



2003
OSISOFT USERS CONFERENCE

RTIPM

Manual Logger & BuzzMe

By James Weller and Elizabeth McNeill

Agenda

- *Manual Logger*
 - *Brief product review*
 - *New features for version 1.4*
 - *Future directions*
- *BuzzMe*
 - *Product overview*
 - *Business case*
 - *Underlying technology*
 - *Future directions*



Manual Logger: Overview

- *Manual input data interface for PI*
 - *PI-ML-PC: PC interface*
 - *PI-ML-HHT: hand held interface*
 - *Optional*
 - *Portable*
- *Eliminate under-utilized log sheets*
- *Correlate manual data with traditional process data*



Manual Logger: What is it used for?

- *Manual input data collection for PI*
 - *Local instrumentation values*
 - *Laboratory analysis*
 - *Quality control test results*
 - *Operator comments and suggestions*
 - *Control room readings from analog instruments*

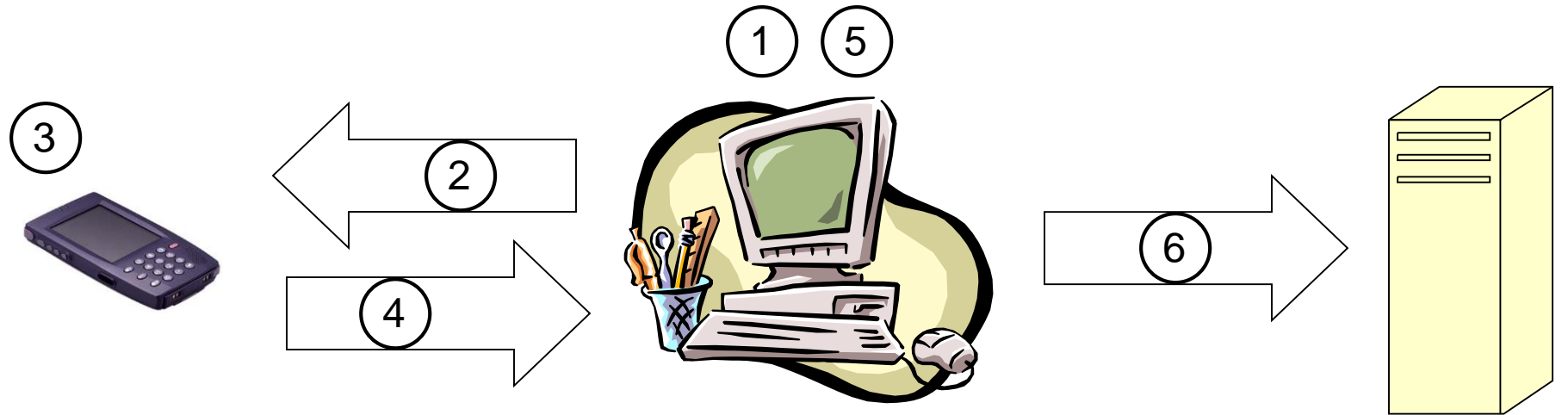


Manual Logger: *PI-ML-PC* and *PI-ML-HHT*

- *PI-ML-PC: PC based*
 - *Desktops*
 - *Laptops*
 - *Tablet PCs*
- *PI-ML-HHT: Hand-held device based*
 - *DOS*
 - *PocketPC 2000 and 2002*
 - *No PalmOS support*



Manual Logger: Typical Workflow



Handheld:
PI-ML-HHT

Desktop PC:
PI-ML-PC

PI Server

1. Tour configuration
2. Download tour configuration
3. Data Entry

4. Upload collected data
5. Data Review (optional)
6. Send to PI



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New Features v1.4

- *Automatic data synchronization*
- *Conditional specifications*
- *Enhanced Auditing*
 - *Mandatory barcode scanning*
 - *Track barcode scan event*
 - *Device ID tracking*
- *Comment tag enhancements*
- *Performance enhancements*



Automatic Data Synchronization

- *Cradle and forget*
 - *Upload tour runs from device*
 - *Wait for data review*
 - *Automatic send to PI*
 - *Send tour definition changes to device*
 - *Update archived values on device*
 - *Eliminate need for previous readings on device*
 - *Enhance performance*



Conditional Specifications

- *What you can do with it...*
 - *Collect data only when ambient temperature is below freezing*
 - *Collect data on the 15th of the month and keep asking until it is collected*
 - *Digital state substitution for out-of-service equipment*
 - *Allow for “hidden”, ad hoc data tags*



Conditional Specifications

- *Expressions supported*
 - *More flexible conditions*
 - *Support Simple logic*

IF(CurrentValue("TI001.ML") < 32 && CurrentValue("PI014.ML") < 50, CollectNow(), SetDigCode(DigCode("No Data")))

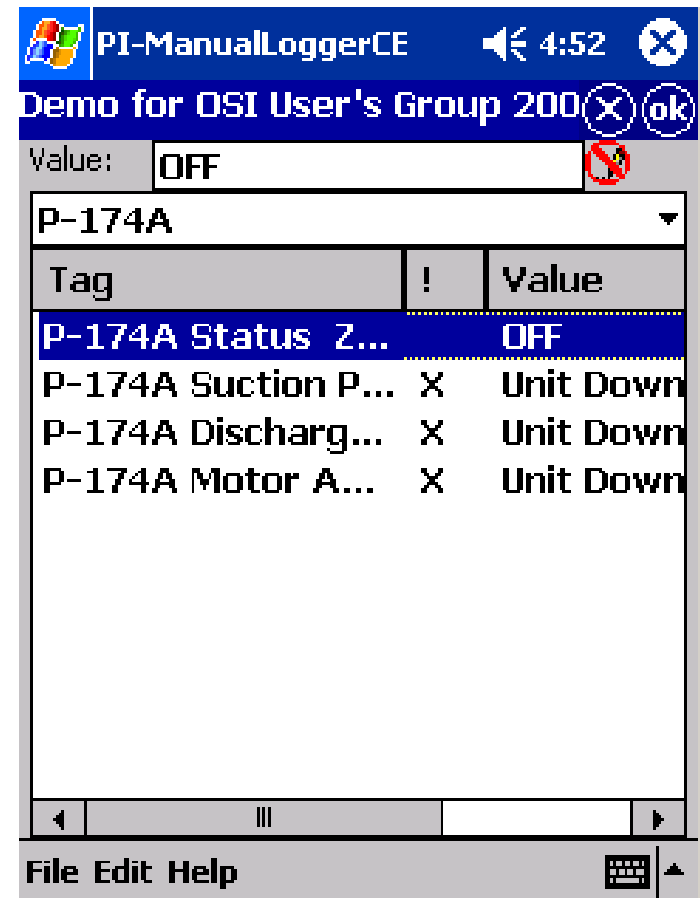
IF(IsDue_MonthlyByDate("1-3,10-12", 15, 6, 0), CollectNow(), Skip())

IF(CurrentValue("Z1001.ML") == DigCode("OFF", "Z1001.ML"), SetDigCode(DigCode("Unit Down")), CollectNow())



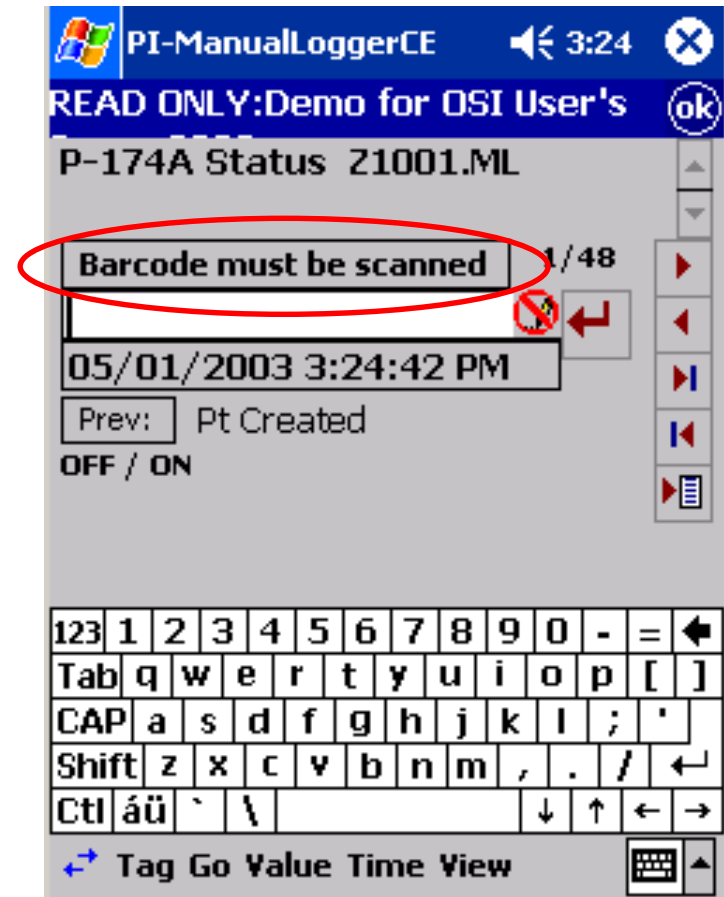
Ad Hoc Data Collection

- *Ad hoc collection*
 - *Override conditional specification*
 - *Easy navigation by equipment group*
 - *Current value and time stamp review*
 - *Skipped during data entry navigation*

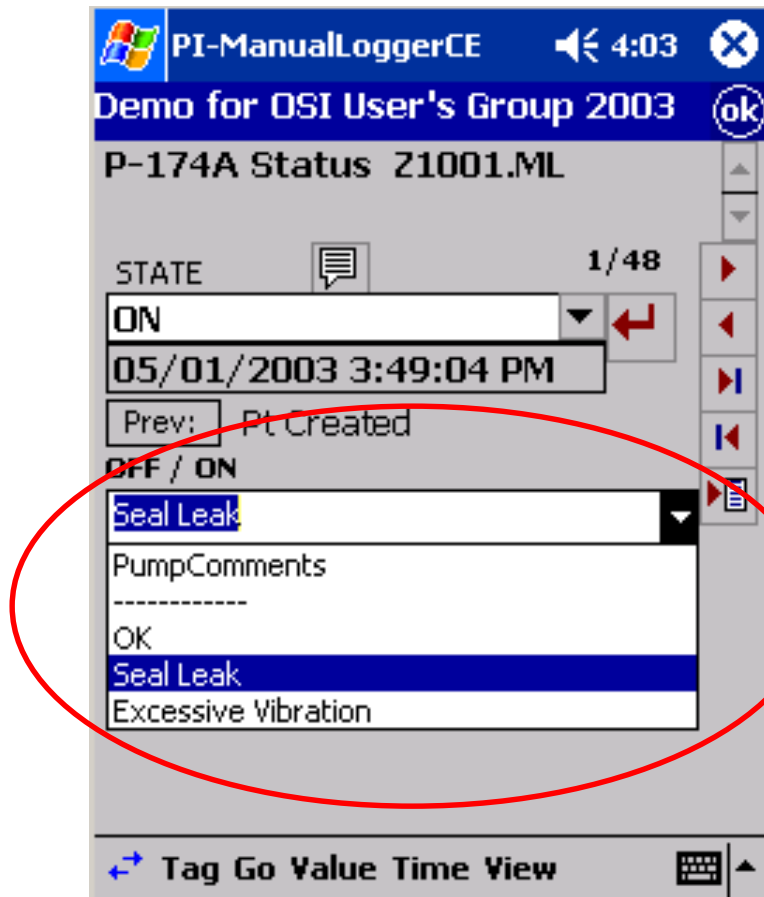


Enhanced Auditing

- *Mandatory barcode scan before data can be entered*
- *Track if barcode was scanned or entered manually*
 - *Supported on Symbol devices - PPT2800, PDT8100*
- *Record ID of device used*



Comment Tags



- *Use digital state set for comment tag*
 - *Drop down pick list*
 - *Select multiple items*
 - *Standardized comments*
 - *Editable*



Future Development

- *ML v1.4*
 - *Release imminent*
- *ML v2.0*
 - *Use Module Database instead of Access*
 - *Leverage Wi-Fi*
 - *Real-time, two-way data transfer*
 - *Enhanced batch support*



BuzzMe: Overview

- *User's define rules that monitor PI tags*
- *BuzzMe generates e-mail alerts when rule conditions are met*
- *Examples*
 - *Notify me when the effluent temperature of a reactor goes above 700 °F*
 - *Tell me when the spot market price of fuel gas goes above \$2.50/MM Btu*



BuzzMe: Proactive Notification

- *BuzzMe takes the initiative and notifies you*
 - *No need to periodically check displays*
- *Use with pagers and mobiles phones, too*
 - *Achieved through e-mail support*
 - *No need to even be near the computer to find out about important events*



BuzzMe: Alert Specifications

- *A good alert notification system should...*
 - *Ensure needed alerts are sent*
 - *Prevent unnecessary alerts*

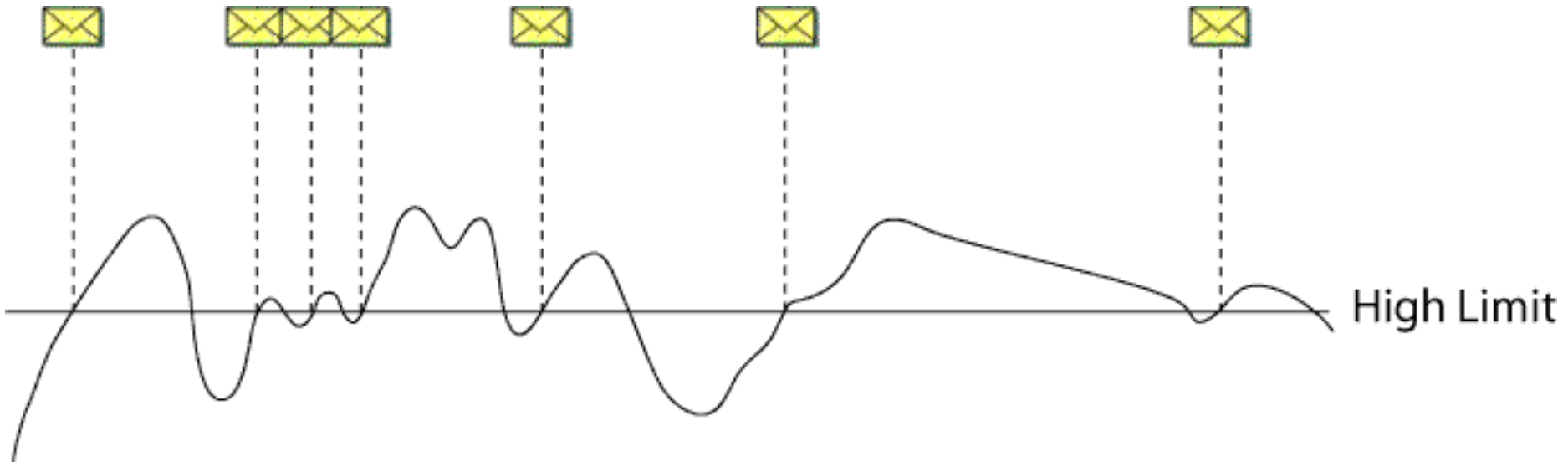


BuzzMe: Specifying Alerts

- *Specifications*
 - *HiHi and LoLo limits*
 - *Alert on bad status option*
 - *Optional re-notification of conditions that persist*
- *Alert Filtering*
 - *Enable/Disable rules*
 - *Deadband*
 - *Minimum time between notifications*



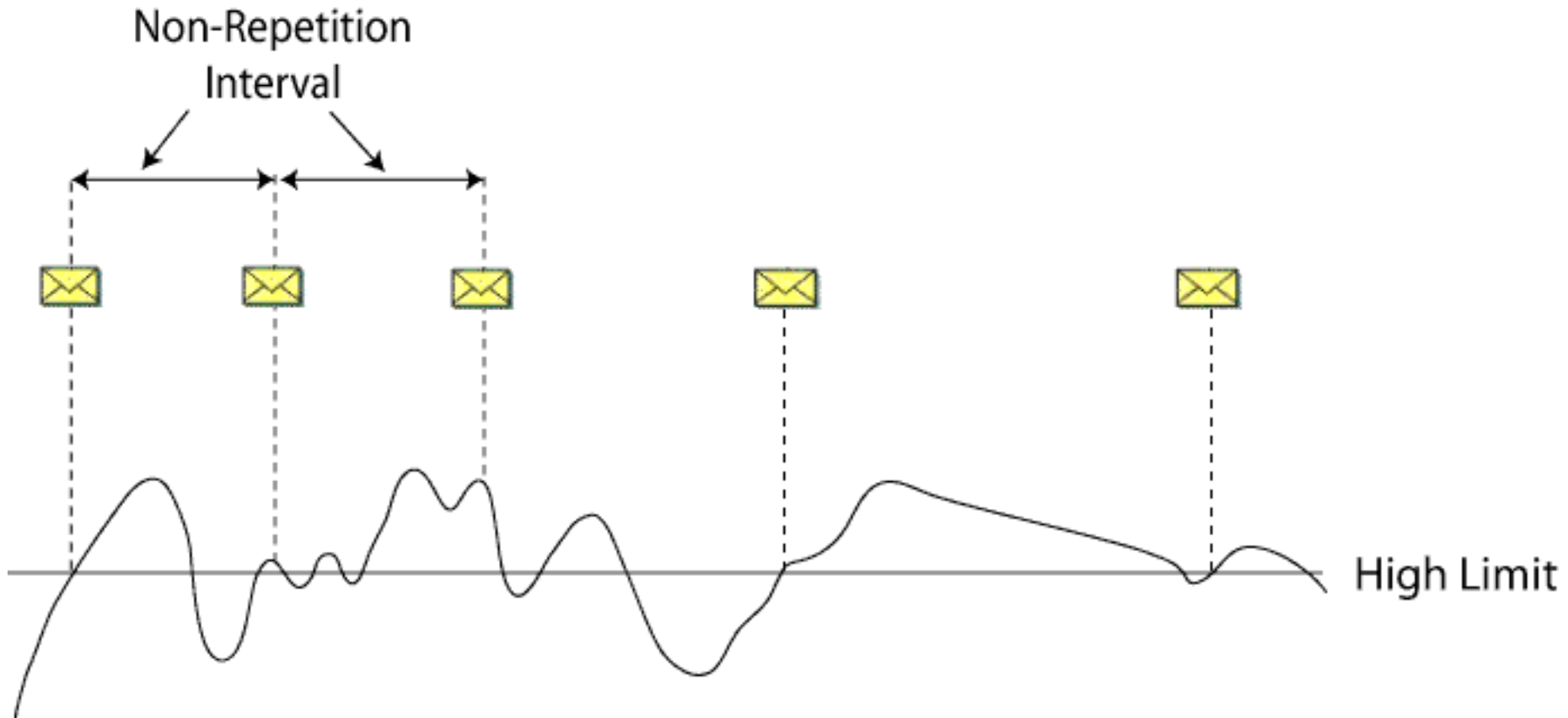
BuzzMe: Filtering Alerts



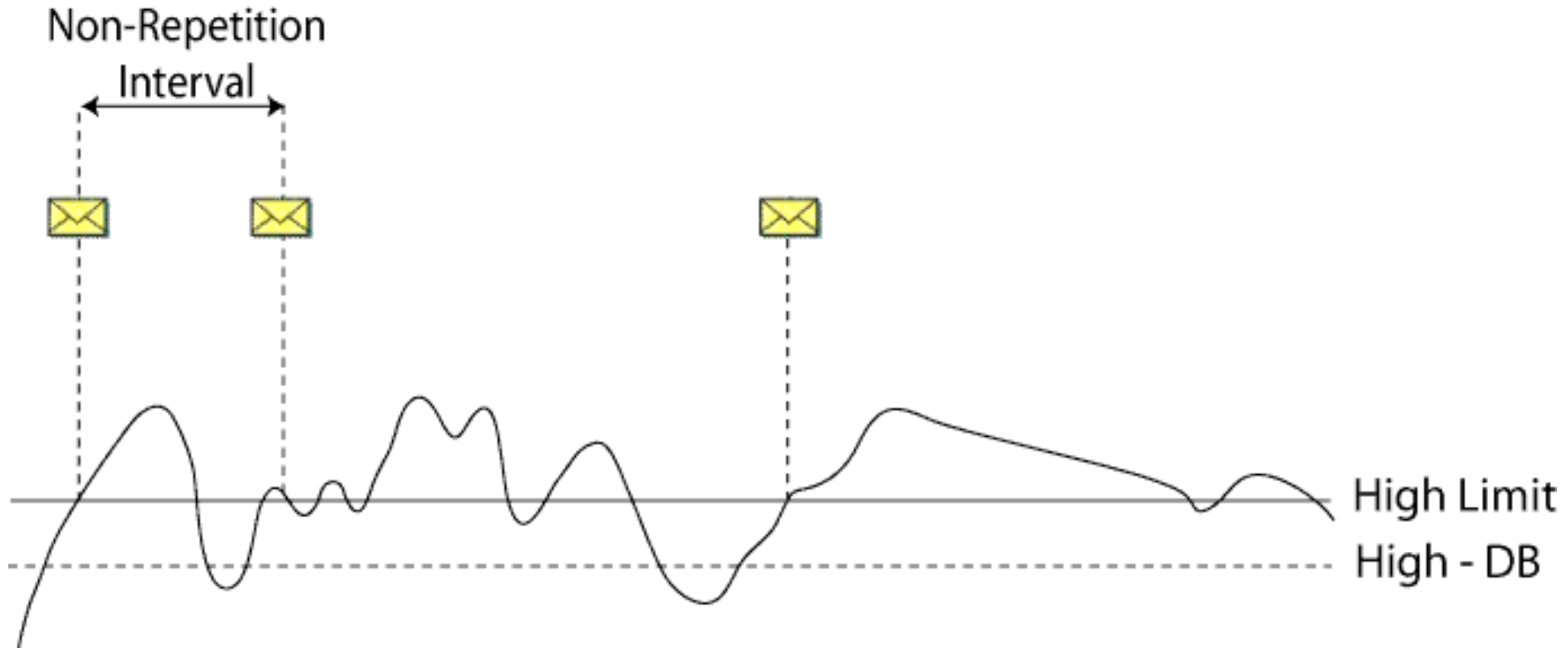
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BuzzMe: Non-Repetition Interval



BuzzMe: Deadband



BuzzMe: Built for Users

- *Users create and administer their own rules*
- *PI-ICE based user interface*
 - *Intuitive to use*
 - *Widely accessible*
- *No need to create new tags*
 - *PI administrator is not burdened with another responsibility*
 - *Users can work independently*



BuzzMe Rule List

BuzzMe Rule List

- Rule List
- Fuel Gas Spot Market Price
 - Heater 202A Stack Temperature
 - Heater 202B Stack Temperature
 - PumpG-517 Seal Oil Pressure
 - Reactor 107 Effluent Temperature**
 - Reactor 107 Recycle Chloride Content

Enabled

Comment

Alerts on high reactor effluent temperature. Set up by EAM 25-Feb-2003 due to problems with CW CV.

Owner:
ICESERVERVMElizabeth A. McNeill

New... Copy Paste... Rename... Delete...
Revert Apply

Rule Configuration

Alert Trigger

TagName: localhostVTC107

Tag Information

Descriptor: **R107 Effluent Temp.**

Extended Desc:

Zero: **400** Snapshot: **684.98**

Span: **600** Timestamp: **2/25/2003 10:37:35 AM**

Typical: **680** Eng Units: **1**

LoLo Limit	Low Limit	High Limit	HiHi Limit
		700	710

Deadband Non-Repetition Interval Renotification Interval

2.5 30 Minutes 8 Hours

Alert On Bad Status

Time Range

Start: *-2h End: *

Apply

Alert Definition

Message Definition

Recipients

mcneill@acme.com
7326735871@vtext.com

Add... Modify... Remove...

From: BuzzMe@acme.com Importance: Low Normal High

E-mail Subject: BuzzMe Alet: Limit for TC107 exceeded

E-mail Body (sample)

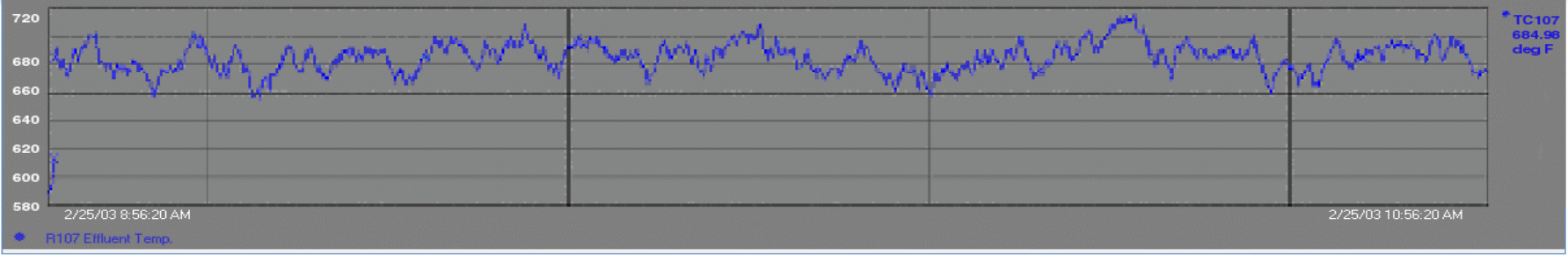
\\piserver1\TC107 High Limit exceeded. Current value: 702.16 deg F at 27-Jun-2002 10:51 AM. High

E-mail Postscript

The cooling water control valve has been problematic and should be checked.

Test E-mail

Trend

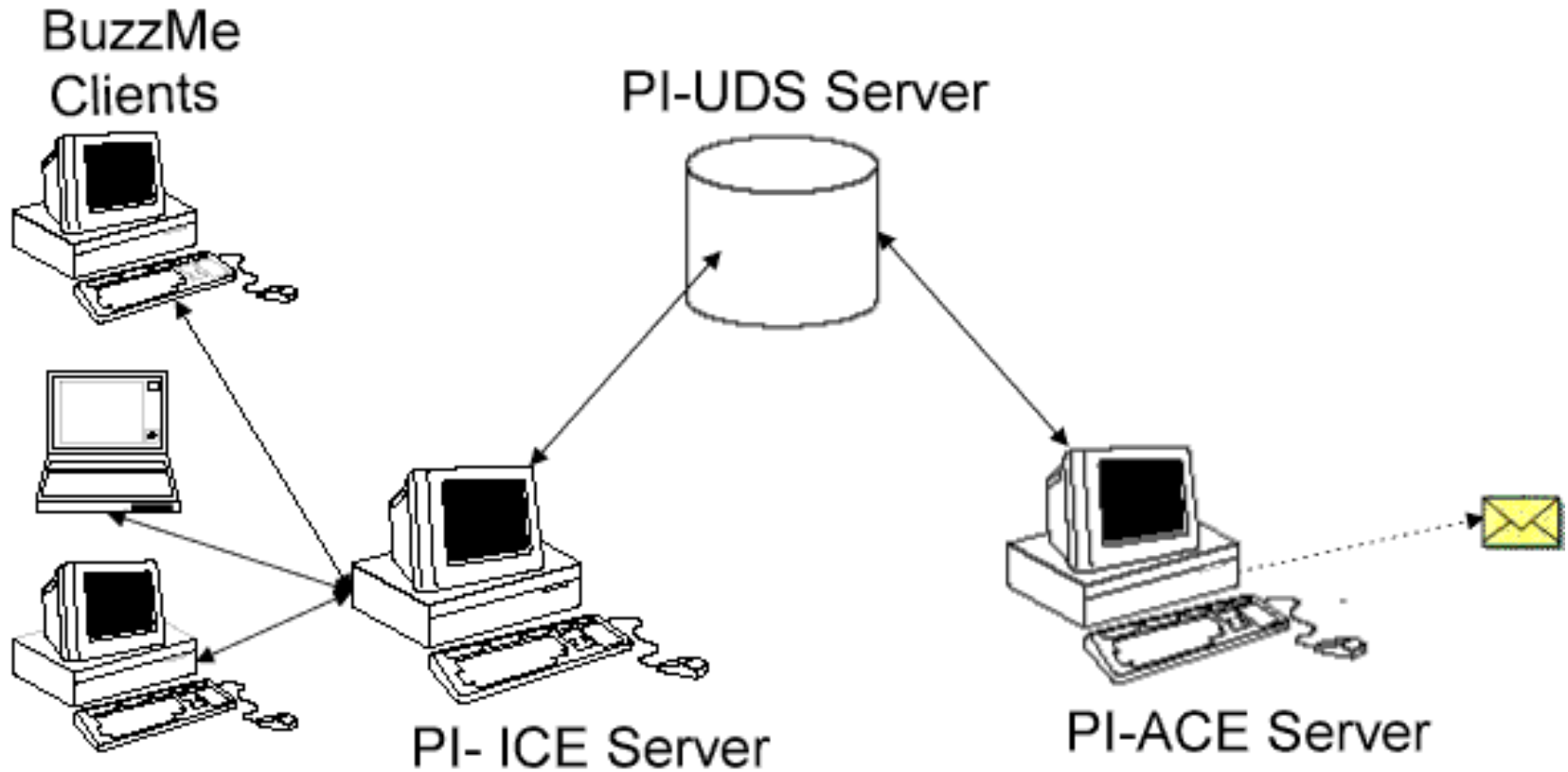


BuzzMe: Under the Hood

- *OSI Technologies*
 - *Rules are stored in the PI-MDB*
 - *PI-ICE based user-interface*
 - *Monitoring engine is PI-ACE*
- *Microsoft Technologies*
 - *Written in VB.NET*
 - *PI-ICE web parts use ASP.NET*
- *Internet Technologies*
 - *Rules are specified in XML format*
 - *Rules are created and maintained exclusively via Web Services*



BuzzMe: Typical Setup



BuzzMe: Future Directions

Future enhancements to look for...

- *Complex, multi-tag rules*
- *Beyond e-mail*
 - *New ways to send alerts to people*
 - *Instant Messenger (MSN, AOL)*
 - *Ways to send alerts to other systems*
 - *Add a record to a database*
 - *Invoke a Web Service on a remote system*
- *Alternate user interfaces*
 - *ProcessBook Add-in*



BuzzMe: Conclusions

- *BuzzMe is an e-mail notification system built on PI*
 - *Alerts are proactive*
- *BuzzMe adds value to PI as a real-time data infrastructure*
- *For more information*
info@KeslerEngineering.com
(732) 296-9910

