



One-Day Wonderware User Conference

THURSDAY, JUNE 4, 2015
MONONA TERRACE • MADISON, WI

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Going Mobile. Mobile Solutions



STAYING LEAN WITH INFORMATION 'ON THE GO'

Presented by: Joe Finn
Wonderware Midwest



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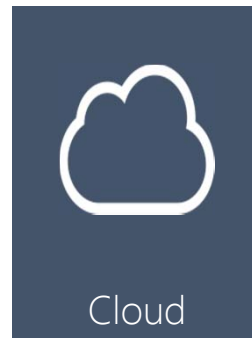
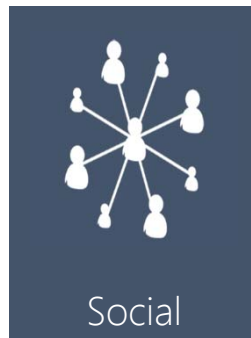
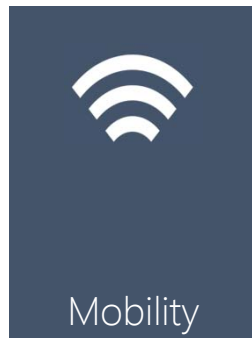
What's driving the pace of change today?



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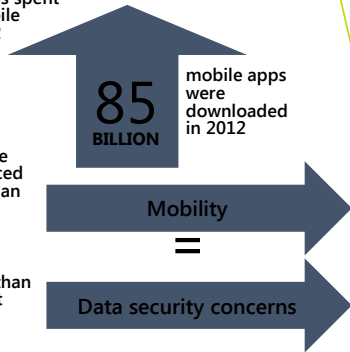
Technology megatrends



91% of organizations spent money on mobile devices in 2012

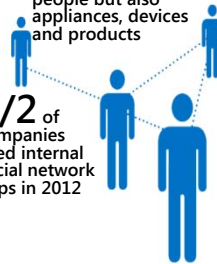
In 2012, mobile devices out paced PCs by more than

2:1 and generated more revenue than PCs for the first time



Social networking now follows not just people but also appliances, devices and products

1/2 of companies used internal social network apps in 2012



> 80% of new apps in 2012 were distributed/deployed on clouds

The strategic focus in the cloud shifted in 2012

from infrastructure to application platforms

34% of CIOs say technology as a service (cloud) will have the most profound effect on the CIO role in the future

49% of CIOs rank BI as the top project priority for 2012

Total digital content grew **48%** from 2011

2/3 of mobile apps developed in 2012 integrated with analytics offerings



2.7 zettabytes in 2012

32% of businesses were likely to invest in BI and analytics in 2012



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Going Mobile - Agenda

- Getting the Right Information to Right Perso
- Mobile Revolution
- Applications for Mobile...
 - #1 Reporting – SmartGlance
 - #2 Workforce Management – IntelaTrac
 - #3 Workflow – Mobile Workflow Client
 - #4 Process Visualization – HMI on an iPad
 - #5 Real-time Alarms – Mobile 911
 - #6 GIS on your iOS (or Droid) – Mobile GIS
 - . . . And wait, there's more! Fun Applications – for Work!



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We All Need Information to Do our Jobs



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How do you provide mobile workers with the right information at the right time?



Mobile Solutions



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Facts...

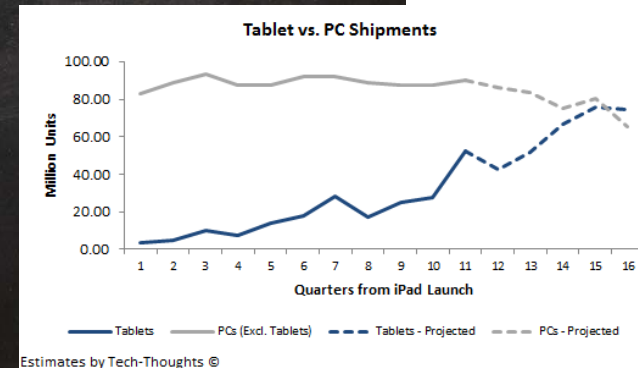
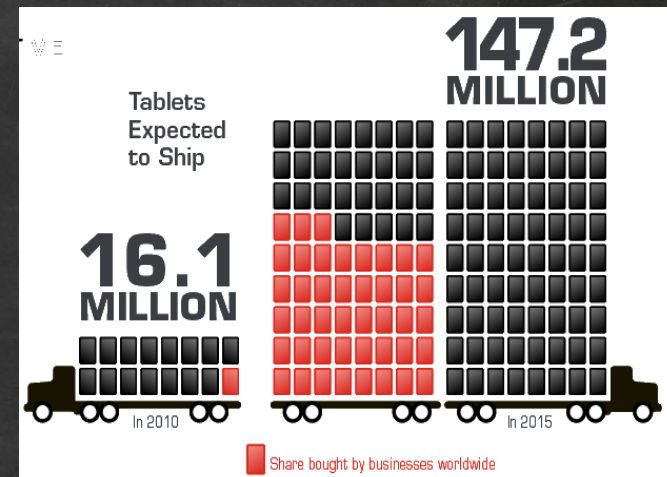
75% of business users impacted by mobility

1/5 of tablets used in business in 2013

147.2 Million Tablets in business in 2015 – 50%

11,000 iPads used by United / Continental Airlines pilots on board

Tablet Sales grew ~80% Annually



Sources : Gartner, ABI Research, Forrester, Frost & Sullivan, Others

So Let's...



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Mobile Applications

Mobile Applications Provide:
The **Right Information**
At the **Right Time**
To the **Right Person**



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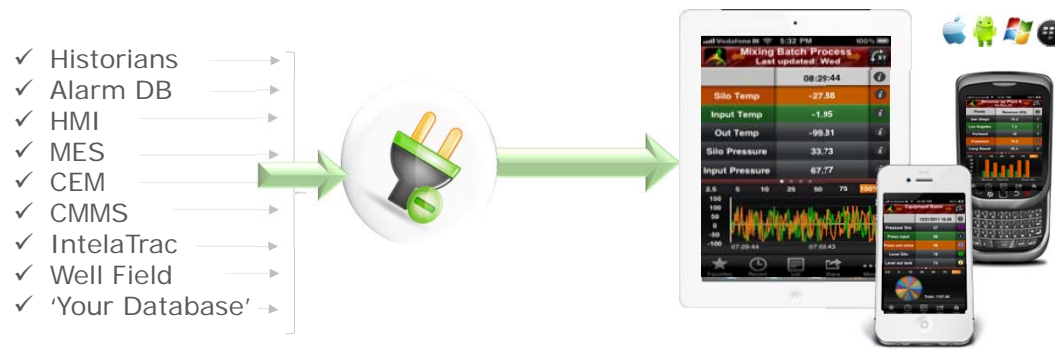
MOBILE APPLICATION #1

Mobile Reporting and Notification

SMARTGLANCE



Mobile Reporting



Mobile Reporting Connector

Send real time data from various products to SmartGlance

SmartGlance

Real Time Mobile Dashboards

Real-time access to critical KPIs and process data via smartphones and tablets.



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Key Features



Reports – Critical Data at Your Fingertips - Real time and historical

Automatic Data Updates... Data always up-to-date

Powerful Analysis Tools: Line Charts, Bar Charts, Pie Charts

Compare time frames, factories, stores, machines, areas, teams

Zoom, Pinpoint, and Analyze:

Share findings with your team

Drill down to pinpoint a problem

Sort, Filter & Freeze options for excel like ana



Supports All Smart Phones Platforms



Apple Devices

- iPhone
- iPod Touch - all versions
- iPad
- *Multiple language support – English, French, Spanish, German, Italian, Chinese & Japanese*



BlackBerry Devices

- Supports both Touch and
 - Non Touch models
 - Multiple language support –
 - BlackBerry Playbook
- English, French, Spanish, German & Italian



Android Phones



Windows Phone Devices

Security:

Similar to online banks and HR/Payroll systems

- **Authentication:**

- Access only to registered and authenticated users
- Each communication message has built-in authentication

- **Authorization:**

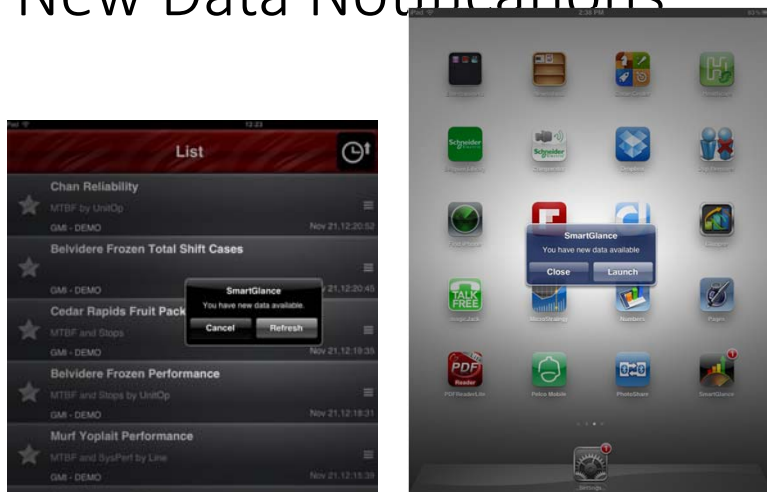
- Mobile level: login and password to start the app
- Report level: data available only to the users authorized within the report

- **Encryption:**

- Full encryption of data
- HTTPS communication in and out of hosted server
- Verisign Thawte Certified



New Data Notifications



Receive a banner or an alert notification when a new report or data is updated.

It is a great reminder to know when new data or report comes up.

Allows to open the SmartGlance app with just a touch on the alert.

Build your own alerts

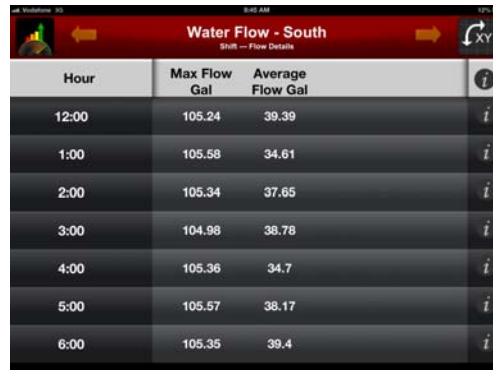
'My Alerts'



- You can generate your own Alerts
- You can share your Alerts with another user
- Subscribe to new Alerts

■ Try it for yourself. . .for free!

- ✓ Download and Install Free [SmartGlance Phone App](#)
- ✓ Connect to 'Demo Reports'
- ✓ Show it off 😊



The screenshot shows a mobile application interface with a red header bar containing the title "Water Flow - South" and a subtitle "Shift - Flow Details". Below the header is a table with four columns: "Hour", "Max Flow Gal", "Average Flow Gal", and an information icon. The table contains seven rows of data for hours 12:00 through 6:00.

Hour	Max Flow Gal	Average Flow Gal	i
12:00	105.24	39.39	i
1:00	105.58	34.61	i
2:00	105.34	37.65	i
3:00	104.98	38.78	i
4:00	105.36	34.7	i
5:00	105.57	38.17	i
6:00	105.35	39.4	i

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MOBILE APPLICATION #2

Workforce Management

INTELATRAC



Field Operators

- Fewer and fewer
- Wearing more hats
- Turnover, experience levels
- Need tools to drive higher effectiveness



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IntelaTrac – A Tool for Improving Operator Effectiveness

- Operator Rounds – Data Collection
- Equipment Inspections
- Health, Safety and Environmental (HSE) Rounds
- Security Rounds
- Built-in Contingency Actions
- Projects & Turnarounds – status tracking & procedure enforcement
- Quality Assurance – Manual data sampling



IntelaTrac



System Administration
User Administration, Device Management
System & Data Center Management



Super Users
Procedures Versioning Scheduling



Mobile Workers
Operator Rounds Data Collection
Work Requests



Enterprise Integration
CMMS / Reliability
Avantis, Maximo, Hansen



Process Historian
WW, OSI PI, AspenTech



Supervisors
Round/Route Approval Performance
Monitoring Exception Management
Shift Handover/Logs



Management
Exception Reports
Process/Performance KPI's
Email Notifications



Minutes not hours, equipment saved

IntelaTrac

- Drives Operational Consistency
 - Rounds & Dynamic Procedures
 - Capture and spread operational knowledge
- Gain Better Insights on All Assets
 - Data Collection on “Stranded” Assets
 - Immediate Feedback (data history)
- Leverage Operators in Reliability Efforts
- Helps Managers Manage Better (w/ data)
- Helps Ensure Regulatory Compliance



MOBILE APPLICATION #3

Decisions on the Go

MOBILE WORKFLOW



New **WORK TASKS** App, *Workflow on the Go*

Most Plant Workers are Mobile

- Operators, Managers, Engineers, Technicians, Maintenance Workers, Lab Workers
- **NEW Work Tasks** mobile app (iPhone & iPad)
 - Monitor & Execute assigned work tasks
 - Great tool for managers (meetings, travel, home)
 - Keeps workflows moving. Not waiting for anyone.
 - Reduces delays, particularly management approvals.



Work Tasks - Key Capabilities

- View and Act on work items from your iPhone or iPad, anywhere
- Search for specific work items
- View work items based on categories
- Flag work items based on importance
- View work items even in offline mode
- Number of pending tasks pushed to mobile devices and displayed on Work Tasks icon



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Work Tasks – Key Advantages



- Helps Accelerate Workflows
 - Less waiting for someone to approve a task
- Keep Track of Critical Workflows
 - List of workflows on your phone
- Helps You Manage Better
 - Helps you identify workflow bottlenecks



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MOBILE APPLICATION #4

Mobile Real-Time HMI





- Keep mobile operators fully informed of ongoing processes
- Allows remote or mobile intervention
 - Full functionality
 - Secure access
- Runs on any mobile device that supports Microsoft Remote Desktop Services (aka Terminal Services)
- Access Anywhere with HTML5 RDP Client (Any device with a browser)
- Consumes a Terminal Services Session License



Operator Use Case

- The Field Operator can see the state of an equipment then operate it using his SCADA HMI on a Tablet
- He can enter information from where he is without having to move to a different place (better reliability of data)
- He can get access to the **right information in real-time** even when he is close to the machine (like a downtime reason or an alarm)



How does it work

- Connectivity achieved through Remote Desktop Sessions
- Secure access using VPN
- Access through WiFi and or 3G/4G
- Reduces the need for multiple panels in warehouse, packaging, bottling or in geographically dispersed facilities in Water, Oil & Gas, Power



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MOBILE APPLICATION #5

Real Time Alarms



- Ties into your SCADA system
- Brings alarms right to your Phone or Tablet where they can be acknowledged.
- Can use in Conjunction with a PanelView also!
- www.specterinstruments.com

MOBILE APPLICATION #6

Mobile GIS (Global Information Systems)

- Extend the reach of your GIS Systems
- Increase productivity and accuracy by updating your GIS in the field
- Most GIS Vendors support most devices



MOBILE (fun) APPLICATION

What is your Water Footprint?

'WaterPrint'

- Calculate your daily Water Usage
- How much water does it take to ___? ___
- iPhone Only
- www.waterprint.net

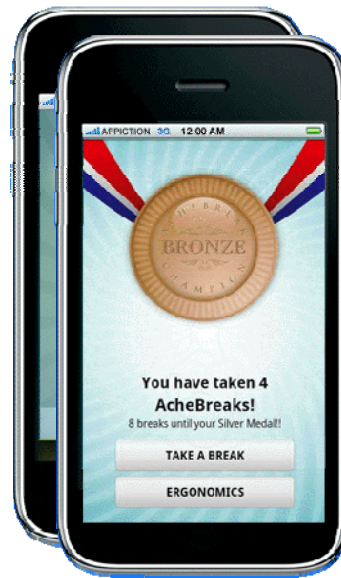


MOBILE (fun) APPLICATION

Fingers hurt because of all of those Apps?

'AcheBreak'

- Repetitive Strain Injury (RSI) App
- Cartoon characters help relieve sore muscles
- Take a Break!
- www.achebreak.com



Water versus 'Apps'



According to a 2013 Mobile App Behavior study by Apigee, 85% of the respondents said they would rather go without Water than going without their Mobile Apps.

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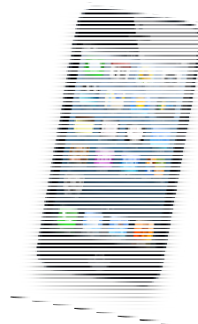
Summary

- Mobile Technology is Here to Stay
 - Smartphones, tablets, rugged handheld computers
- The market delivers a host of mature, mobile solutions
 - Mobile Reporting
 - **Mobile Workforce**
 - Mobile HMI & Alarms
 - Mobile GIS
 - Mobile 'everything!'
- The Right Information to on at the Right Time
- Questions? Joe.Finn@WonderwareMidwest.com



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More on SCADA

Security



- \$Millions\$ being spent to keep SCADA Safe
 - But, must stay quiet on all being done
- 3rd Party Companies being paid to hack into 'our' software
- ICS-CERT – Emergency Response Teams

More on SCADA

PLC Training

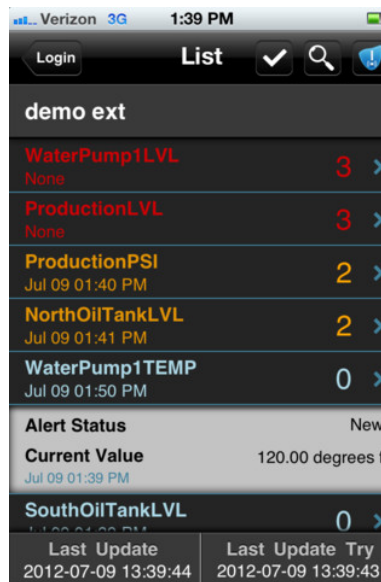
- 'PLC Guide' (Others available)
- Basic concepts of PLC Programming
- FREE



More on SCADA

SCADA-Aware

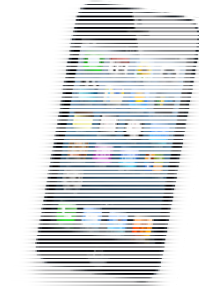
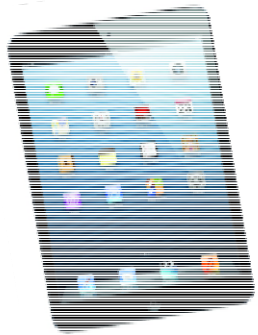
- Alarm Notification – Guaranteed Delivery
- Can deliver to person ‘closest to alarm’
- You’ll pay more, but. . . Guaranteed delivery!
- All Phones



Demonstration

SmartGlance

WaterPrint



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