



# From Clipboards to PDA's

(Personal Digital Assistant)

Joe Finn

Wonderware Midwest

# Agenda

- ▶ Some History



- ▶ Mobile Technology in Water & Wastewater

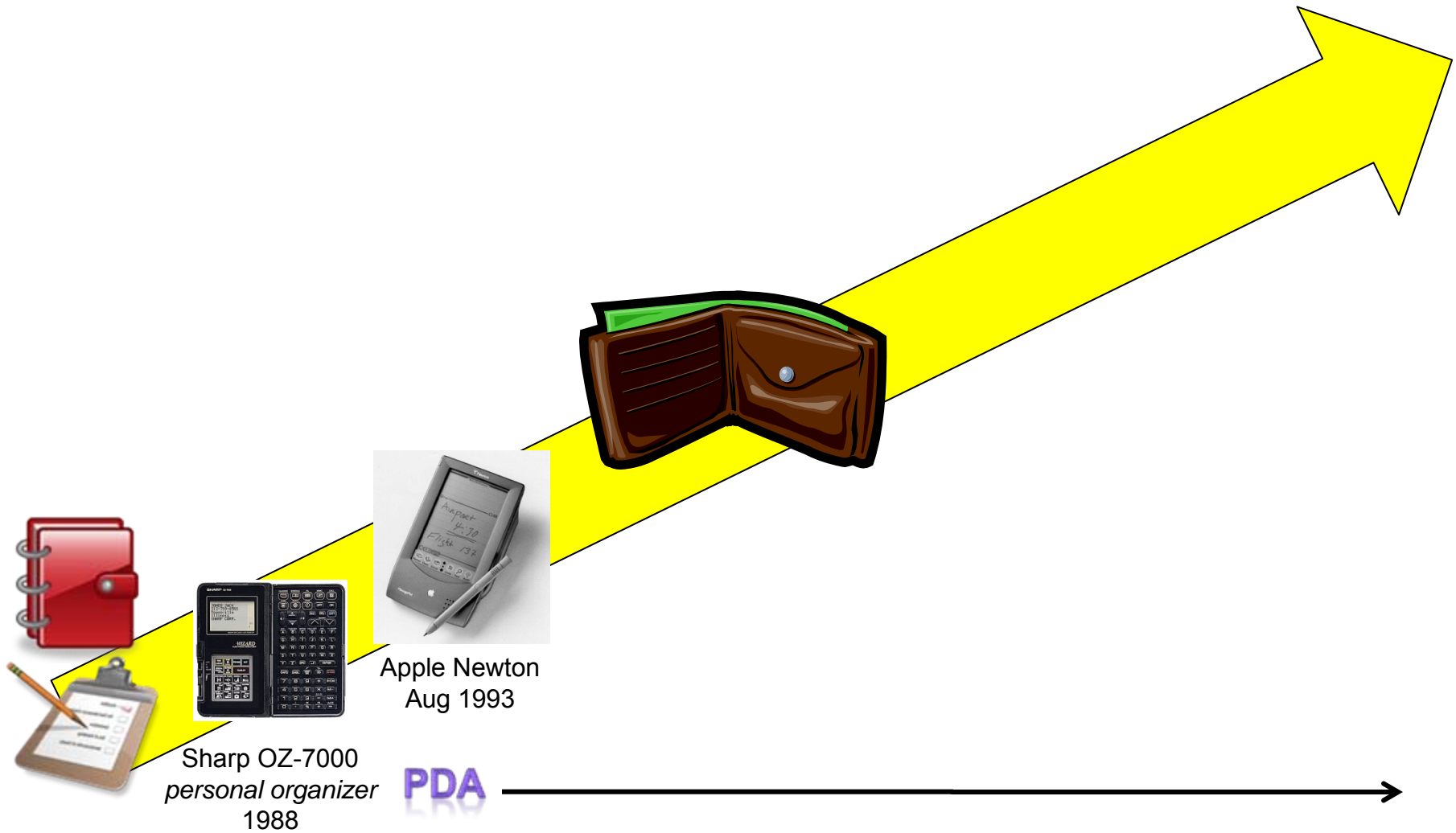
- ▶ Other Mobile Devices

- ▶ Application Examples

- ▶ Use Case in Water/Wastewater

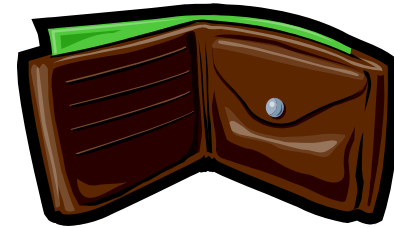


# Evolution of the PDA



# A Wallet?

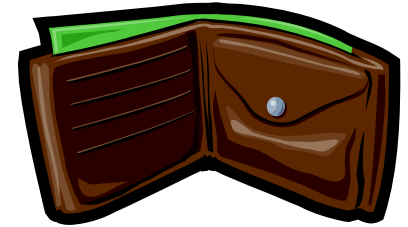
**... A Wallet PC?**



**Feb 1993.**

**Bill Gates talks to  
University of Washington students  
about  
the Wallet PC**

## The Wallet PC ...



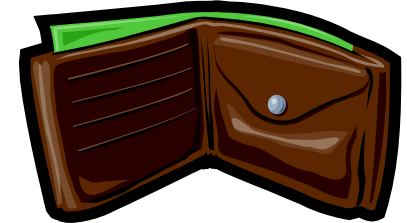
*... it's a futuristic device unlike today's personal digital assistants.*

*"... You have digital certificates. Digital money."*

*"It has a global positioning thing in it, so you can see a map of where you are and where you might want to go."*

*"It's our vision of the small, portable PC of, say, five years from now." (~ 1999)*

*[Bill Gates, The Bill Gates Interview, Playboy Magazine, 1994]*



*"A Wallet PC will be a pocket-size computer with a snapshot-size color screen that you will use in place of many essentials you carry around with you today -- money, keys, identification, credit cards, tickets -- as well as items that provide you with mobile information and communications, such as a watch, newspapers or other reading material, address and appointment books, photographs, calculator, portable telephone and pager."*

*[Bill Gates, Huntsville Times, Feb 20, 1996*

*9 months before Windows CE 1.0 is released]*

<http://www.hpcfactor.com/reviews/editorial/walletpc/>

# Evolution of the PDA

NT 4.0  
**Terminal Server Edition**  
1998

WiFi  
802.11b  
Oct 1999



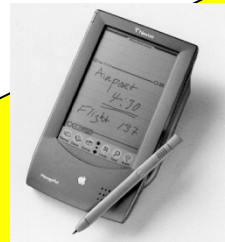
iPAQ  
pocket pc  
Apr 2000



Palm Pilot  
Mar 1997



Casiopeia  
Handheld PC  
1996  
Windows CE



Apple Newton  
Aug 1993



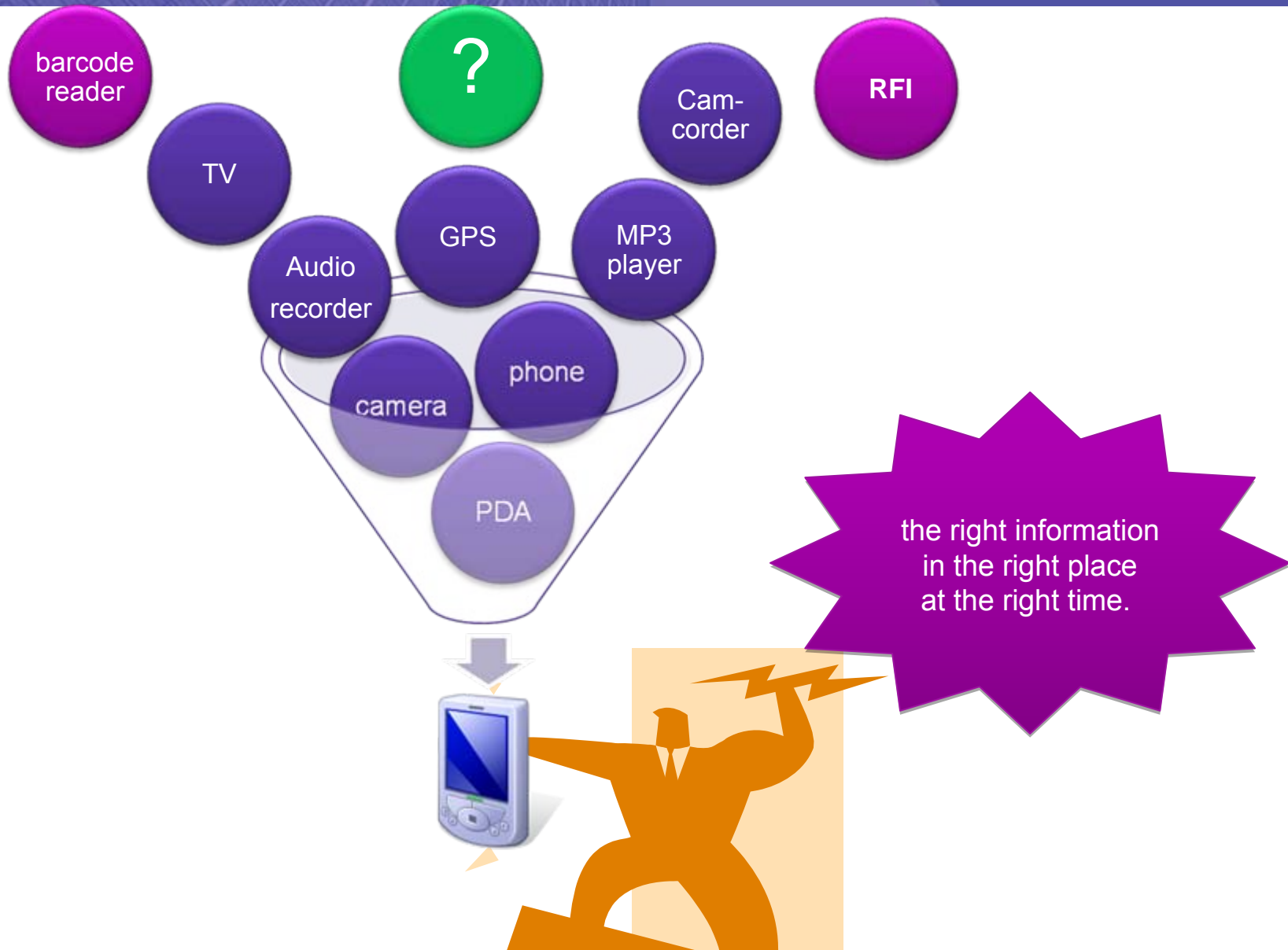
Sharp OZ-7000  
personal organizer  
1988

**SYNCHRONIZATION**

**PDA**



# Convergence (of functionality)



# Other mobile devices: Larger, standard Operating Systems



# Examples of Industrial versions of mobile hardware

► Intermec



► Motorola  
/Symbol



## *“Field Computing Applications and Wireless Technologies for Water Utilities report”.*

A survey performed by awwaRF

The image shows the cover of a report titled "Going Mobile: Field Force Computing Improves Productivity". The cover is white with a blue header section. The header includes the text "Workforce Management" and a small bio for Greg Smith, awwaRF's director of mobile field solutions. The main title "GOING MOBILE FIELD FORCE COMPUTING IMPROVES PRODUCTIVITY" is in large, bold, black letters. Below the title, there is a large blue letter 'L' followed by text describing the report's focus on field computing and wireless technologies. The text is arranged in two columns. At the bottom, there is a footer with the date "Q4 Update September 2008", the logo for the American Water Works Association, and the URL "www.awwa.org/communications/q4update".

**Workforce Management**

Greg Smith, awwaRF's director of mobile field solutions, with Terence (terence@awwa.com), Greg Smith, CTO, and always investigator for the many different requirements, field computing applications and wireless technologies for these utility markets, please email terence@awwa.com or the general inquisitive reader or visit awwaRF.com. awwaRF Communications Group (awwaRF.com), for details.

Water utilities are evaluating and adopting mobile and wireless technology to help them more efficiently manage information flow between field and office. **BY GREG SMITH AND BRETT HARRIS**

# GOING MOBILE FIELD FORCE COMPUTING IMPROVES PRODUCTIVITY

**L**ITTLE FORMAL RESEARCH has been done on the effectiveness of field computing applications and wireless technologies to help utilities operate more efficiently to better serve customers. To help fill this information void, the AWWA Research Foundation—along with a location-based services company, a market research firm, and several US water utilities—developed the *Field Computing Applications and Wireless Technologies for Water Utilities report*.

Developed under awwaRF's Tailored Collaboration research program, the report analyzes current use by water utilities of field computing applications and mobile technologies. The report takes a closer look at the technologies and work practices in place at several US utilities and provides an overview of current and emerging field computing and wireless technologies on the market.

The report reveals that the utilities market sector is more interested in adopting field automation and mobile computing tools than other sectors. Even so, many utilities have been slow to implement technology for use by field workers—especially the largest portion of the workforce—despite being aware of the benefits.

What is the future for mobile workers and wireless technologies? Inevitably the industry will see widespread adoption of field computing solutions over the next few years, and wireless technology use will have a deep and lasting effect on the industry.

Q4 Update September 2008      2008 © American Water Works Association      www.awwa.org/communications/q4update

# Key Mobile Capabilities Important to the Water Industry (awwaRF survey)



Software Solutions for Real-Time Success™

- Improved customer service
- Better data quality, transparency, and control
- Enhanced overall visibility into field activities
- Reduced response time for unplanned activities
- Knowledge capture for succession planning
- Cost savings and efficiency in field activities
- Regulatory compliance and reporting



**Reliability**

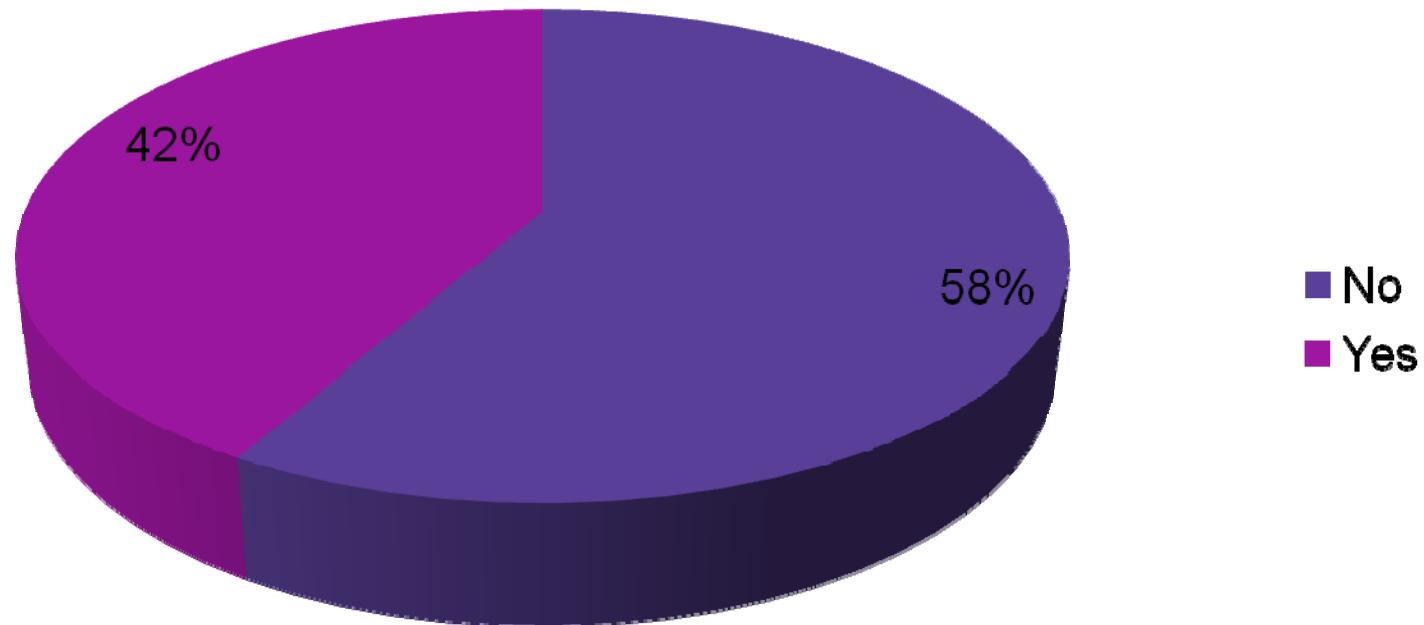
**Affordability**

**Compliance**

**Sustainability**

**Source:** AWWA Opflow Magazine. Sept 2008.  
*Going Mobile – Field Force Computing Improves Productivity*

## Percentage of Utilities in the Survey Deploying Wireless Technologies



Source: "Going Mobile. Field force computing improves productivity" *Opflow magazine*, Sep 2008

# So – why NOT (go mobile) ?

- ▶ Security concerns
  - *Although it is possible to have a secure implementation.*
  
- ▶ IT challenges
  - *Although technology advances facilitate integration*
  
- ▶ Reluctance of staff
  - *Positioning*
  - *Training*

# APPLICATIONS

# Application: Alarms to your phone

*Sending (SCADA) alarms to your pager and or cell phone has been around for many years.*

**Mobile-911™** 

For WIN-911/PRO



# Application: Field Automation

*Mobile personnel accessing SCADA applications remotely via Remote Desktop Protocol (RDP) sessions using dockable PCs in trucks or SmartPhones.*

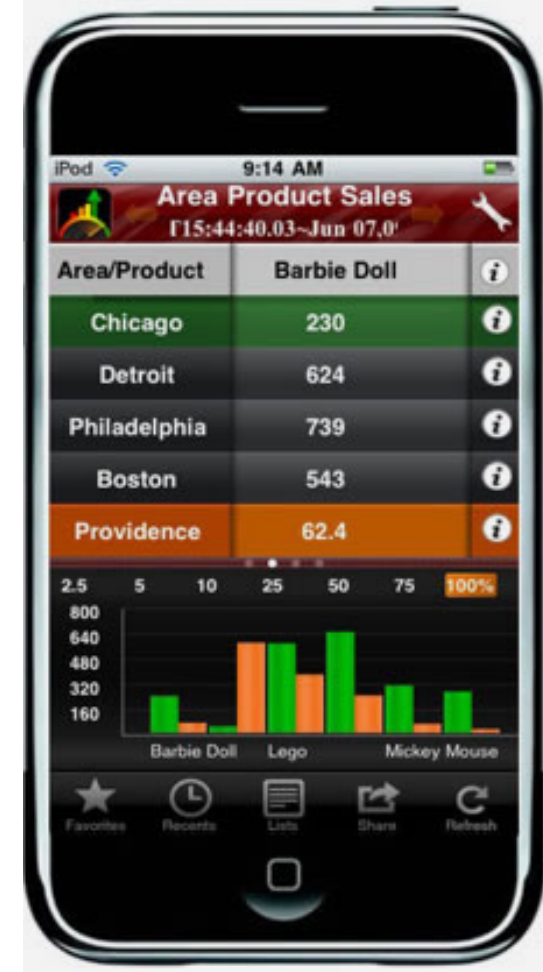


# Application: SaaS to your iPhone

## SmartGlance

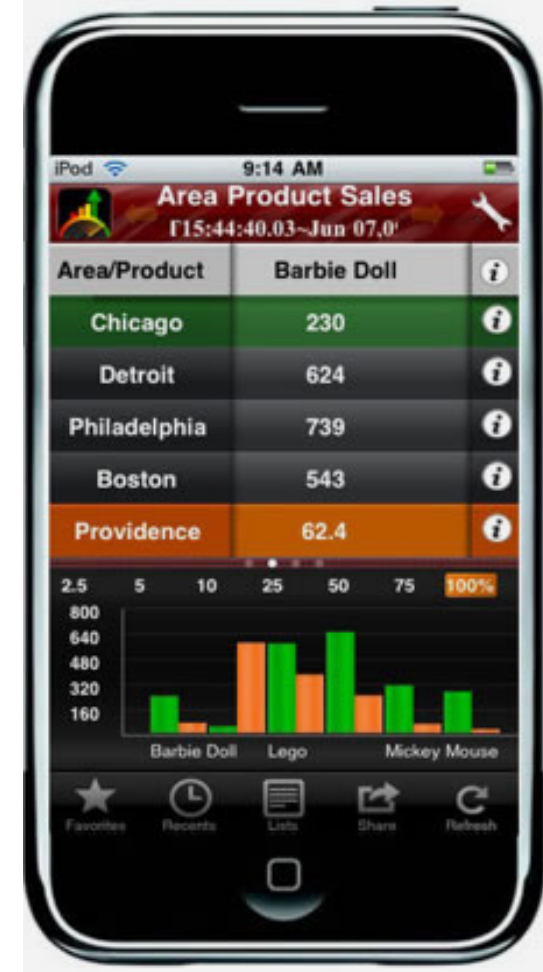
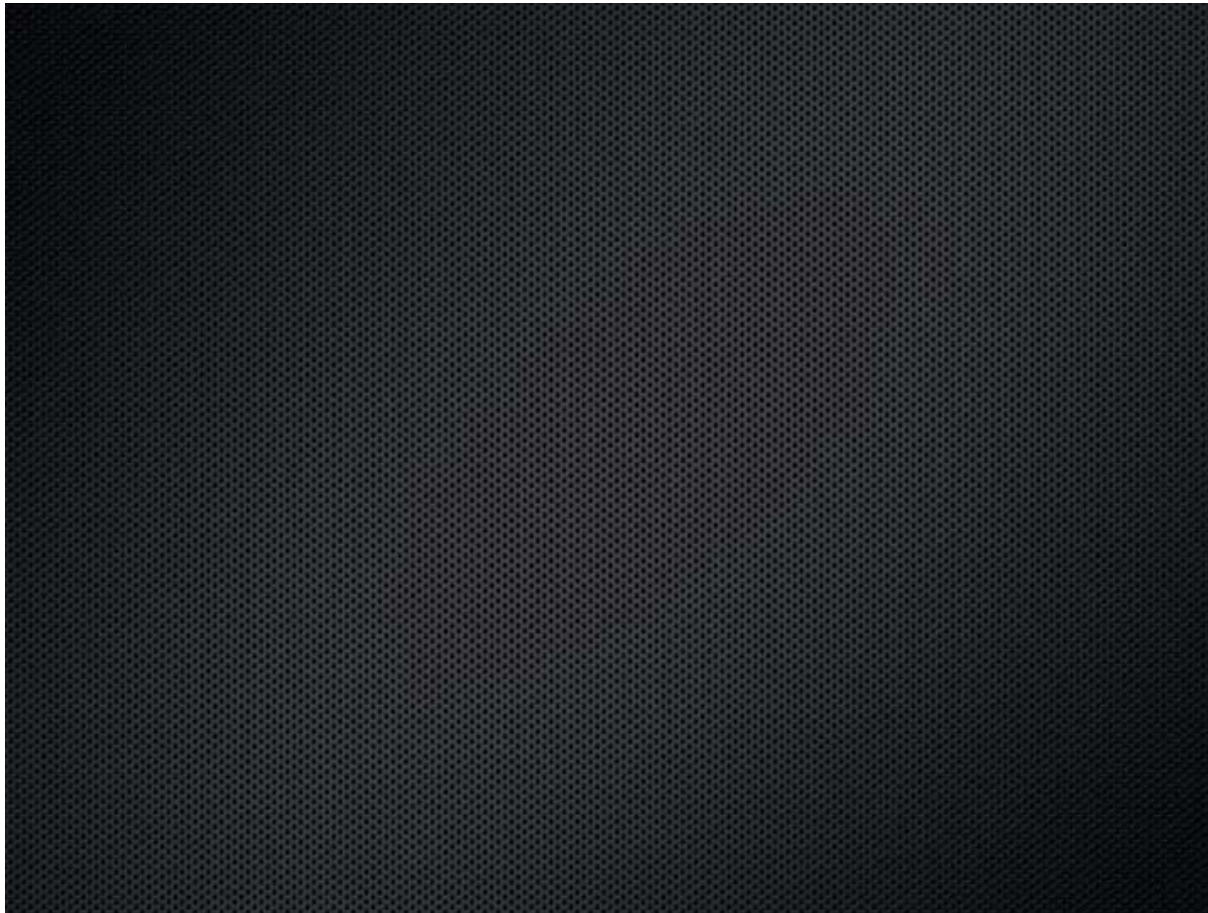
*SaaS . . .  
(Software As A Service)  
. . . to your iPhone.*

*SaaS = Subscription based*

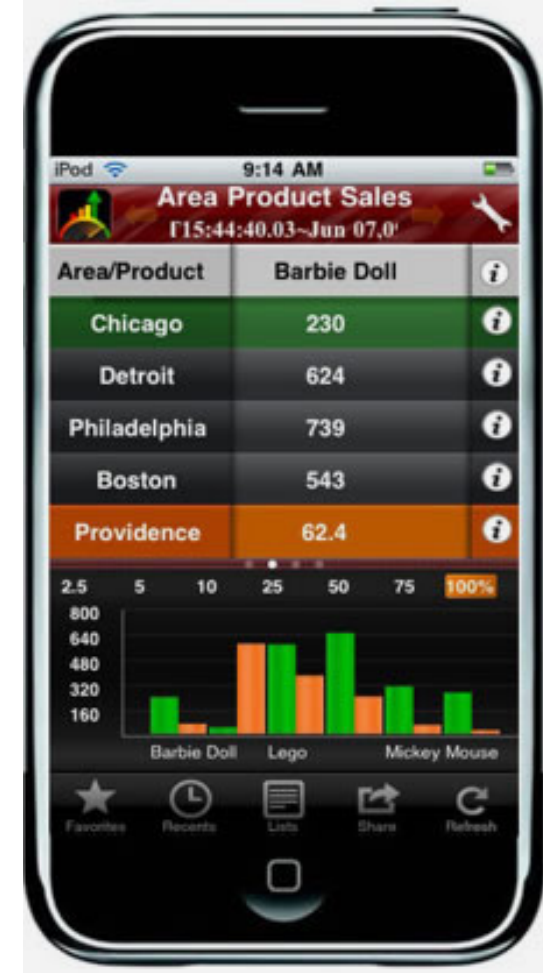
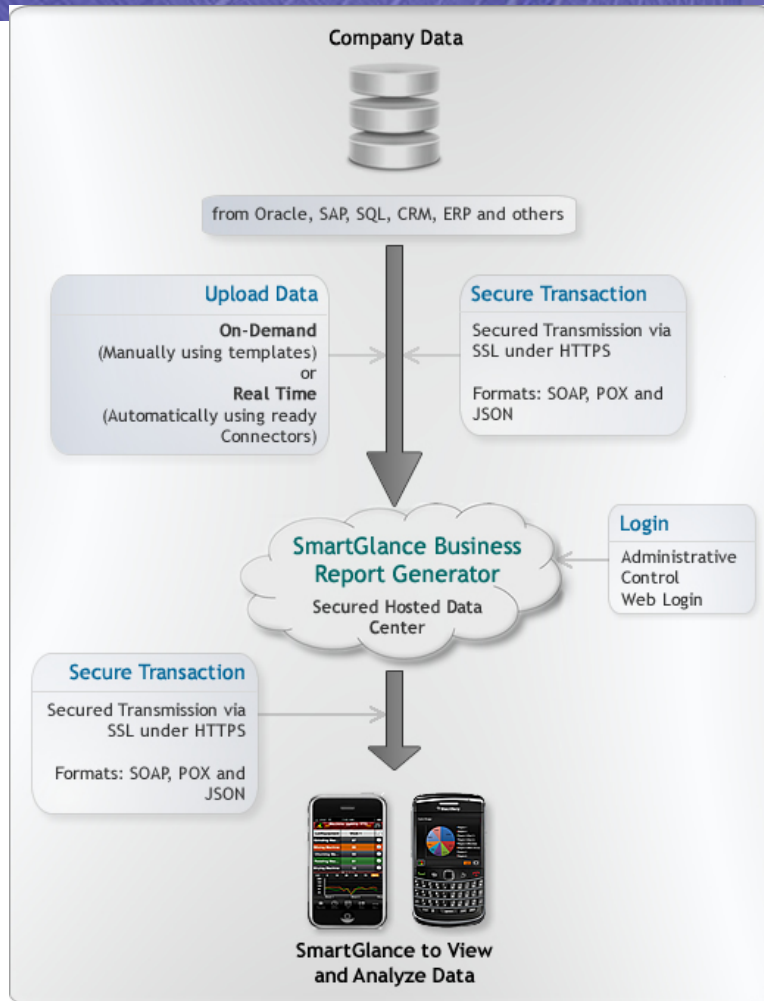


# Application: SaaS Video (2:00)

## SmartGlance



# Application: SaaS Architecture



# Application: Data Monitor



Watch your data via:

twitter

# Applications: THIS JUST IN

invensys.  
*Wonderware*

Software Solutions for Real-Time Success™

Ditch the plastic, pay with your phone - Scan your phone (1) - CNNMoney.com - Windows Internet Explorer

http://money.cnn.com/galleries/2011/technology/1101/gallery.mobile\_payments/index.html?source=cnn\_bin&hpt=

Favorites

Ditch the plastic, pay with your phone - Scan your ph...

## Ditch the plastic, pay with your phone

Cash, credit or iPhone? Here are a few of the growing number of ways your smartphone can replace your wallet.

### Scan your phone

1 of 5

Back

Next

No more fumbling for your wallet when you want a latte. **Starbucks' mobile app**, available for the iPhone and BlackBerry, allows users to essentially replace their Starbucks card with their phone.

Download the app, enter in your Starbucks card number, and your phone will display a barcode that can be scanned at the checkout counter. Users can track their balance on their mobiles, but the real selling point is the ability to order and pay quickly – vital during a morning coffee rush. To reload the card, customers can link it to a debit, credit card or PayPal account

Starbucks started testing mobile payments in September 2009 in a handful of Bay Area and Seattle shops. On Wednesday, it expanded the effort to all 6,800 of its stores throughout the U.S.

By Laurie Segall, staff reporter

NEXT: Skip the lines at the ballgame



COURTESY: STARBUCKS

## Mobile cash

9296.59 USD  
Send Money  
Amount

### Your phone is now your wallet

It's a Wild West in the mobile payments field, as startups and power players battle for a piece of a market valued at billions. [More](#)



### Most dangerous possession: Your smartphone

A thief who gets hold of your phone can wreak havoc on your finances. [More](#)



### PayPal dives into mobile

The Web payments giant is ramping up its focus on smartphones. [More](#)

shareBUILDER

## Buy stocks for \$4

Click Here

- No account minimum
- No inactivity fees
- Invest any amount

ING DIRECT

Job Search See 231,491 new jobs added today

# Application Use Case: Mobility in Water & Wastewater



Best Practice Repository



Mobile Field Applications



Advanced Scheduling



Reporting & Analytics



Business Analyst - Tools



Enterprise Ready  
Framework

# Application Use Case: Mobility in Water & Wastewater



- Operations – Operator Rounds
- Maintenance / I & E – Inspections
- HSE – Safety and environmental rounds
- Learning – Learning on-the-job. . . reliably!
- Projects/Turnarounds – Status / details
- QA – Time stamped lab samples

# Application Use Case: Mobility in Water & Wastewater

Mobile devices are more than just remote browsers...

They are powerful computers in their own right.

Mobile computing is an opportunity. . .

- . . . to complement desktop computing,
- . . . to establish a new way of working
- . . . to leverage applications that can accelerate and sustain process improvements *rather* than moderately improving them by moving that same process from paper to mobile device. . .



. . . because you have a GPS, a bar code reader, RFID, a video player, historical data and step by step instructions in that mobile device!

# Work Process – Configuration and Content

## System Administration

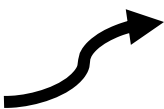


System Administration  
User Rights

## SuperUsers



Creating Procedures  
Managing Task Lists  
Scheduling

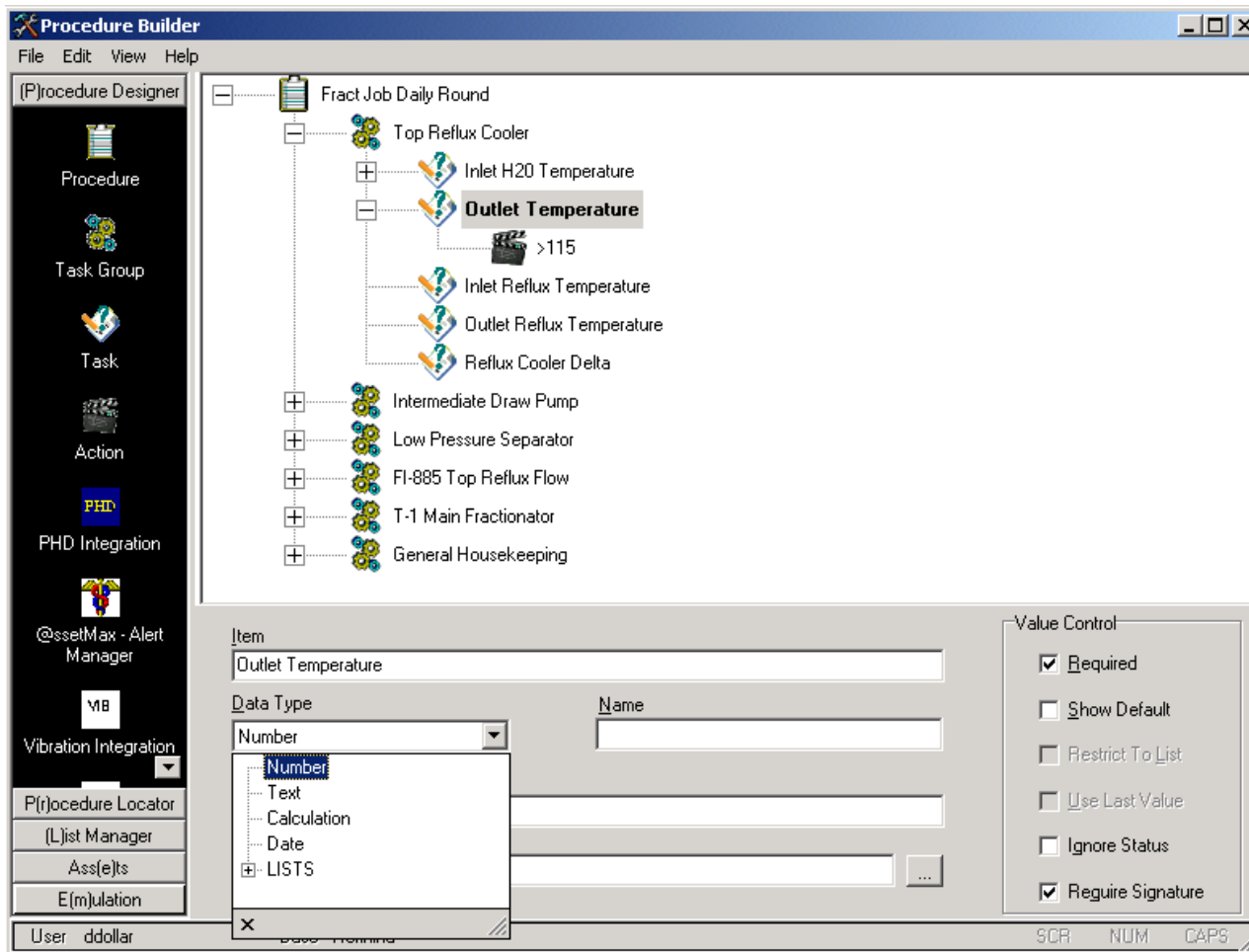


Manual Work  
Processes



Automated Work  
Processes

# Infrastructure for Work Management



## Procedure Builder

- Intuitive Procedure Creation
- Tasks, Assets & Integrations
- Define Best Practices
- Define Workflow



# Schedule Manager

## Calendar view of scheduled procedures

The screenshot displays the IntelTrac Management Center's Schedule Manager. A dialog box titled "Create New Schedule for Job 2 Daily Round" is open, showing the "Occurrence" tab. A red arrow points from the "On a recurring basis" radio button to the "Range of recurrence" section, which includes fields for "Start Date" (6/11/2008), "End Date" (No end date), and "End by" (6/11/2008). The "Recurrence Pattern" section shows "Daily" selected with "Every 1 day(s)". The background shows a calendar for June 2008 with colored bars representing scheduled procedures. The bottom status bar shows "Current Base: Unit 3", "Shift Filter: Off (Viewing all shifts)", "Role Filter: Off (Viewing all roles)", "Crew Overlay: North Crew A", and "QA3-SQL2K5\admin".

Look Ahead (Current or Future Scheduled)

A Future Procedure

A Currently Active Procedure

Look Behind (Completed, Overdue or Missed)

A Completed Procedure

An Overdue Procedure

A Missed Procedure

A Suspended Procedure

Drag & Drop Scheduling



# Advanced Scheduling Options

**Create New Schedule for Job 1 Daily Round**

Occurrence   Exceptions   Advanced

How often will this happen

One time only

On a recurring basis

Who will do the work

Role: U3 Job 1

Assign this procedure to a specific person:  
 admin, admin

Pattern is based off of

A specific shift: Days

A specific crew: North Crew A

Mobile visibility options

All Shifts

By Crew

By Scheduled Shift

Hide On Early Pickup

Range of recurrence

Start Date: 6/15/2008

End Date:  No end date

End after: 10 occurrence(s)

End by: 6/15/2008

Recurrence Pattern

Daily

Weekly

Monthly

Yearly

Every 1 day(s)

Every weekday

Help   OK   Cancel

Single or Recurring Schedules

Schedule to a Role or a Person

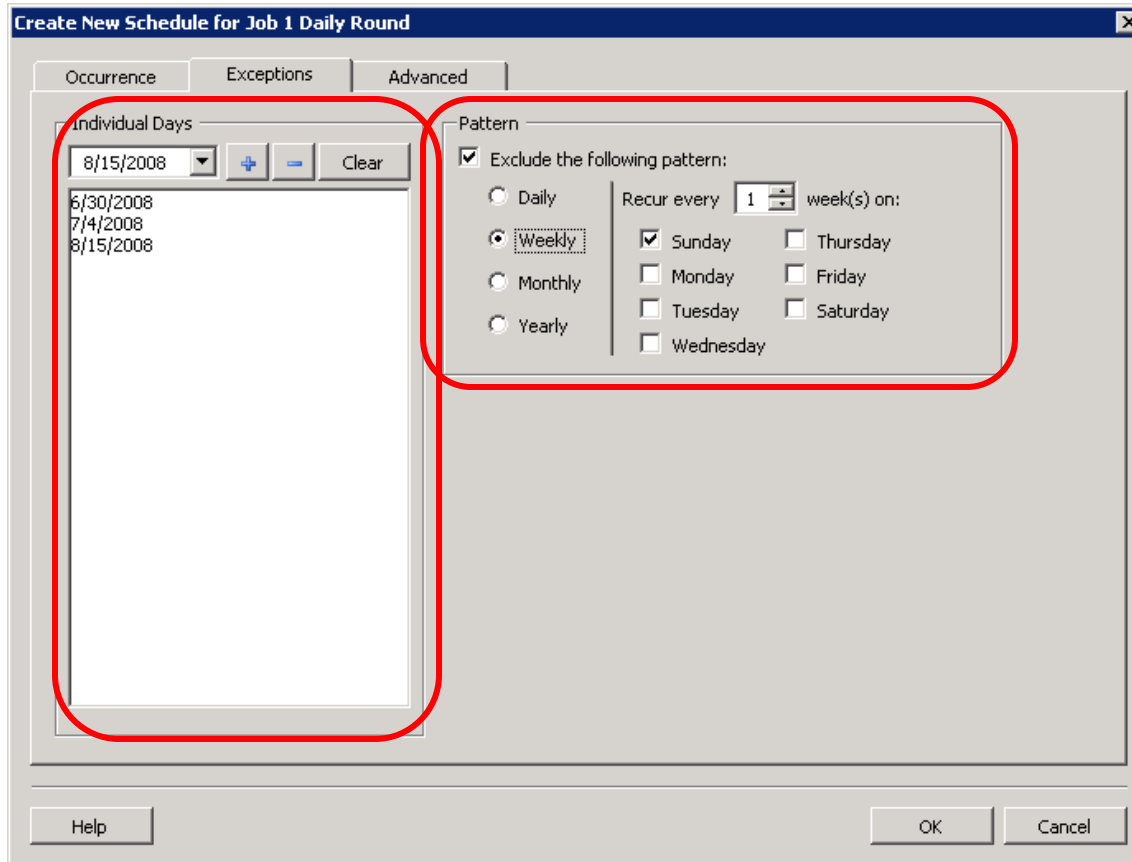
Schedule to a Shift or to a Rotating Crew

Make sure the Procedure is visible to the group you want

Schedule Start, End and Number of Times

Multiple Pattern Choices by Shift or by Crew

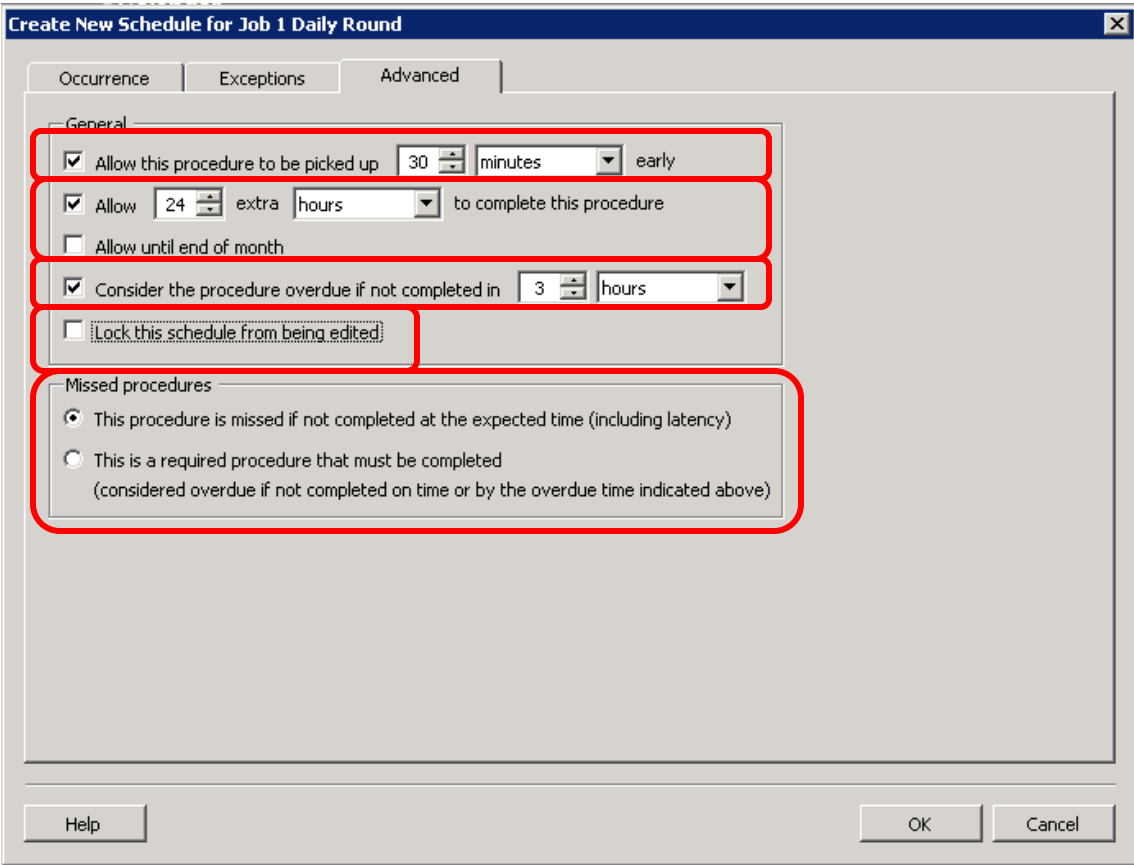
# Advanced Scheduling Options



Individual Dates can be selected for exclusion from the schedule

Date Patterns can be excluded from the schedule

# Advanced Scheduling Options



Allow for early availability of the procedure

Latency with new options including "End of Month"

Overdue Flag available to help drive Field Worker and Supervision behavior

Higher level permissions allow schedule locking

Procedure Schedules can be configured as "Required"

# Workload Balancing

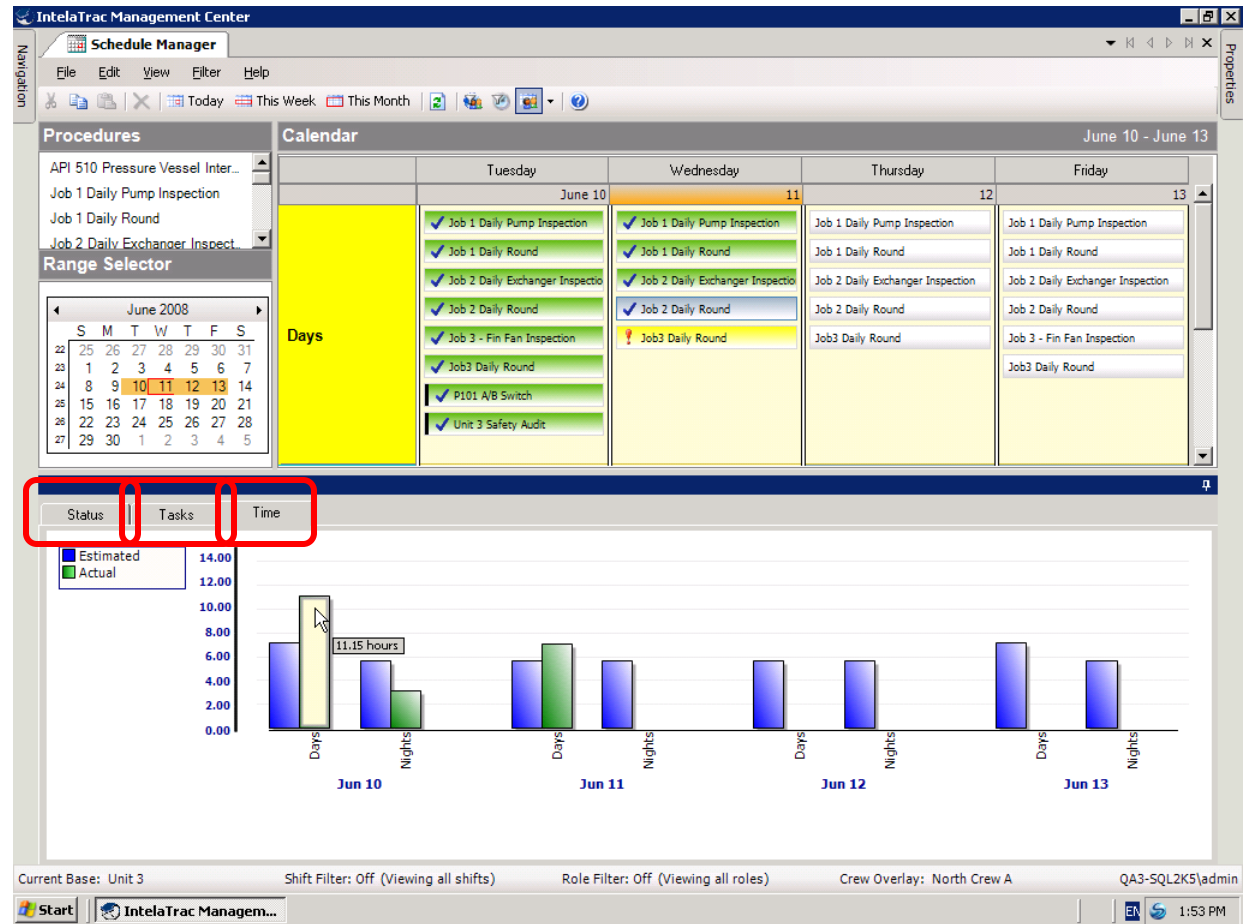
## Procedure Status

- Overdue
- Completed
- Active
- Missed
- New

## Scheduled Number of Tasks

## Time

- Estimated
- Actual



# Crew Setup



Software Solutions for Real-Time Success™

<input type="checkbox"/>	Off
<input type="checkbox"/>	Days
<input type="checkbox"/>	Nights

## North Crew A rotation schedule for calendar year 2008

January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

March						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Rotating Crew configurations are used to facilitate scheduling and reporting

Rotation Patterns up to 366 days

Create Rotating Shifts that match your current configuration



# Work Process – Field Worker

## System Administration

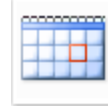


**System Administration**  
User Rights

## SuperUsers



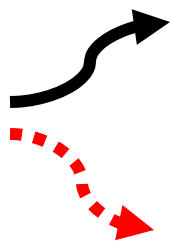
**Creating Procedures**  
**Managing Task Lists**  
**Scheduling**



## Field Workers

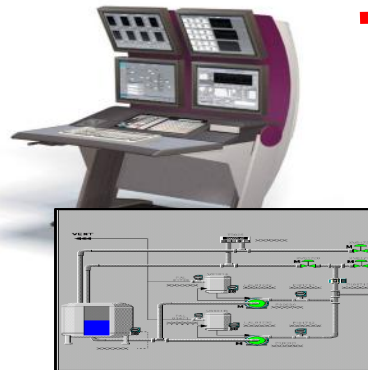


**Operator Rounds**  
**Inspections**  
**Work Requests**

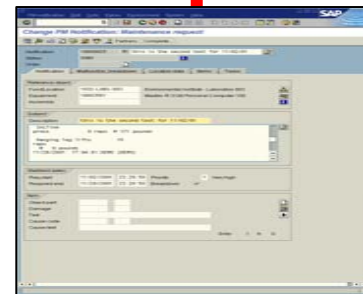


**Manual Work Processes**

**Automated Work Processes**



- Process Historian
- (OPC-hda)
- DCS



**CMMS (SAP, Maximo, Tabware, etc)**



# Observation and Measurement



Operator is provided with a list of procedures

- Scheduled
- Filtered by Area & Role
- On Demand

Operator is presented with a list of tasks to answer

- Using defined pick-list
- Virtual keyboard
- Pen entry
- Peripheral devices



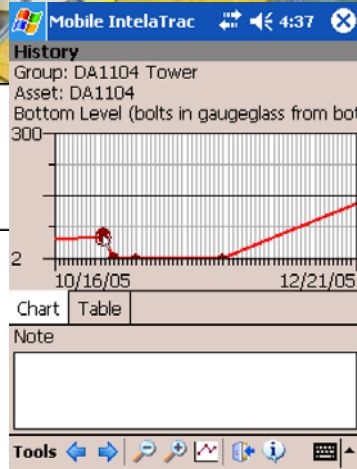
# Focused Advice & Escalations



Back Flush Motor Box Exchanger. Notify Shift Supervisor.



Make note of any leaks and report to the HSE department at x4357



Switch the Post Frac production into the 8" leg of the HDU-1 line that goes to the Bird's Nest by opening the one valve at this location. This valve is located on the platform and is labeled "SHCU line to HDU-1 line leg"

Work Orders 9:38

Type  
M1 Maintenance request

Number

System Status

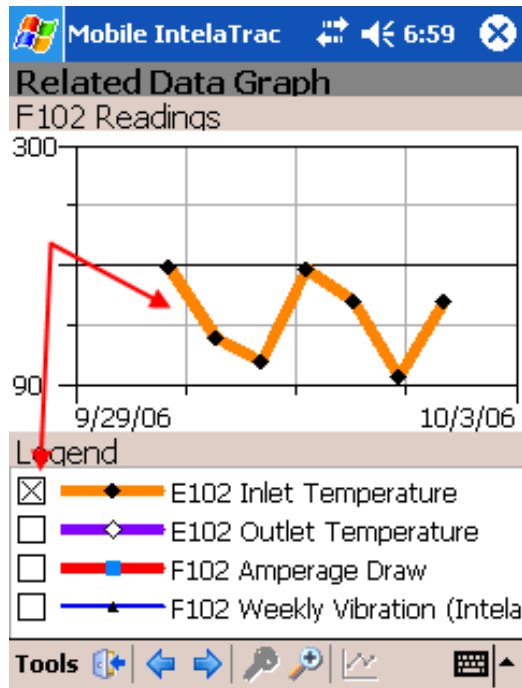
Priority

- 1 Very high
- 2 High
- 3 Medium
- 4 Low

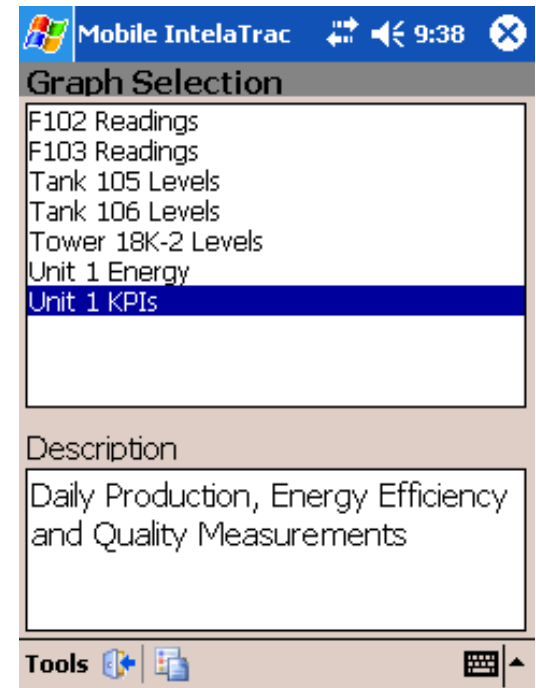
I H Priorities #

Tools

# Mobile Trend Graphs



- OPC-hda Trends are transferred to the computer automatically
- Zoom In / Zoom Out
- Select one or more tags to view
- Some trends are always available



# Create & View Work Requests



Operator can review existing or create new notifications on the mobile computer

- Triggered from an Action
- Ad Hoc as required
- Reduces chance of duplicates
- Some lists come from your CMMS
- Some fields answered by the procedure or through integration with RFID tags



# Work Process – Supervisory Review

## System Administration

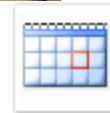


System Administration  
User Rights

## SuperUsers



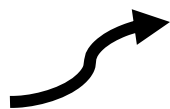
Creating Procedures  
Managing Task Lists  
Scheduling



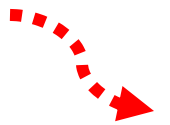
## Field Workers



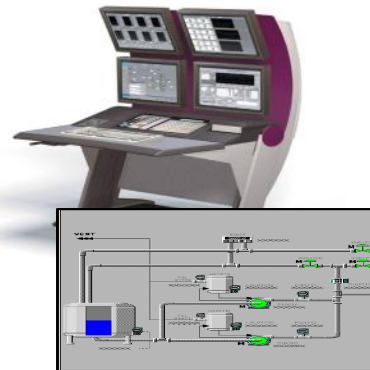
Operator Rounds  
Inspections  
Work Requests



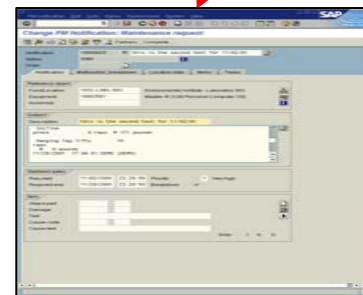
Manual Work Processes



Automated Work Processes



- Process Historian
- (OPC-hda)
- DCS

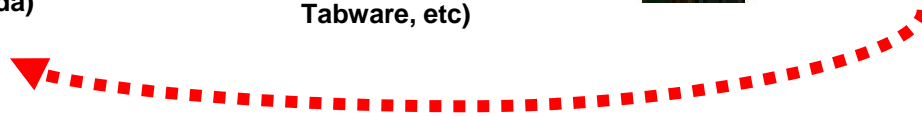


CMMS (SAP, Maximo,  
Tabware, etc)

## Supervisors



Review Rounds  
Approve Rounds Edit  
Field Data



# Auditor Plus Procedure – Summary Reports

IntelTrac Procedure Auditor Plus – Detail Record

File View

BaseName: Unit 3  
STATUS: COMPLETE  
SCHEDULEDBY: Role  
SCHEDULEDDTO: U3 Job 2

completedshiftday ▾

completedshiftday : 6/12/2008 12:00:00 AM (5 items)

ProcedureTitle	Status	Operat	schedul	scheduledTo	Early_	End_T	Sched	scheds	complete	date_s	Comple	Time
Job 2 Daily Exchanger Ins	ection	COMPLETE	admin,	Role	U3 Job 2	06/12/	06/12/	06/12/	Days	Days	06/12/	6/12/2008 3
Job 2 Daily Exchanger Ins	ection	COMPLETE	admin,	Role	U3 Job 2	06/12/	06/13/	06/12/	Nights	Nights	06/12/	6/12/2008 1
Job 2 Daily Round		COMPLETE	admin,	Role	U3 Job 2	06/12/	06/13/	06/12/	Nights	Nights	06/12/	6/12/2008 1
Job 2 Daily Round		COMPLETE	admin,	Role	U3 Job 2	06/12/	06/12/	06/12/	Days	Days	06/12/	6/12/2008 3
Job 2 Daily Round		COMPLETE	admin,	Role	U3 Job 2	06/12/	06/13/	06/12/	Nights	Nights	06/12/	6/12/2008 1

completedshiftday : 6/11/2008 12:00:00 AM (2 items)

ProcedureTitle	Status	Operat	schedul	scheduledTo	Early_	End_T	Sched	scheds	complete	date_s	Comple	Time
Job 2 Daily Exchanger Ins	ection	COMPLETE	admin,	Role	U3 Job 2	06/11/	06/11/	06/11/	Days	Days	06/11/	6/11/2008 8
Job 2 Daily Round		COMPLETE	admin,	Role	U3 Job 2	06/11/	06/11/	06/11/	Days	Days	06/11/	6/11/2008 8

completedshiftday : 6/10/2008 12:00:00 AM (3 items)

## Summary Report By User (Role)

- % Approved
- % Complete

## Summary Report By Year and Month

Drill down to Status components by Procedure



# Auditor Plus Completed – Summary Report

IntelTrac Procedure Auditor Plus

File View Tools Help

Report Type: Completed/In Progress Start Date: 6/10/2008 End Date: 6/13/2008 Get Data

Base Expected Start

Status	Procedure	Scheduled To	In Progress	On Demand	Required	Approved Date	Approver	Highest Severity Name
Base : Unit 3 (8 items)								
Expected Start : 6/10/2008 6:00:00 AM (6 items)								
COMPLETE	Job 1 Daily Pump Inspection	U3 Job 1	0	<input type="checkbox"/>	0	06/12/2008	admin, admin	Normal
LATE	Job 1 Daily Round	U3 Job 1	0	<input type="checkbox"/>	0			Normal
COMPLETE	Job 2 Daily Exchanger Inspec	U3 Job 2	0	<input type="checkbox"/>	0	06/10/2008	admin, admin	Normal
COMPLETE	Job 2 Daily Round	U3 Job 2	0	<input type="checkbox"/>	0			Normal
COMPLETE	Job 3 - Fin Fan Inspection	U3 Job 3	0	<input type="checkbox"/>	0	06/10/2008	admin, admin	Normal
COMPLETE	Job3 Daily Round	U3 Job 3	0	<input type="checkbox"/>	0			Normal
+  Expected Start : 6/10/2008 10:00:00 AM (2 items)								
+  Expected Start : 6/10/2008 2:55:07 PM (1 item)								
+  Expected Start : 6/10/2008 2:56:28 PM (1 item)								
+  Expected Start : 6/10/2008 6:00:00 PM (4 items)								

Approve

## Completed / In Progress Report

- Procedure Status
- Scheduled Role
- Scheduled Crew
- Expected Start
- Expected End
- Other



# Auditor Plus – New Scheduled Procedure Report

IntelTrac Procedure Auditor Plus

File View Tools Help

Report Type: Scheduled Start Date: 6/10/2008 End Date: 6/13/2008 Get Data

Base Schedule Method

Status	In Progress	On Demand	Required	Procedure	Approved Date	Approver	Highest Severity Name	Data Filter Count	Sc
Base : Unit 3 (5 items)									
Schedule Method : U3 Job 3 (9 items)									
ACTIVE		<input type="checkbox"/>	0	Job 3 - Fin Fan Inspection				0	Days
COMPLETE	0	<input type="checkbox"/>	0	Job 3 - Fin Fan Inspection	06/10/2008	admin, admin	Normal	66	Days
MISSED		<input type="checkbox"/>	0	Job3 Daily Round				0	Nights
SUSPENDED		<input type="checkbox"/>	0	Job3 Daily Round				0	Nights
MISSED		<input type="checkbox"/>	0	Job3 Daily Round				0	Days
ACTIVE		<input type="checkbox"/>	0	Job3 Daily Round				0	Days
COMPLETE	0	<input type="checkbox"/>	0	Job3 Daily Round			Normal	11	Days
COMPLETE	0	<input type="checkbox"/>	0	Job3 Daily Round	06/13/2008	admin, admin	Normal	3	Nights
COMPLETE	0	<input type="checkbox"/>	0	Job3 Daily Round			Normal	3	Days
Schedule Method : U3 Job 2 (16 items)									
Schedule Method : U3 Job 1 (17 items)									
Schedule Method : Everyone (23 items)									

## Scheduled Report

- Procedure Status
- Scheduled Role
- Scheduled Crew
- Expected Start
- Expected End
- Other



# Auditor Plus – Individual Procedure Details

The screenshot displays the Auditor Plus software interface. The left pane, titled 'Transmitted Data', shows a hierarchical tree of 'Job 2 Daily Round (rev. 1)' with various equipment items and their values. The right pane, titled 'Item Details', provides specific information for the selected 'Delta Pressure' item, including its reading (11), date (6/10/2008 2:53:19 PM), user (admin, admin), and status (In Service). Below the details is a history graph showing 'Reading Value' over time from 6/6/2008 to 6/13/2008 for three pressure types: Delta Pressure (blue), Discharge Pressure (green), and Suction Pressure (red).

Item	Value
Unit 3 Charge Tank	
Bottom Level (bolts in gaugeglass ...)	5
LCCO Color <Normal>	Medium...
All Belts In Good Order on Overhead...	Yes
Sour Water Pump	Serviceable
No Leaks, Gauges OK, Housekeeping...	Yes
Oil Level <Normal>	Normal
Select Run Status	In Service
Suction Pressure <Rot Equip Alert>	74
Discharge Pressure <Normal>	85
Delta Pressure <Alert>	11
FE#33 East Side of Control Room	Out for...
Propylene Charge Pump	Out for...
No Leaks, Gauges OK, Housekeeping...	
Oil Level	
Select Run Status	In Service
Suction Pressure <Normal>	150
Discharge Pressure <Normal>	140
Delta Pressure <Rot Equip Alert>	10
Suction Temperature <Alert>	74
Is Seal Flush Line Hot <Normal>	Yes

Item	Value
Delta Pressure	11

Item Details for Delta Pressure:

- Reading: 11
- Date: 6/10/2008 2:53:19 PM
- User: admin, admin
- Status: In Service

History Graph Data (Approximate):

Date	Delta Pressure	Discharge Pressure	Suction Pressure
6/6/2008	10	85	74
6/13/2008	11	85	74

- Procedure Details provide additional information
- Highlighted Exceptions
  - Data Collection Details
  - History graph
  - Tabular History



# Shift to Shift Communications



Mobile Intelatrac 1:05

### Virtual Log

1/7/06 1:05:40 PM  
This is a second log entry

1/7/06 1:05:17 PM  
Asset: ABC  
Added 43f Oil to OB Pump Bearing

Close

New Entry

Sort by Date

Sort by Asset

Text Size

About Intelatrac

Tools

Log Manager (3/27/2001 - 3/14/2002) (1)

Asset	Date	Time	User	Entry	Remote
Asset : TG3					
Asset : TG2	11/27/2001	5:52:50 PM	ddollar	High temperature observed on bearing's	remote
	11/27/2001	10:31:29 PM	ddollar	filter clogged with fish heads	remote
Asset : TG1	11/30/2001	9:06:48 AM	ddollar	Report filed for accident investigation.	remote
Asset : P22A	12/27/2001	2:30:48 PM	ddollar		remote
Asset : F100	12/14/2001	9:27:19 AM	ddollar	Lact meter failed calibration and needs replacing.	remote
Asset : B125	11/27/2001	4:04:01 PM	amorton	Lact meter failed calibration and needs replacing.	remote
	11/27/2001	10:33:08 PM	ddollar	Too much baking soda was introduced in the batch	remote
	11/28/2001	8:35:23 PM	ddollar	Excessive vibration noted.	satdemodave
	11/29/2001	6:36:20 AM	abrooks	Lact meter needs to be calibrated.	QA2234
	11/29/2001	8:02:50 AM	amorton	Handle is broken.	remote
	11/29/2001	8:22:47 AM	amorton	Shower water flow pressure is low. Fire extinguisher is discharged.	remote
	11/29/2001	8:23:58 AM	amorton	Items missing from first aid kit inventory.	remote
	11/29/2001	1:26:05 PM	amorton	The sky is overcast with grey cloud cover today. Life vest has broken strap.	remote
	11/30/2001	9:12:51 AM	ddollar	No injuries to report for this accident.	remote
	11/30/2001	9:14:04 AM	ddollar	Red sky at night, sailor's delight. Red sky at morn, sailors be warned.	remote
	11/30/2001	12:57:27 PM	ddollar	Lact meter needs to be calibrated. Check the time, it may be after dark.	remote
	12/7/2001	6:09:08 AM	abrooks	Report filed for accident investigation.	satdemodave
	12/7/2001	8:14:04 AM	abrooks	The sky is overcast with grey cloud cover today. Check the time, it may be	remote
	1/3/2002	3:01:26 PM	ddollar	Handle is broken.	remote

Handle is broken.



Electronic Log Books Provide Shift Supervisors and Field Operators with Common View of Shift Relief Notes

# Work Process – Management Review



Software Solutions for Real-Time Success™

## System Administration



System Administration  
User Rights

## SuperUsers



Creating Procedures  
Managing Task Lists  
Scheduling



## Field Workers

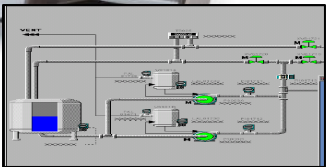


Operator Rounds  
Inspections  
Work Requests

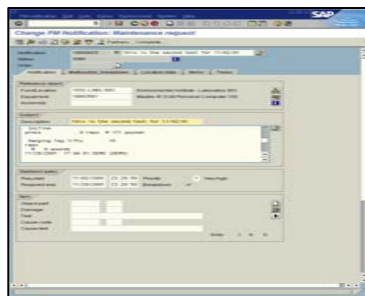
## Management



Performance Monitoring,  
Data Visualization, KPI /  
Web Reports



Process Historian  
DCS, OPC

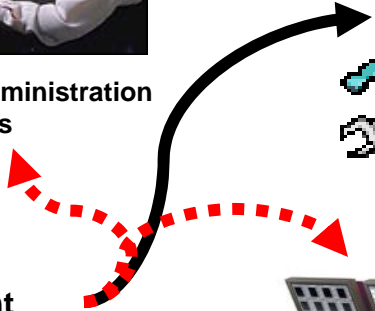


CMMS (SAP, Maximo,  
Tabware, etc)

## Supervisors



Review Rounds  
Approve Rounds Edit  
Field Data



# For more information...



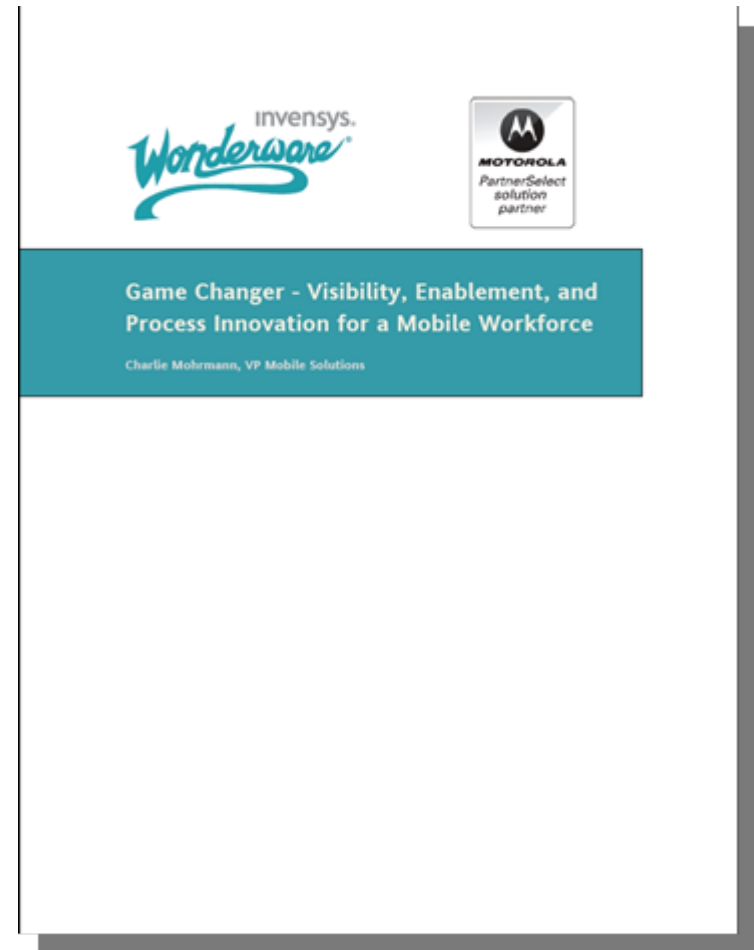
White Paper 

*“Game Changer – Visibility,  
Enablement and Process Innovation  
for a Mobile Workforce”*

Available for download from  
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OR

Drop me a note:  
[joe.finn@wonderwaremidwest.com](mailto:joe.finn@wonderwaremidwest.com)



Thank  
you