



# PI Coresight in Genentech PTD

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**Roche / Genentech**

# Agenda

- Genentech / Roche Background
- Problem Statement
- History of Historization in PTD
- Current State
- Challenges
- Benefits of PI Coresight
- Plans



# Genentech / Roche Background

- Roche acquired Genentech in 2009
- 3 new drugs approved in 2012 and 2013, including the first antibody-drug conjugate approved by the FDA
- 31 drugs in Phase II or Phase III (Source: [www.gene.com](http://www.gene.com))

# Genentech / Roche Background

- PTD = Process Technical Development
- Roughly 500 users accessing data from cell culture and purification pilot plants and several cell culture labs
- 2 PI servers - 60000 points & 6000 points
- Over 350 units sending data to the PI System



# Problem Statement

All these new drugs and increased global collaboration since the Roche acquisition require better access to process development data.

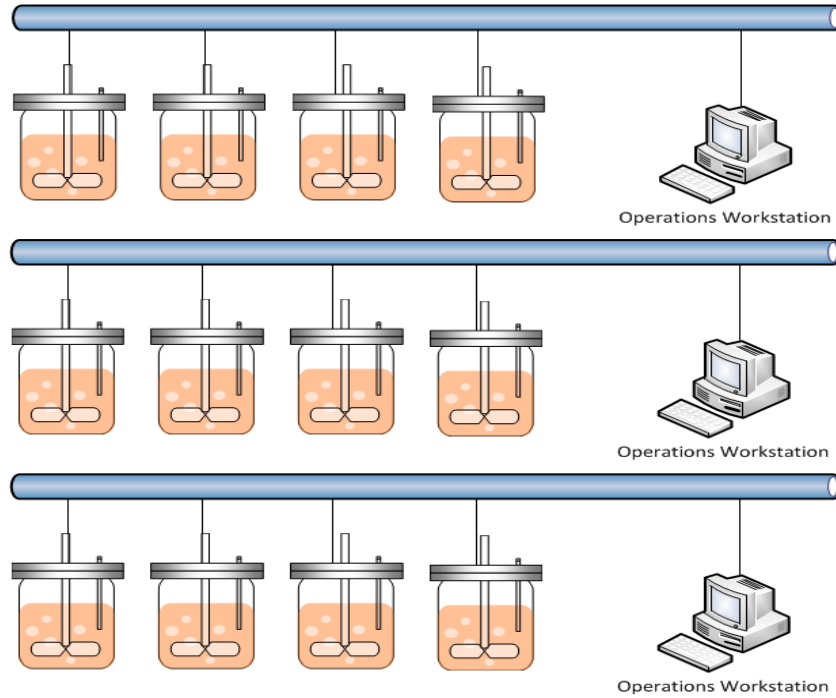


# History of Historization in PTD

- In 2009, majority of data collection was localized on LabVIEW based systems
- 1 DeltaV system with embedded PI System
- Frequent data loss and lots of support hours
- All data exported to Excel for review and analysis



# History of Historization in PTD

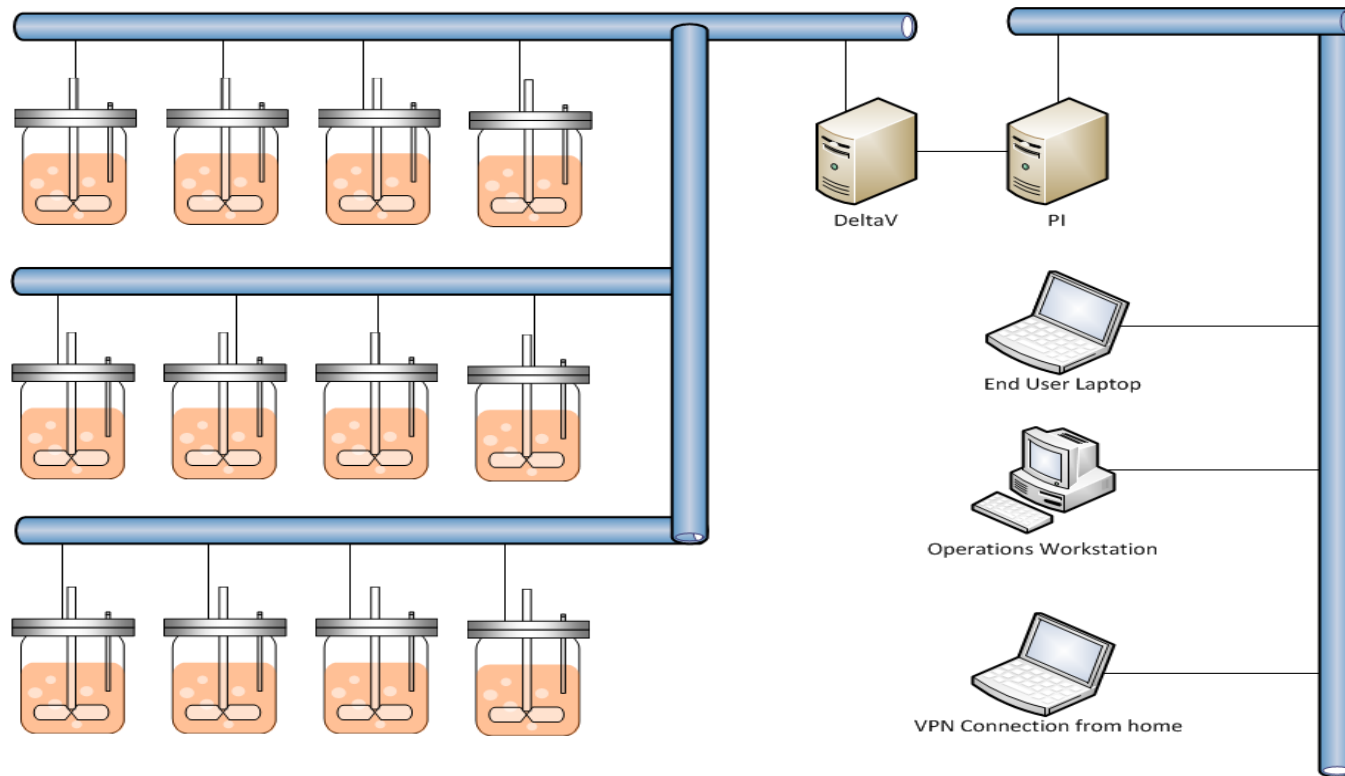


# History of Historization in PTD

- 2009 - Cell Culture PI Server installed
- 2010 - 4 DeltaV systems sending data to PI System
- 2010 - Purification skids migrated from IP21
- 2011 - Custom web client developed by GAP
- Since - Additional analyzers, systems added



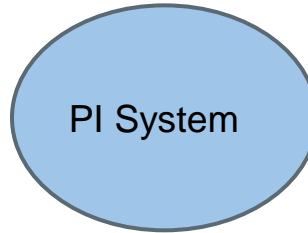
# Current State



# Current State

## Data Sources

- DeltaV Systems
- Rockwell PLCs
- Nova Analyzers
- ~~GE PLCs~~
- ~~Dasgip Bioreactors~~
- ~~Foxboro DCS~~



## PI Clients

- PI ProcessBook / ActiveView Displays
- Data Report Tool
- Custom Web Client
- Matlab Analysis Tool
- PI Coresight

# Current State

- PI System is the primary software for trend review
- Multiple analytic tools built from one core system
- Preferred historian platform across the Roche network

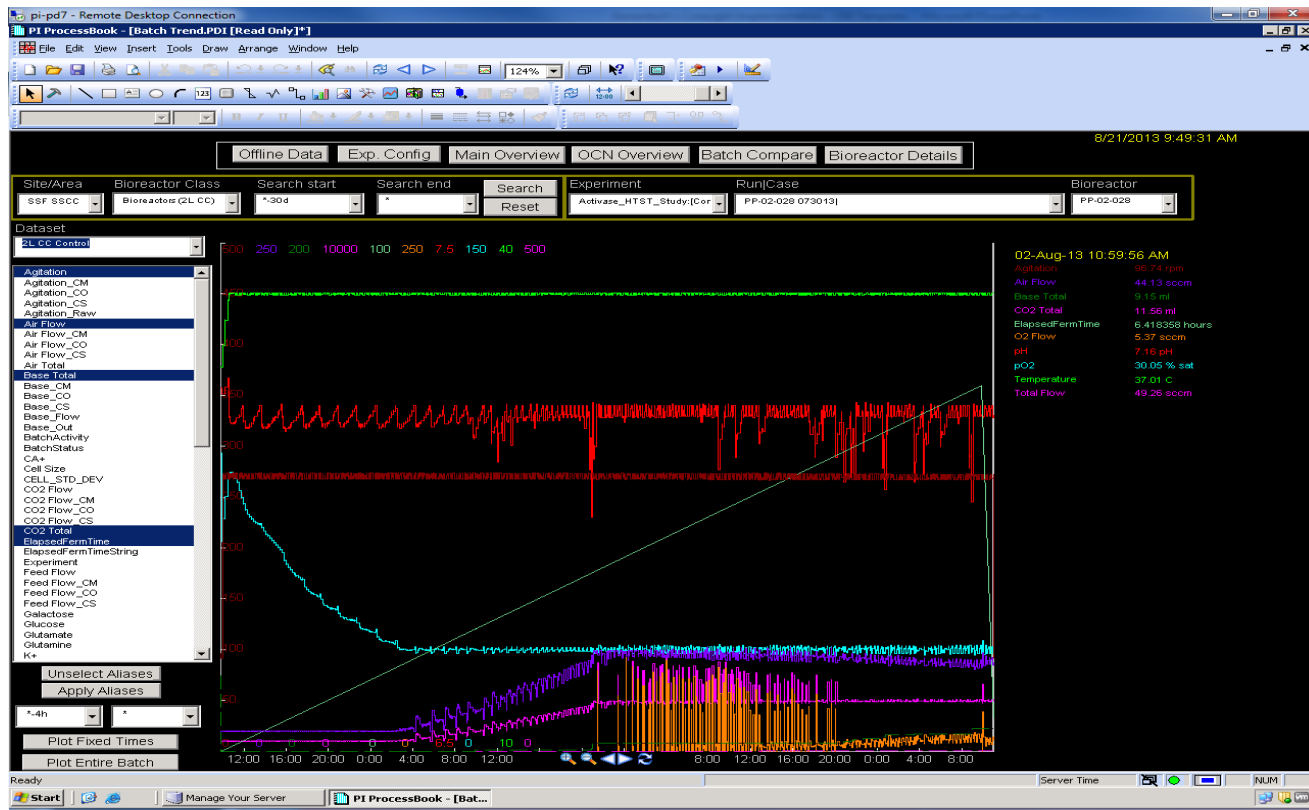


# Current State

- Pre-configured displays to ease navigation
- 40 ActiveView displays for on the floor of the labs and pilot plant
- 4 PI ProcessBook terminal servers
- Limited use of PI DataLink or local PI ProcessBook install
- Custom web based PI Client



# PI ProcessBook Displays



# Custom Web Client



# Custom Web Client Challenges

- Still difficult to share trends
- Difficult to service
- Future development expensive
- No mobile platform



# 2011 – PI Coresight on the Horizon

COTS = lower development and maintenance costs, relative to custom web client

Web based = less client install support

Very easy to share trends, not just screen shots





# PI Coresight in PTD

- Enrolled in beta test in November 2011
- Commercial release installed in January 2012
- Gathering regular feedback from a select subset of end users (PTD pilot deployment)



# Challenges to Implementing PI Coresight

- Primary PI Server on 3.4.380 (no PI AF)
- Limited user experience with PI ProcessBook
- Lack of batch relativity
- Unable to specify pen colors



# Current State of PI Coresight

- 75 users
- 240 displays
- Still in pilot, not released to all users
- Limited application of PI AF element templates and categorization

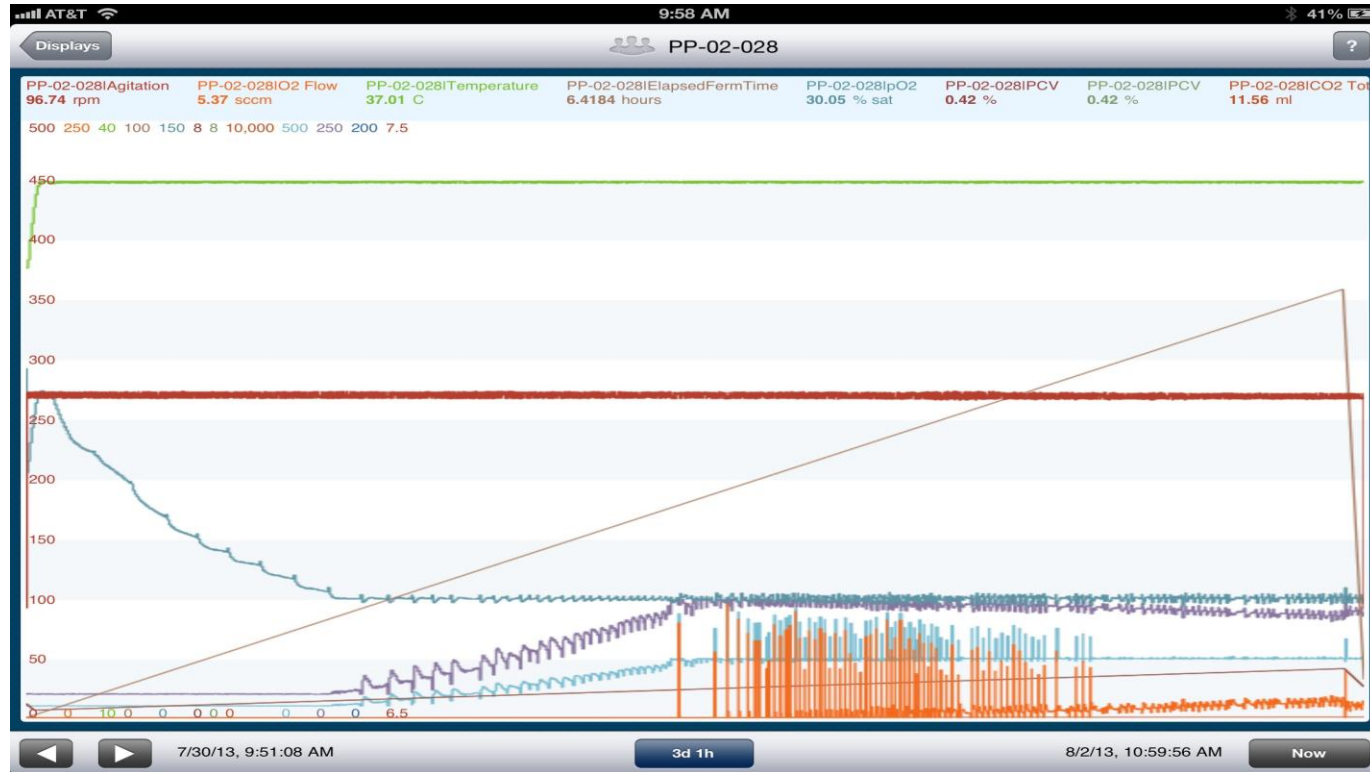


# PI Coresight Benefits

- Mac compatibility
- Easy to share - email a link to a trend, not just a screenshot
- Ease of use - first time users don't need extensive instruction
- iPad App allows for on the go trend review



# iPad App



# For the future

- PI AF structure providing asset relativity
- Event frames providing batch relativity
- Auto-generated displays from url
- Navigation improvements from Sharepoint(?)





# DEMO

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