

REAL-TIME PERFORMANCE MANAGEMENT FOR THE ENTERPRISE

RtPM



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Fossil Generation Fleet Performance Center: Real Time Process Visibility via RtPortal/ProcessBook

Fossil Generation Sites

- Detroit Edison founded in 1903
- 8 Fossil Generation Sites (multiple units at each site)
- Total Generating capacity: 11,000 MW
- Market Served: Southeast Michigan (2.1 Million customers)



Fossil Generation Sites



PI System

- Installed PI in 1999
- Interfaces to multiple DCS/HMI systems and PMAX
- Primary DCS – Bailey OIS
- Data collection initially focused on production and quality data



Fleet Performance Center

- Central location to monitor operation of power generation fleet (remote)
- Staffed 24 X 7 by highly experienced operators
- Maintain Constant communication with control rooms
- Troubleshoot, analyze, diagnose, and operational advice
- Operator display mimics in ProcessBook using PI data (Bailey OIS, PMAX)
- Other software apps (alarm management, equipment monitoring, etc.)



Fleet Performance Center

Insert picture here



Why do it? (Benefits)

- MISO market went into effect April 1, 2005 (Midwest Independent System Operators)
- Deregulation of Power Industry in Michigan
- Single point of control/view of total enterprise operations
- Leverage experience of “super operators” to monitor and offer control advice to all sites
- Insure consistent control and operational methodologies



Critical Success Factors

- **All** Operator displays replicated in ProcessBook
- Same look and feel as in control room
- Maintain DCS navigation links in ProcessBook



Cost/Benefit

- Problem: 5000 Operator displays to convert to ProcessBook
- Manual screen building – approximately 8 hours per display
- Manual PI Tag creation – Each display may require new PI tags
- Easy to justify purchase of graphics conversion software



Time and Money Constraints

- Timing was critical – accelerated deployment schedule
- Limited project budget
- Requirement to leverage existing technologies (PI, ProcessBook)



AVI Demo

- ProcessBook (demonstrate basic tag and navigation functions)
- RtPortal (demo navigation functions, ease of deployment)



Project Implementation

- Initially converted all operator displays to ProcessBook (GrITS for ProcessBook)
- Approximately 5000 Bailey displays converted to ProcessBook
- All Bailey tags on displays mapped to respective PI tags in ProcessBook
- DCS Navigation Links replicated as ProcessBook Linked Displays
- Same look and feel as Operator Displays



Project Implementation

- Needed additional PI tags for complete replication of displays (BaCon – Auto Pointsync for Bailey tags)
- Lots of Digital PI tags (for Bailey Multistate replication)
- PI Tag count increase
- Driving the need for Enterprise License Agreement with OSIsoft



Project Implementation

- Online week of June 6, 2005 (accelerated)
- Automatic synchronization of DCS Tag and Display changes



Future Enhancements

- Migration to RtPortal (currently replicating displays to both PDI and SVG files)
- Enterprise Control Room
- Tie in to other facilities/business units



Conclusion

Total Enterprise Operational Visibility delivers
Real Time Performance Management

