

- See our partners present on Event Frames tomorrow @ 2:30pm

- Try out Event Frames in the Learning Labs on Wednesday

- See the vCampus Blog and Discussion group on Event Frames

- Try the CTP on vCampus and give us feedback!

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Thank You!

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