

Industrial Network Systems MOBILE USE CASES

OVERVIEW







MUNICIPALITY IN INDIANA (WASTEWATER UTILITY)

Municipality in Indiana

- In service approx. 80 years
- Serves city with > 80,000 residents

Challenge

- How to deliver Mobile dashboards to users inside & outside the plant network
- Data from GE iFix SCADA and GE Historian
- Real-Time, Historical Trends and Alarms





MUNICIPALITY IN INDIANA (WASTEWATER UTILITY)

Solution

- Delivered dashboards for iPhone and iPad users with a native iOS app, downloadable from the Apple App store, configured in our Windows Application
- Accessible remotely secured by built-in application security and data diode technology
- For security, only specific screens will be pushed to the iOS as "view-only" screens
- With the proper security and multi layered authentication, supervisory control and alarm acknowledgement
- Configurable interface to GE SCADA and Historian





PICKING A MOBILE OPTION IS THIS EASY! (REALLY!)

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DESIGN A SCREEN ONCE

DEPLOY ACROSS PHONE, TABLET, & DESKTOP

- Develop the HMI Screens for use on Windows computers and then easily deploy them to iPads and iPhones as well as HTML5 without additional engineering
- Configurable designer for your graphical mobile application
- Use VB.NET or C# scripting to develop powerful flexible applications for your iOS device
- For HTML5 applications we support JavaScript







APACHE (OIL & GAS)

Apache

Apache Corporation is an Oil & Gas exploration and production company with operations in North and South America, the UK, and elsewhere

Challenge

Improve access and usage of real-time data to increase efficiency, improve performance, lower costs, make better data-informed strategic decisions in real- time



APACHE (OIL & GAS)

Solution

• We used FactoryStudio to build high- end analytic tools to aggregate, analyze, and present real-time information to both the rig and the office for real-time review and analysis

• With FactoryStudio they were able to combine high-speed data with low- latency data sources in real-time

• Loaded historical data from approx. 800 wells to help pre-load the system with valuable "lessons learned"



APACHE (OIL & GAS)

Mobile Application

- Deployed to many N.A. rig locations
- Using FactoryStudio's graphics engine enabled mobile usage via HTML5 and native iOS systems on iPads
- Mobile application was a subset of what is used in the desktop application
- Same graphics designer supports iOS
- Later phases added development of smart alarms, advisory services, and high-end analytics
- Configurable High-Performance interface to OSISoft's PI and PI AF







RITE IRRIGATION (AGRICULTURE)

Rite Irrigation

- Irrigation system dealer and automation company
- Extensive experience in farming irrigation systems

Challenge: Mobile IIoT

- Main method of communicating with Pivots would be mobile devices (iPad / iPhone)
- Needed mobile connectivity, graphics, and reports in a single package





RITE IRRIGATION (AGRICULTURE)

Mobile Solution

• We enabled very complex animations and scripts on both desktops and natively on iPads

- Built-in SQL data-logging capabilities
- Flexibility and control in managing real-time PLC communications





CHOCOLATE MAKER CONNECTING TO ERP WITH MOBILE APP

Problem

- Largely paper-based system of rounds and readings
- Information for decision making was not realtime
- Schedule conformance was issue with excess idle resource time
- A new implementation of SAP as their ERP forced operator interface change





CHOCOLATE MAKER

CONNECTING TO ERP WITH MOBILE APP

Solution

- Identified data sources; brought together and stored
- Applied analytics and then visualized predictable KPI's like downtime & quality events
- Delivered actionable information to iPads and smart phones, accommodating their mobile workforce

Results

- Improved schedule performance
- Double digit improvement in quality
- Double digit improvement in manufacturing efficiency
- Created ability to better manage schedule conformance
- Lowered overall production costs



CONNECTING TO ERP

Solution

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- Real-time Mobile dashboards
- The system is made up of multiple role-based dashboards.
- Dashboards were made up of several key metrics including metrics like:
 - Selectable Current Day information
 - Quality Events and Trends
 - Downtime Events
 - OEE and Line Health Activities
 - Production Schedule Details
- We delivered decision support via pc's, mobile devices like iPads and smart phones, even large flat panel displays.

Results

- Improved schedule performance
- Double digit improvement in quality
- Double digit improvement in manufacturing efficiency

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