Facilities Energy Optimization and Alarm Management with the PI System Infrastructure

Presented by **Paul Van Buskirk, Sr. Manager, Genentech Inc.**
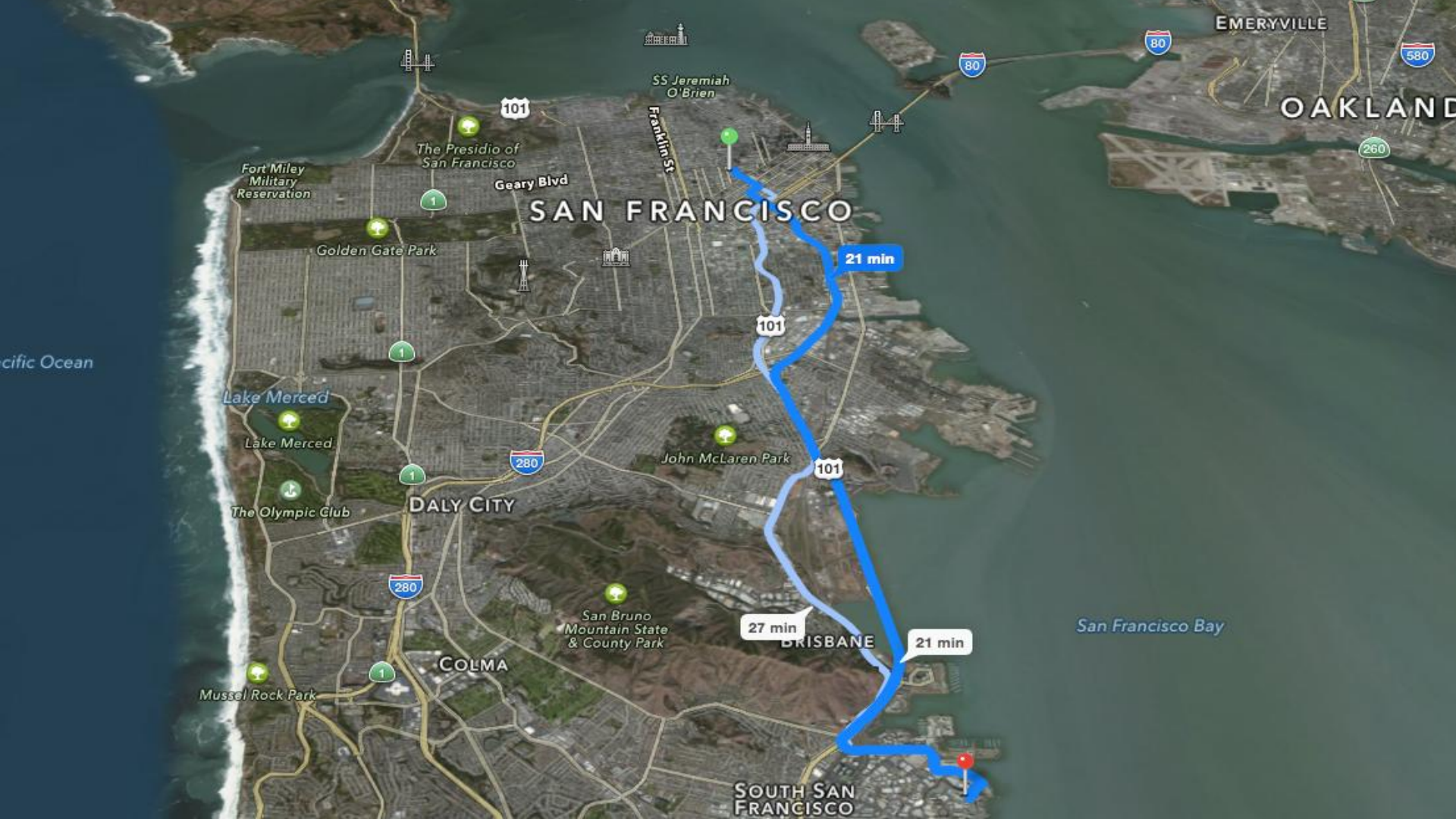
Oliver Yu, Principal, Zymergi LLC

Agenda

- Introductions

- Historical Background - Legacy FMS, Challenges and Decisions

- The Pitch

- Technical Design

- Future of Facilities Data Historian

- Q & A

Genentech/Roche

Seeks solutions to unmet medical needs. As a proud member of the Roche Group, we make medicines to treat patients with serious medical conditions.

South San Francisco - Birthplace of Biotechnology…

…next to large body of salt-water.

Problem Statement

- The legacy Facilities Monitoring System is not capable of providing robust and reliable alarm information and does not offer data trending capabilities.

The Pitch

- *Risk to Business - Product, Research and Safety*

- *Strategy - Centralized Data and Purpose Built Software*

- *OSiSoft is Genentech's standard*

- *Ease of Use*

Facility Data Historian: Key Requirements

- *No data loss permissible*

- *Data come from diverse sources*

- *Diverse end-user multiple roles in multiple departments across multiple campuses*

- *Ease of Use*

Selection of OSIsoft PI System to underpin the FDH

- FDH must rationalize alarms from time-series data

- OSIsoft PI System is proven platform at other Genentech sites. (Standard of Roche)

- Rich eco-system of 3rd-party applications and partners

Technical Design: Layered Approach

Application

Data Server
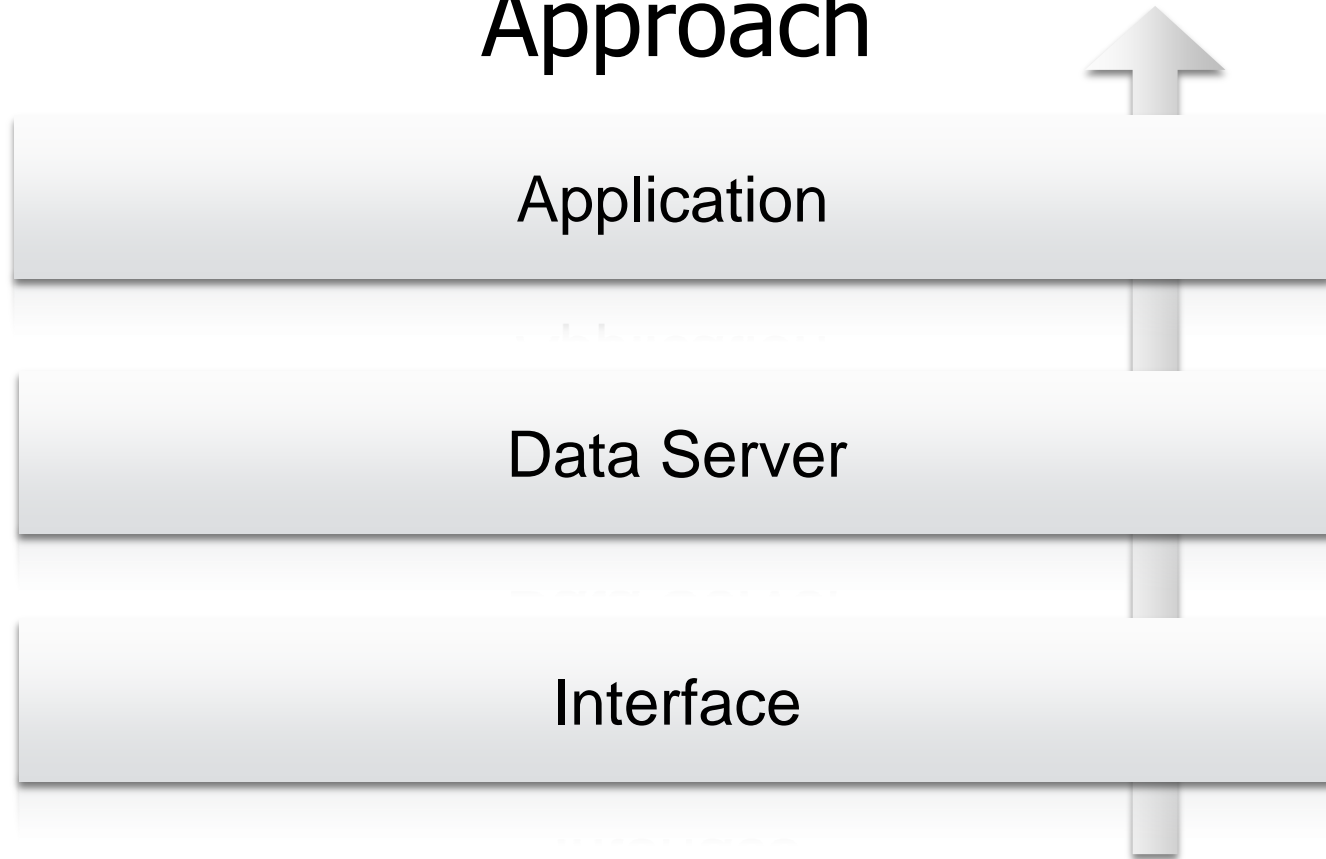
Interface

7 Servers to achieve High-Availability/Redundancy

Application	Application	Application

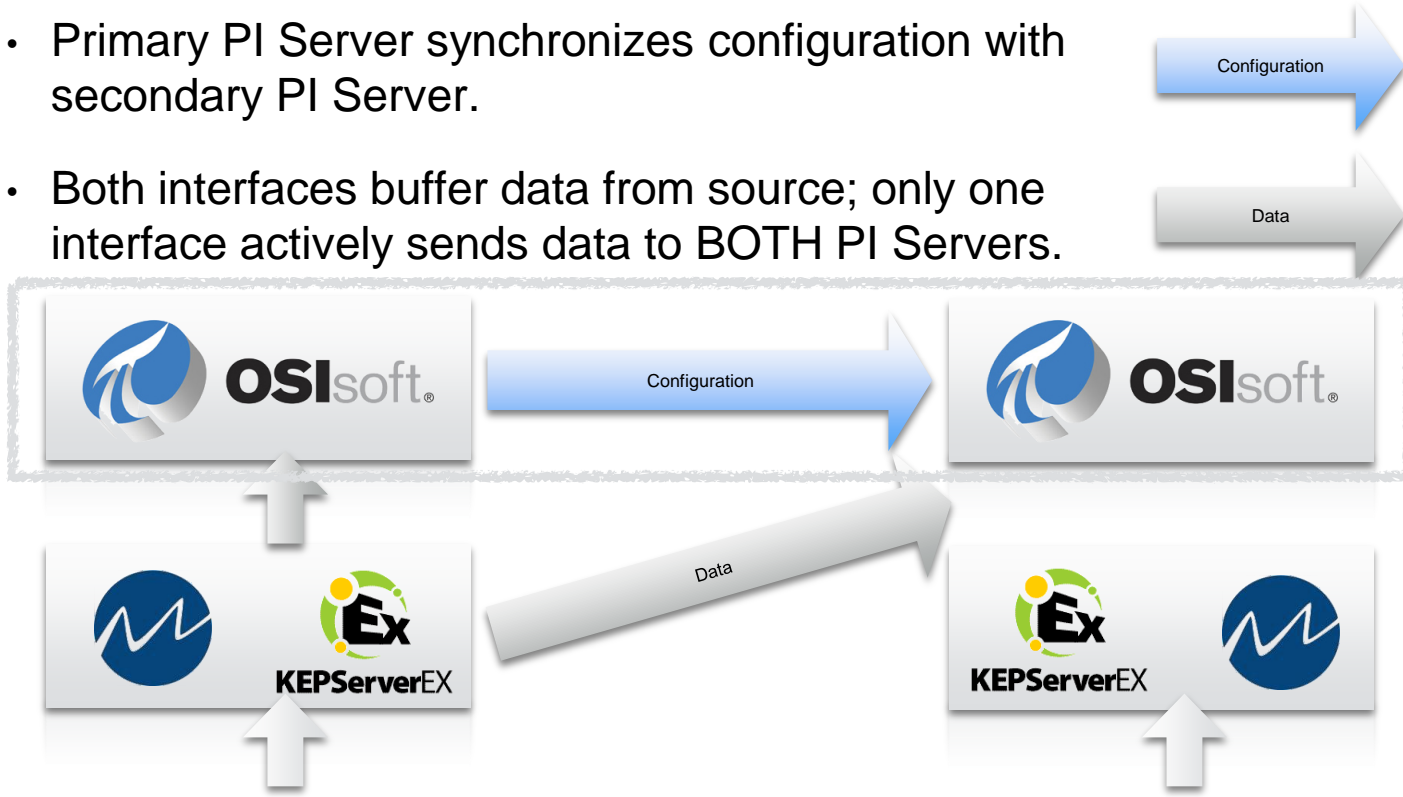|	
Data Server	Data Server

Interface	Interface

# FDH comprised of multiple COTS, anchored by the PI System

PI Server High-Availability

- Primary PI Server synchronizes configuration with secondary PI Server.

- Both interfaces buffer data from source; only one interface actively sends data to BOTH PI Servers.

13

"Hot" Failover (UFO2)

- If active interface becomes unavailable, backup interface assumes primary and begins data transmission.

- **No loss of data** since secondary was already buffering data and has a copy at the time the primary failed.
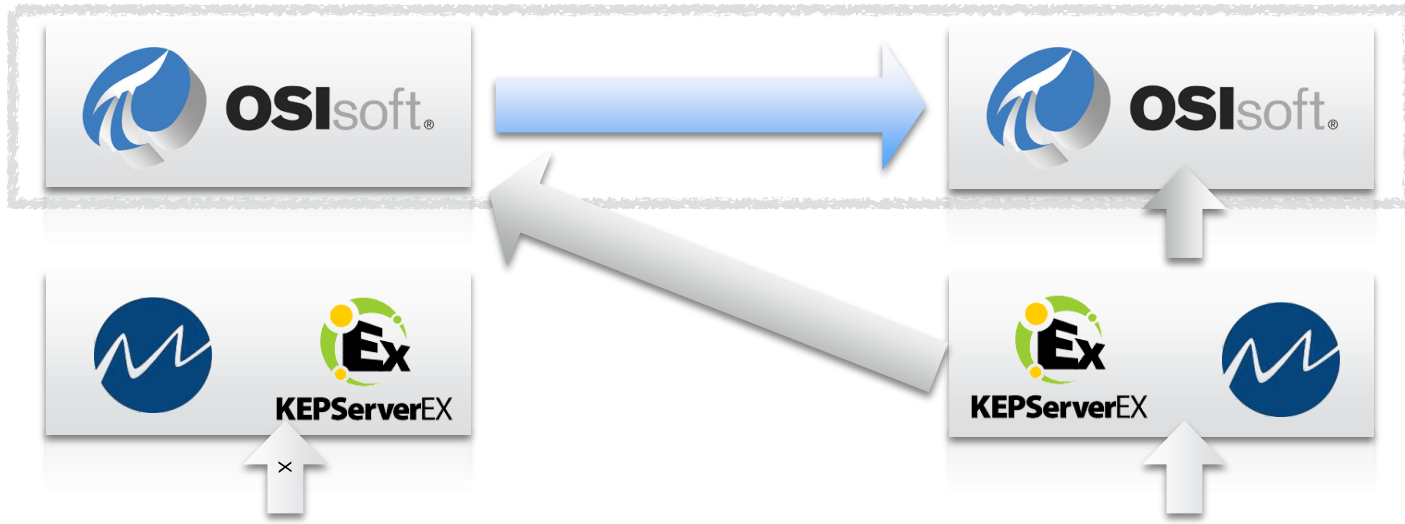
Alarm contacts notified using OSIsoft Partner Alarm Management Software

Points whose current values exceed pre-defined limits trigger desktop or email notification.

Backup TopView Server provides Redundancy

Failure of primary alarm server causes backup server to start and continue to operate without interruption.

Remaining non-redundant SQL, Search-Engine, Report Server

- SQL Server
- Search-engine
- Custom web-reports

- *Smart alarms - 'The Why'*

- *Sustainability goals achieved - centralized and meaningful data*

- *Check Engine light - Condition defined and continuously monitored*

- *Cost savings*

- *Qualified (GMP) Facilities Data Historian*

Acknowledgements

- *My Team*

- *My Guinea Pigs*

- *Rob Eisele*

- *Zymergi*

- *Many others*

Questions

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

State your
name & company

THANK YOU