vigilantplant™
the clear path to operational excellence

Maximizing the Value of Vigilance

2009 User Conference
May 21, 2009
Chris Schneider
Application Engineer

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January 2006

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Agenda

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- FieldMate Introduction
  - Value-added benefits
  - Basic vs. Advanced versions
  - Use cases
  - PRM synchronization
- Getting the most out of FieldMate
  - Troubleshooting
  - Device replacement/configuration
  - Tracking maintenance information
  - Updating DD and DTM files
- Wrap-up / Q&A

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FieldMate Introduction

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FieldMate™

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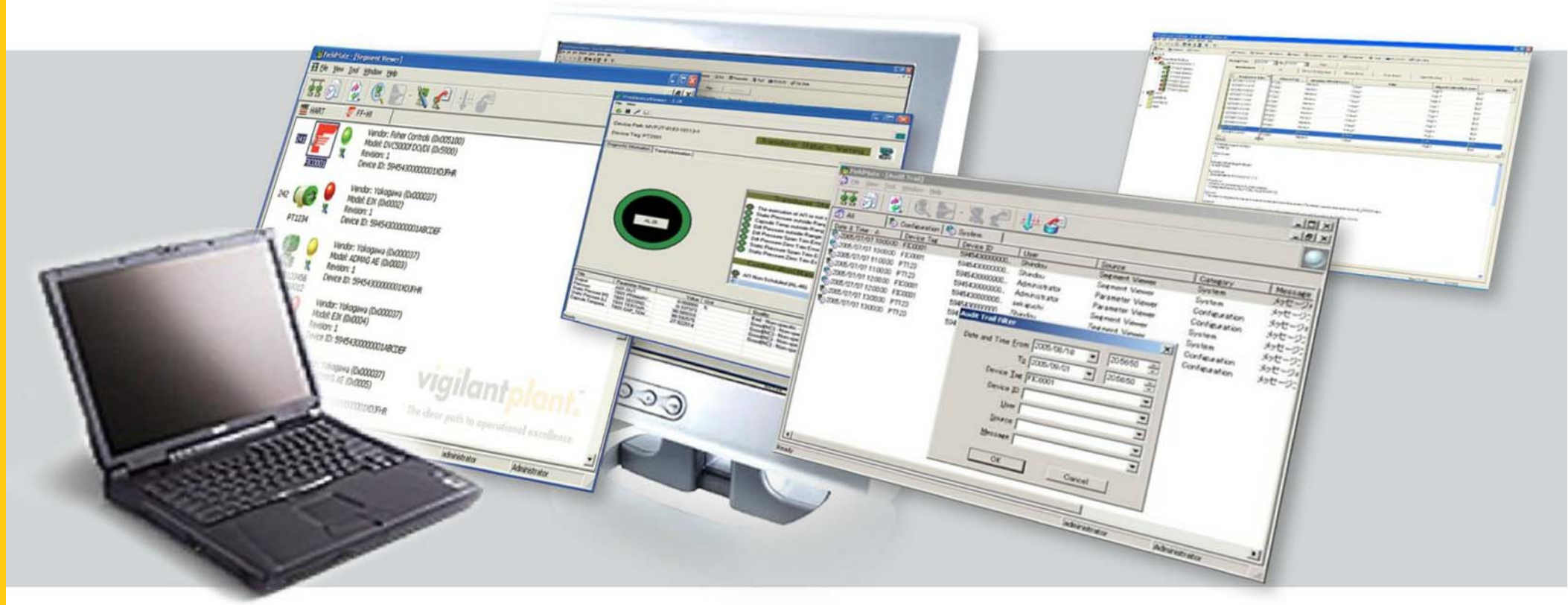
- Field Device Configuration and Management Tool
  - Portable PC Based
- Supports DD/EDD *and* FDT/DTM Technology



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Device Lifecycle Support

- Configuration Management
  - Initial Configuration
    - Startup
    - Diagnostics
    - Maintenance
    - Replacement

FieldMate

Windows PC-based Flexible Device Management Tool

Advanced intelligent field devices

Field Device Tool (FDT)

Device Type Manager (DTM)

Digital communication
(FOUNDATION Fieldbus, Profibus)
App. 250 parameters

2000s

4-20mA, hybrid communication
(HART, BRAIN)
App. 50 parameters

1990s

Analog setting
4-20mA

Screw driver

Handheld Terminal

No standard environment

Device Description (DD)
HART Standard
FOUNDATION Fieldbus Standard
Profibus Standard

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User Needs

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Multi-Protocol Access

Documentation

- Replace Paper Systems
- Manage Configuration Change
- Process Work Orders
- Document Quality Procedures
- Link to Device Documents

FieldMate

Leveraging Your Laptop Investment

Eliminate Proprietary Tools

- Configure All Registered Devices

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One Tool for All - Easy Connection

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Faster commissioning and start-up

Group FDT

Multi presentation technologies

Multi protocols

Vendor B

Vendor A

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Multi vendors

Multi devices

EJX/ EJA

AXF

DYF

YTA

YVP

ROTAMASS

Analyzers

Field Devices

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FieldMate Architecture

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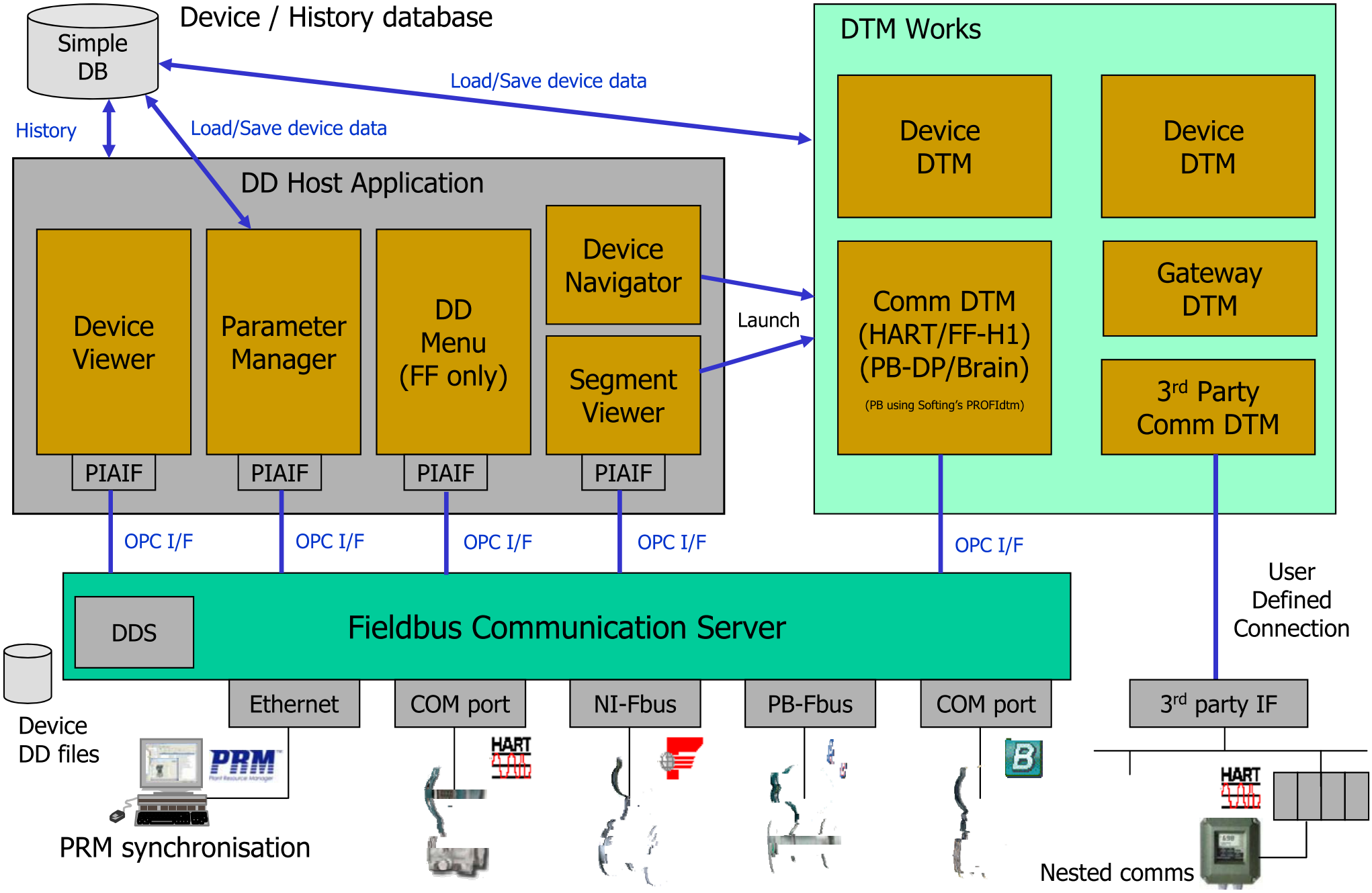

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FieldMate Functionality

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- FieldMate is a hybrid application
  - Supports both EDD and FDT/DTM applications
  - DTM Works is the name for Yokogawa's FDT frame application
  - DTM Works in FieldMate and PRM are essentially the same
- FieldMate Basic Edition (FM-BE)
  - PC-based configurator – "Electronic Screwdriver" – on-line only
  - Supports common Process Automation (PA) protocols
- FieldMate Advanced Edition (FM-AE)
  - PC-based "Device Management Tool" – both on-line and off-line
  - Supports common Process Automation (PA) protocols
  - Nested communication and other protocol support through DTM Works
  - Synchronisation with Yokogawa's PRM PAM solution

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FieldMate Basic and Advance

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Device management

- Device template
- Navigation
- Device maintenance DB

Device information handling

- Segment Viewer
- Operation status
- Device initial set up
- parameter management
- Device Adjustment/setting
- Windows Application usage

Basic function

- User management function
- Operation log History

Language/OS

- English/others

Multi vendor connections

- Comm. Route configuration definition
  3rd party COMM DTM handling
- PRM I/F
- Multi vendor support
  3rd party device DTM handling

Basic

Advance

Protocols

- BRAIN
- HART
- FOUNDATION
- PROFIBUS

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FieldMate Basic Edition (FM-BE)

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- FM-BE is a PC-based configurator – "Electronic Screwdriver"
  - On-line functions only – must be connected to device(s)
- Features Built-in Connection (BIC) for common PA protocols
  - Integrated communication paths for HART/BRAIN and FOUNDATION Fieldbus
  - DTM Setup "DTM assignment tool" for automatic DTM launch
- Supports both EDD and FDT/DTM applications

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FieldMate Advanced Edition (FM-AE)

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- FM-AE is a PC-based "Device Management Tool"
  - Device Database functionality allows for:
    - Both on-line and off-line functions
    - Device maintenance information
    - User management
    - Device history
- Features Built-in Connection (BIC) for Profibus
  - Integrated communication path for Profibus through Softing's PROFIdtm
    - In combination with Softing's PROFIusb Profibus DP modem
- Features User Defined Connection (UDC) for "FDT projects"
  - Other FDT supported protocols e.g. Ethernet, Modbus
  - Nested communication through Remote I/O and HART multiplexers
- Synchronization with Yokogawa's PRM PAM solution

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FieldMate and PRM

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FieldMate Features

One Tool for all
- Multi protocol
- Multi device

One Tool over device lifecycle
- Audit trail
- Master Database

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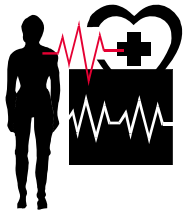
Asset Optimization



PRM
Plant Resource Manager

ACT WITH AGILITY

KNOW IN ADVANCE

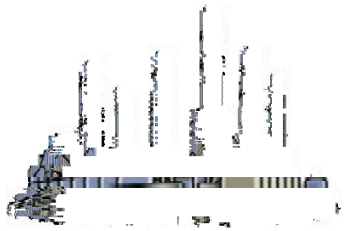
FDT

EDDL

BRAIN

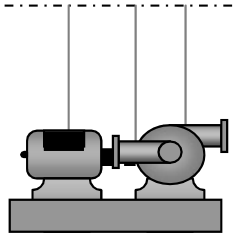
SEE CLEARY

Vendor B
Vendor A
YOKOGAWA



•Process
• Unit

Machine Monitoring



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FM-AE: PRM Synchronization

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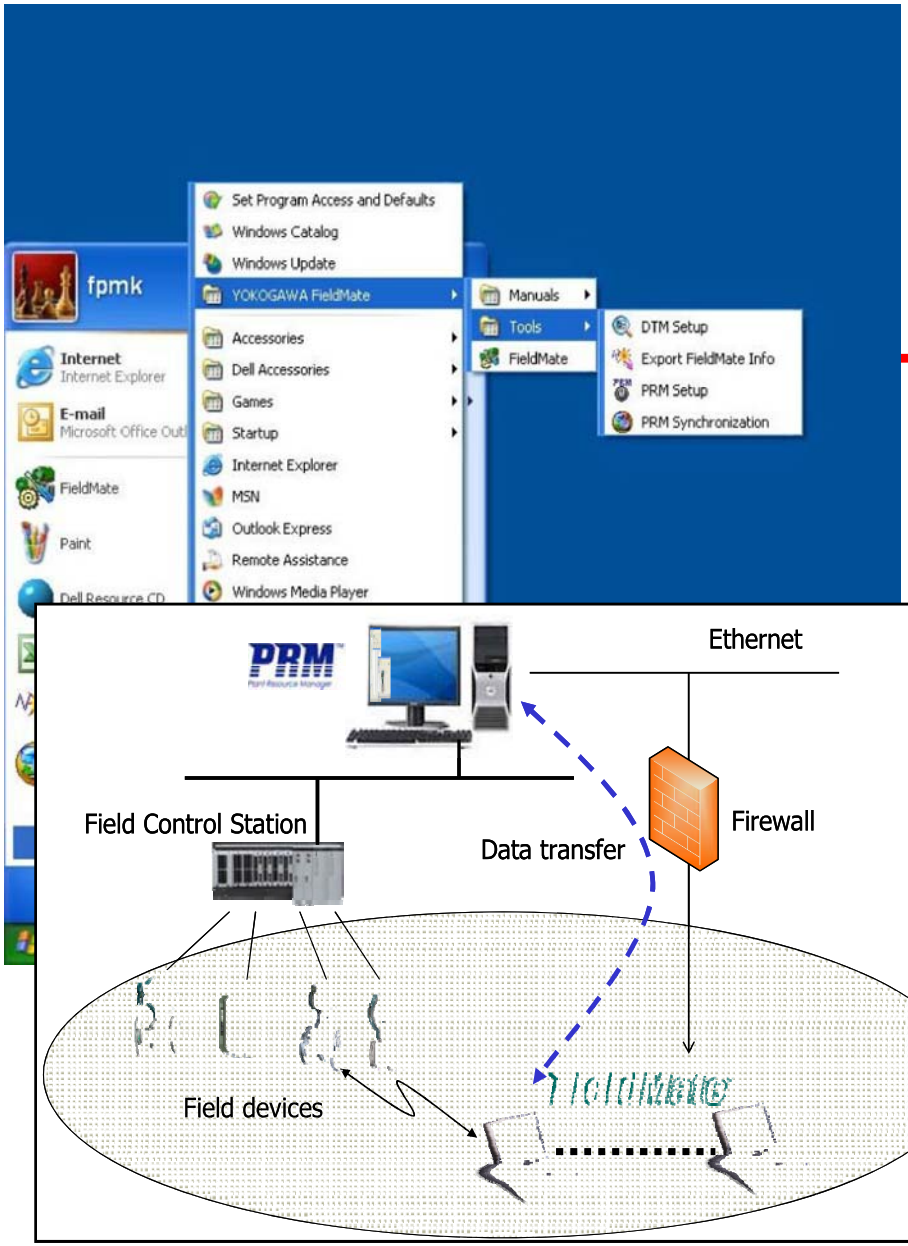

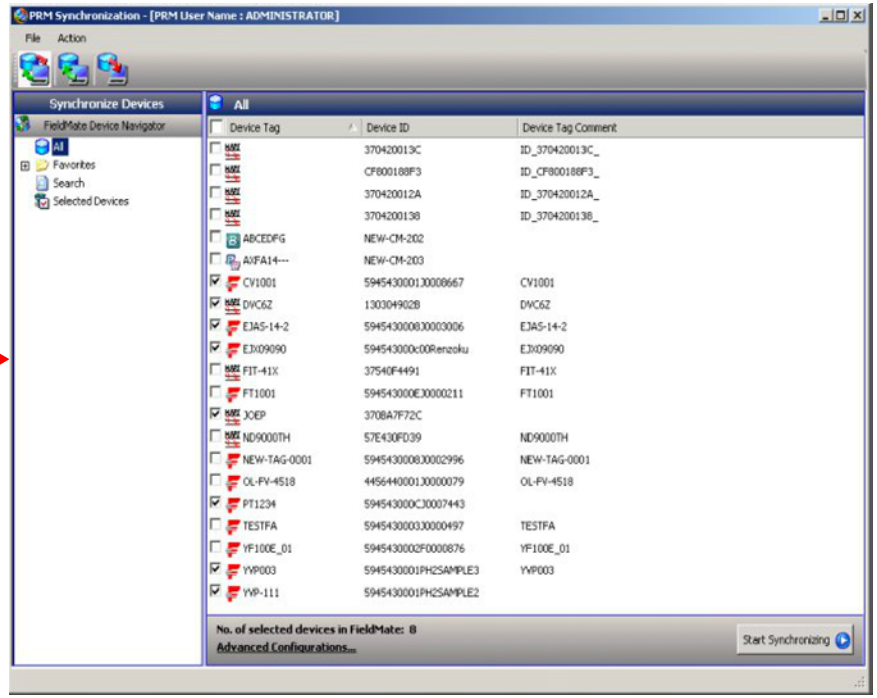

PRM synchronization:

- Synchronizes FieldMate >< PRM
- Status, History, Memo's, Documents
- Parameter/DTM data sets (5 sets)

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Getting the most out of FieldMate

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Device Lifecycle

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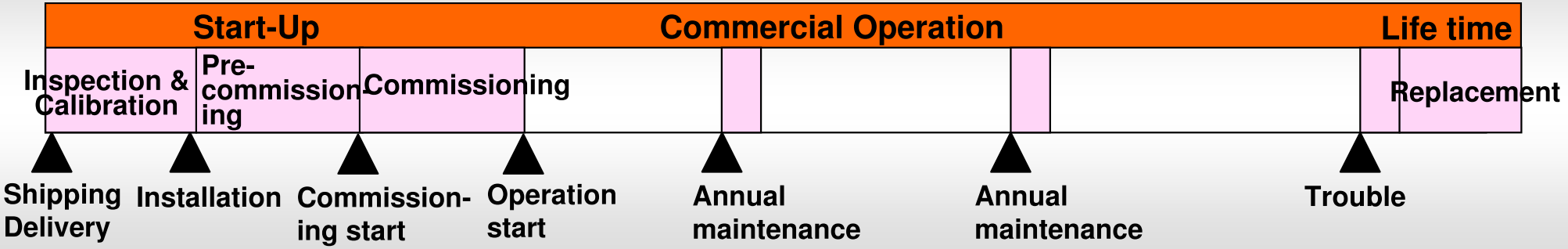
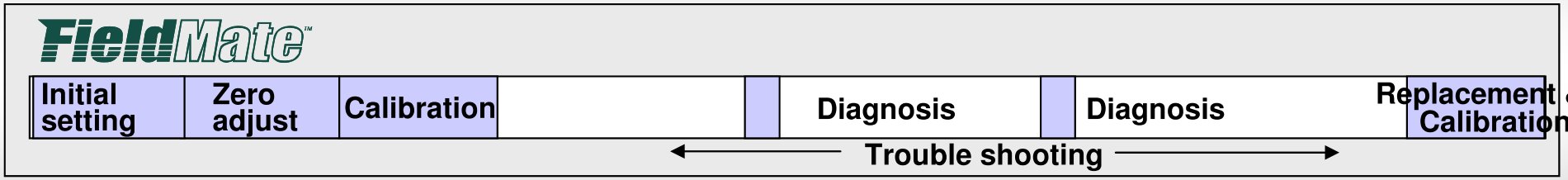
Device life cycle



When to use FieldMate



Life Cycle Maintenance

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Initial Inspection and FieldMate Entry

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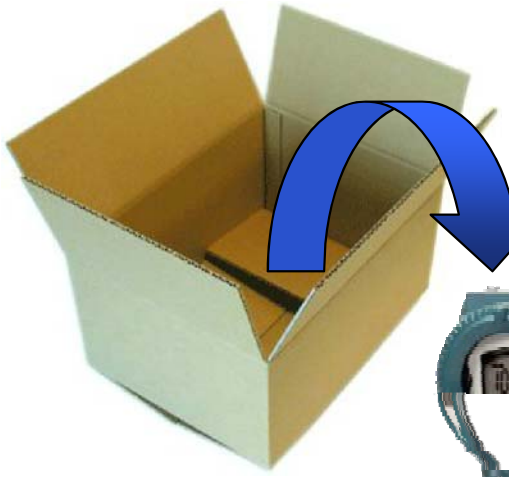
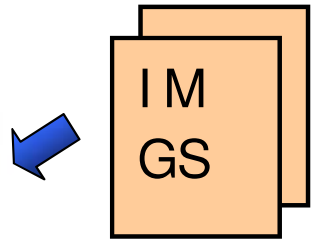
Works start after opening the box.

Quantity check
Appearance check





Measurement

Manometer

Pressure pump

- Create device maintenance Info on device registration
- Save the original factory data
- Initial setting
- Calibration
- Link any helpful documents

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Device Maintenance Information

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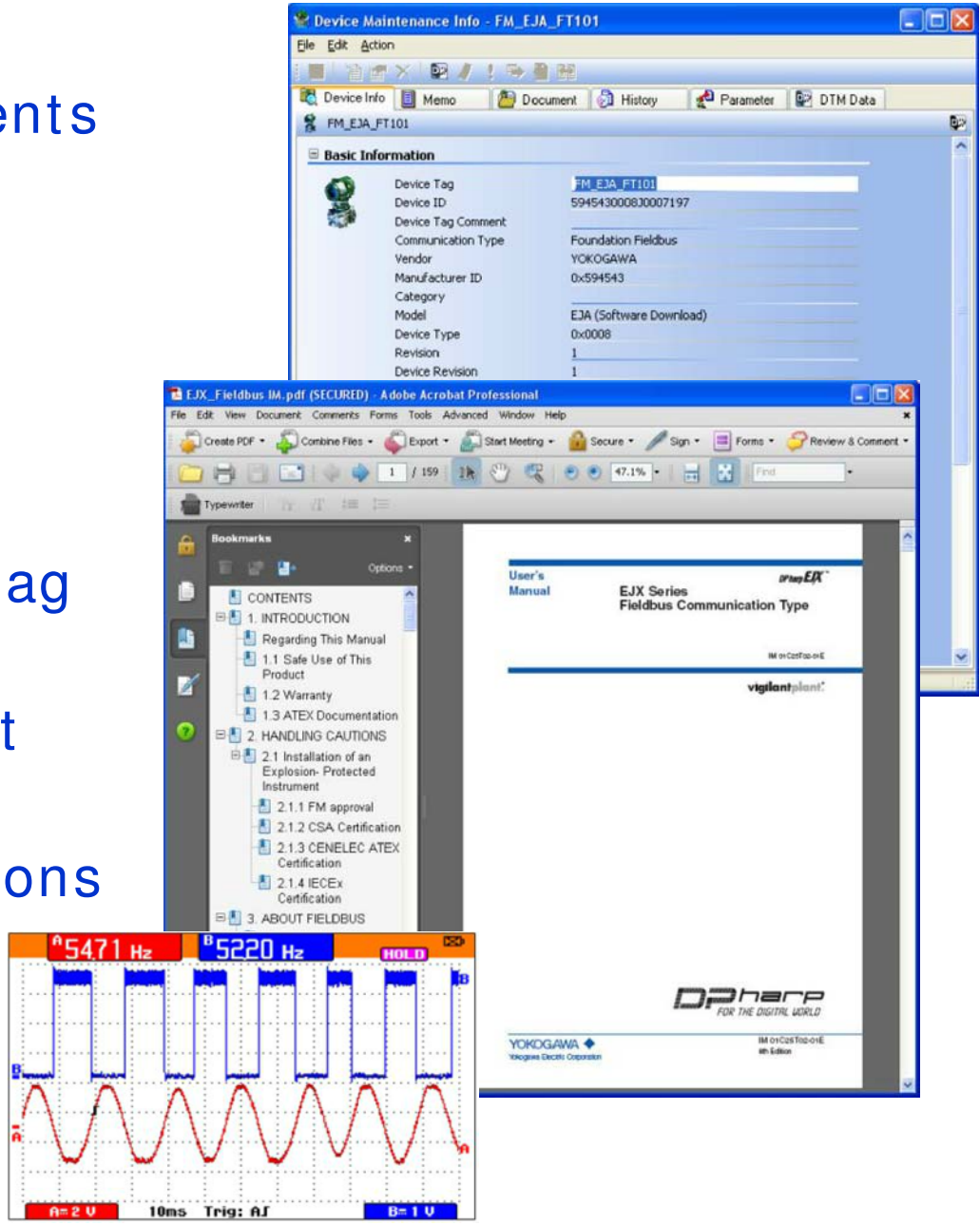
- Store helpful reference documents in their native file format
  - Product manuals
  - Drawings
  - Datasheets
  - Work orders
- Attach memos to devices and flag them for further action
- Review device history and audit trail
- View stored off-line configurations of devices



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Troubleshooting

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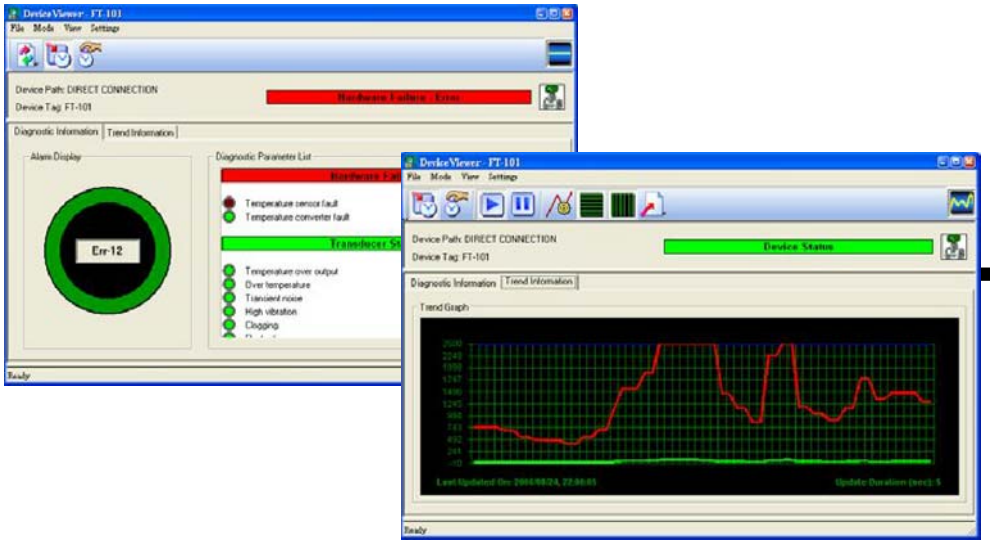
FieldMate™

- View device diagnostics
- Observe/ record device trend
- Record the problem in memo
  - High vibration
  - Impulse lines blocked
  - Damage to device
  - Process upset
- Flag device for future action



Attached on e-mail →

CSV. file

- Trend
- Current status
- Setting

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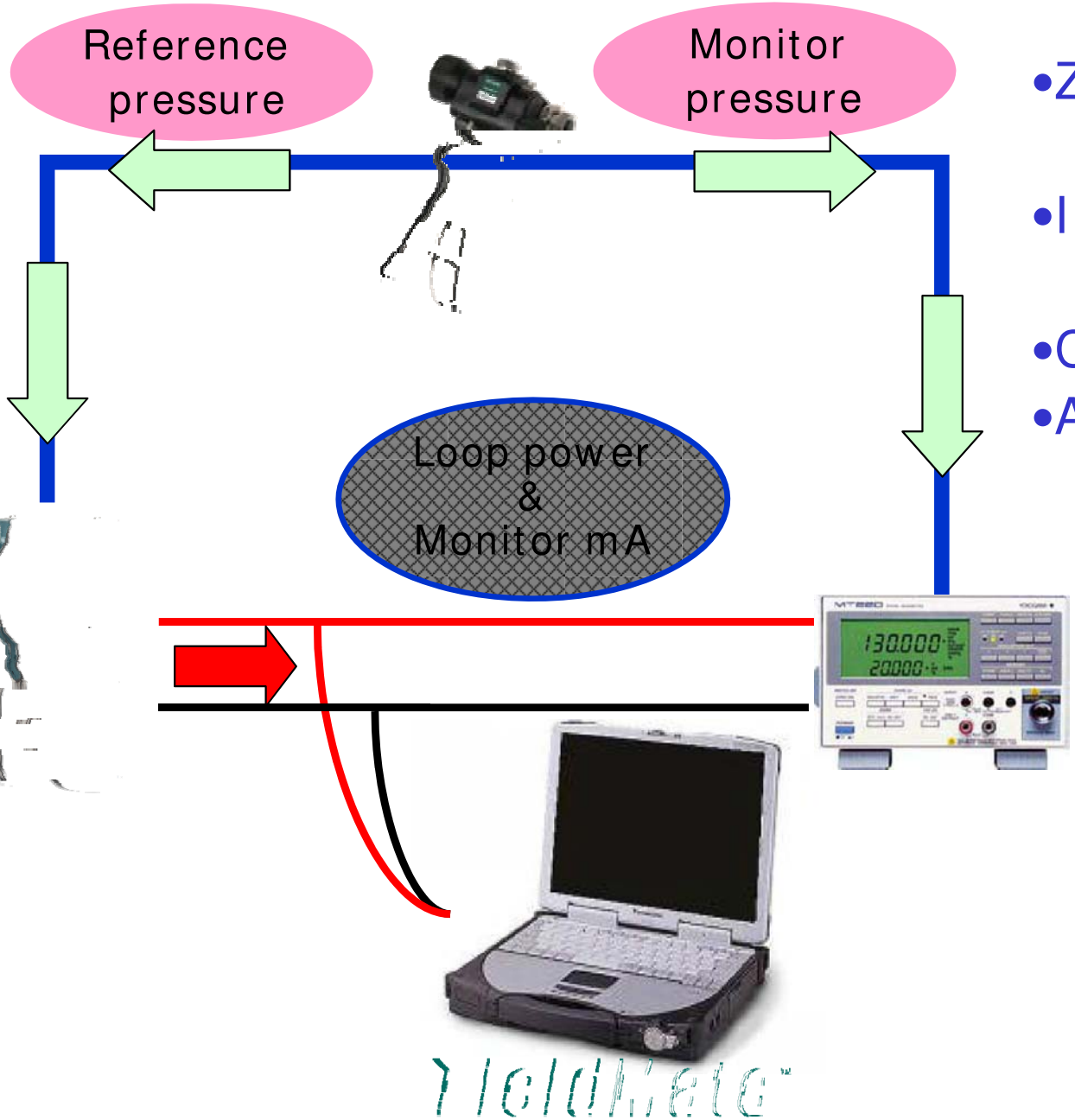
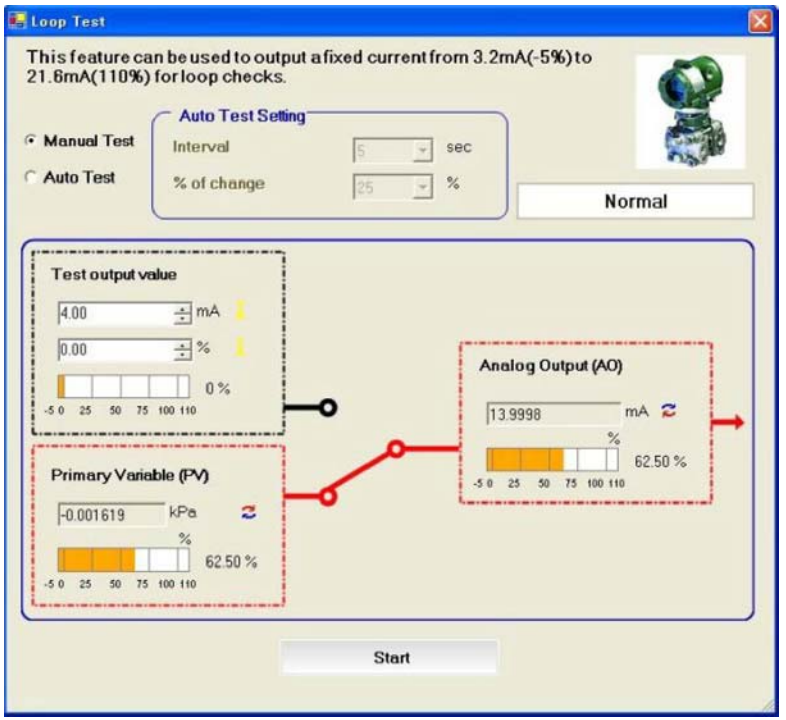
Calibration



- ZERO trim
  - Process connection
- Input and output check
  - ±0.2 adjustment
- Calibration
- Attach the record on memo



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As Found / As Left Documentation

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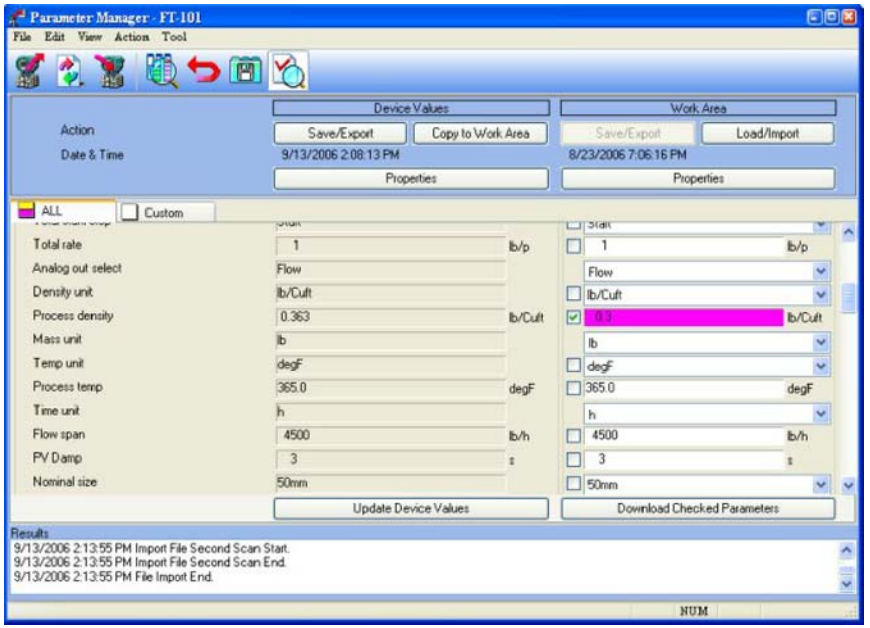
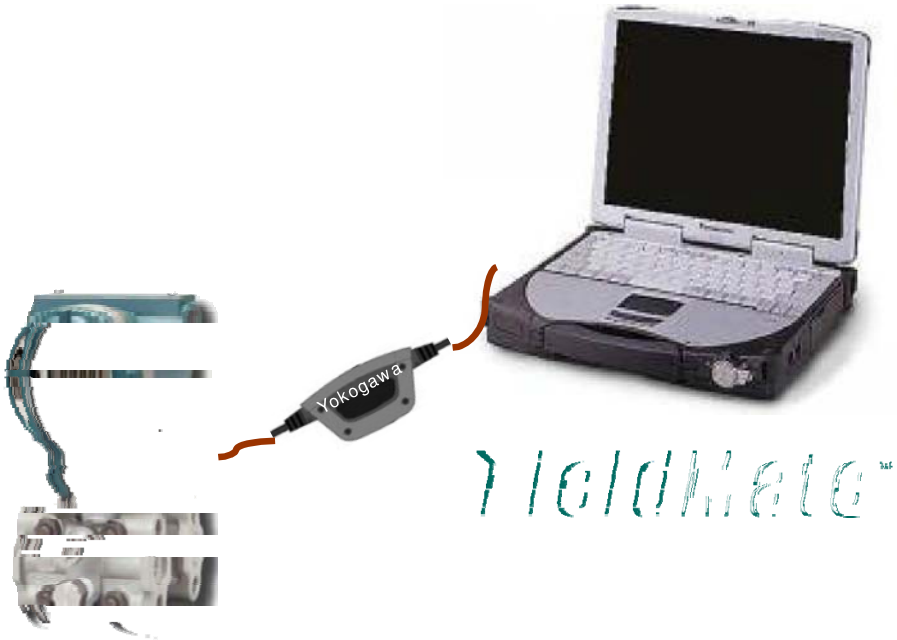
- Print the latest parameter as work master
- Compare with the saved previous parameter
- Search the history if necessary
- Print the parameter after inspection



As Found

As Left



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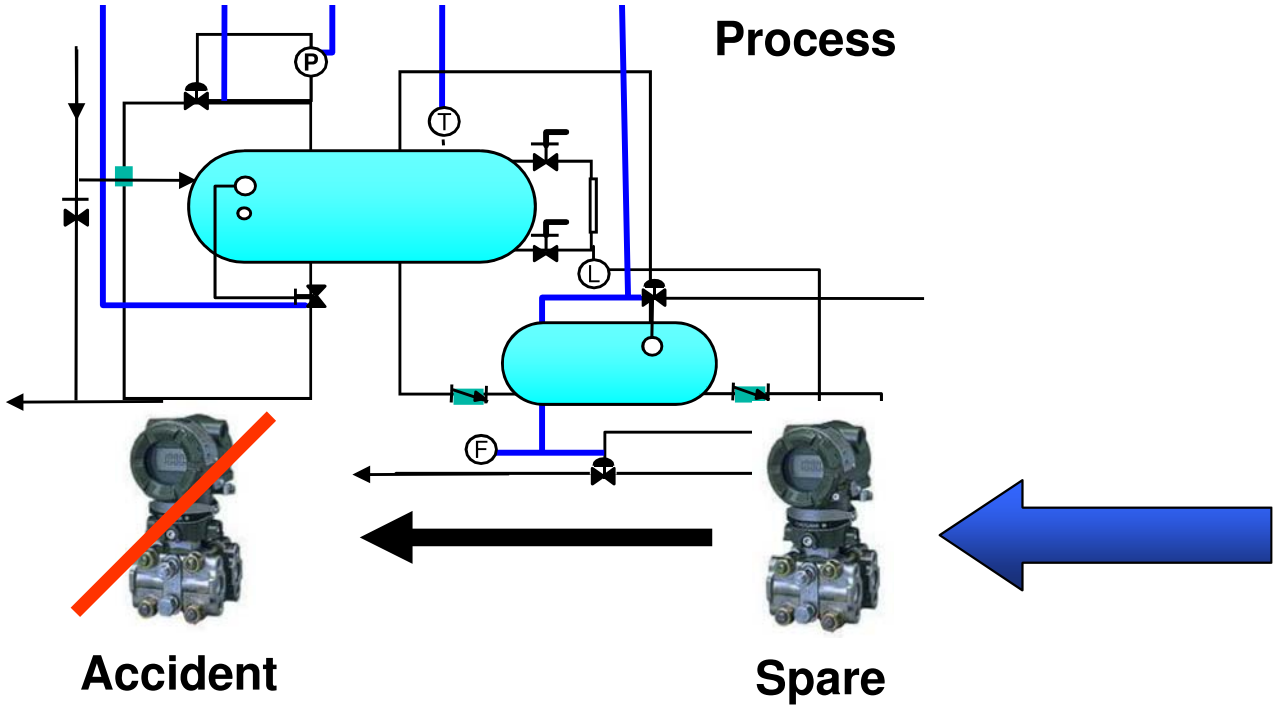
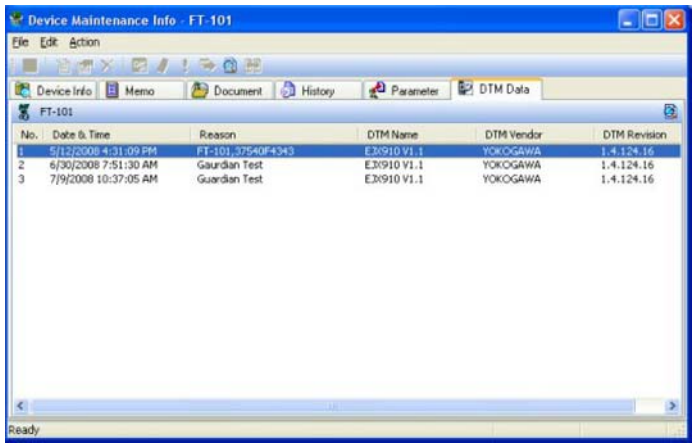
Device Replacement via DTM

- Replace the device with minimum setup reducing man hours
- Always upload and store latest DTM configuration information for future use



Device Maintenance Information

- DTM data



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Device Replacement via Parameter Manager

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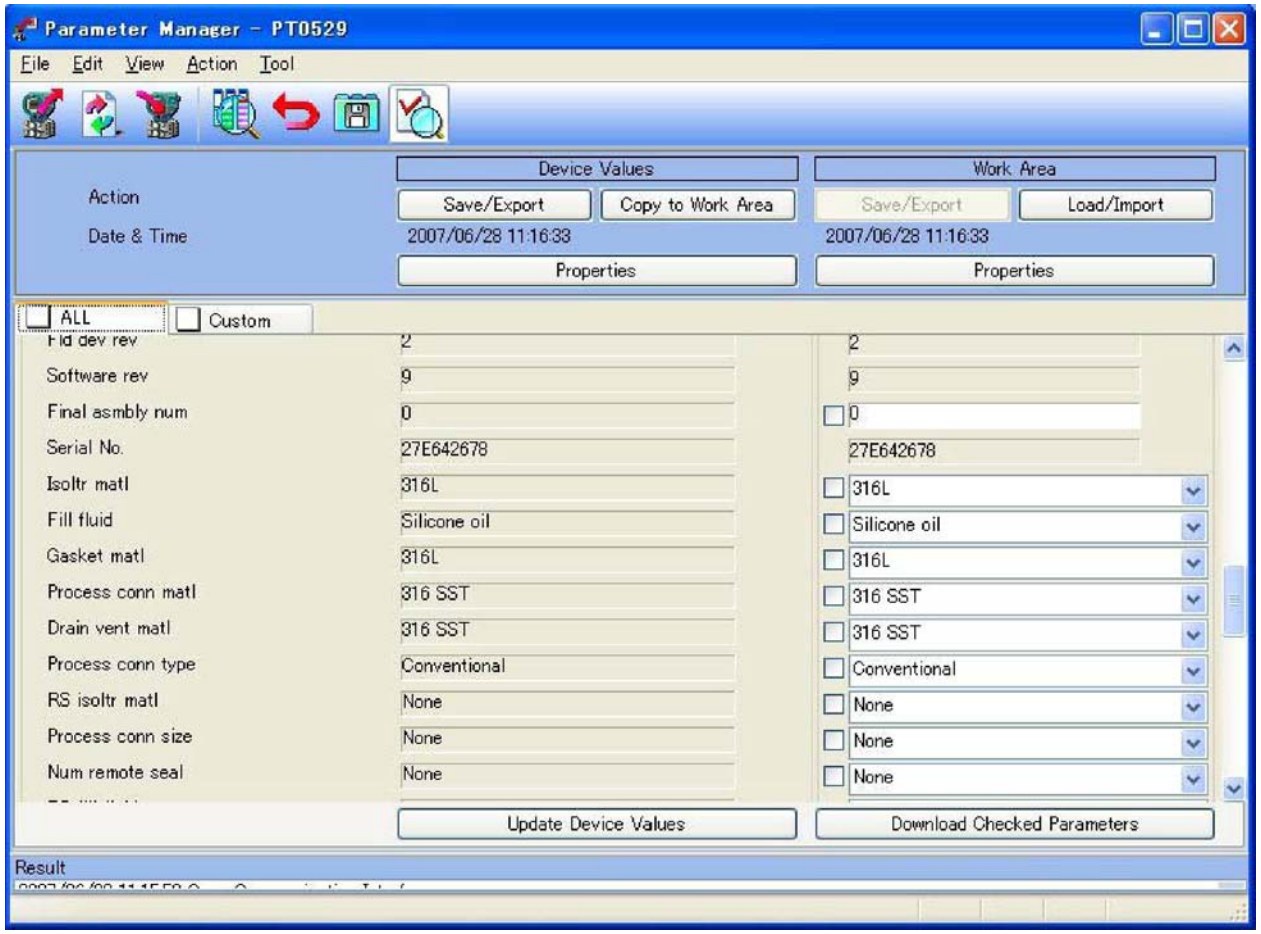
- Save and export device data to CSV file for later use.
- Import CSV file and modify any additional parameters for the new device

EJA



Export

CSV. file

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Quick Configuration Using the "Custom" Tab

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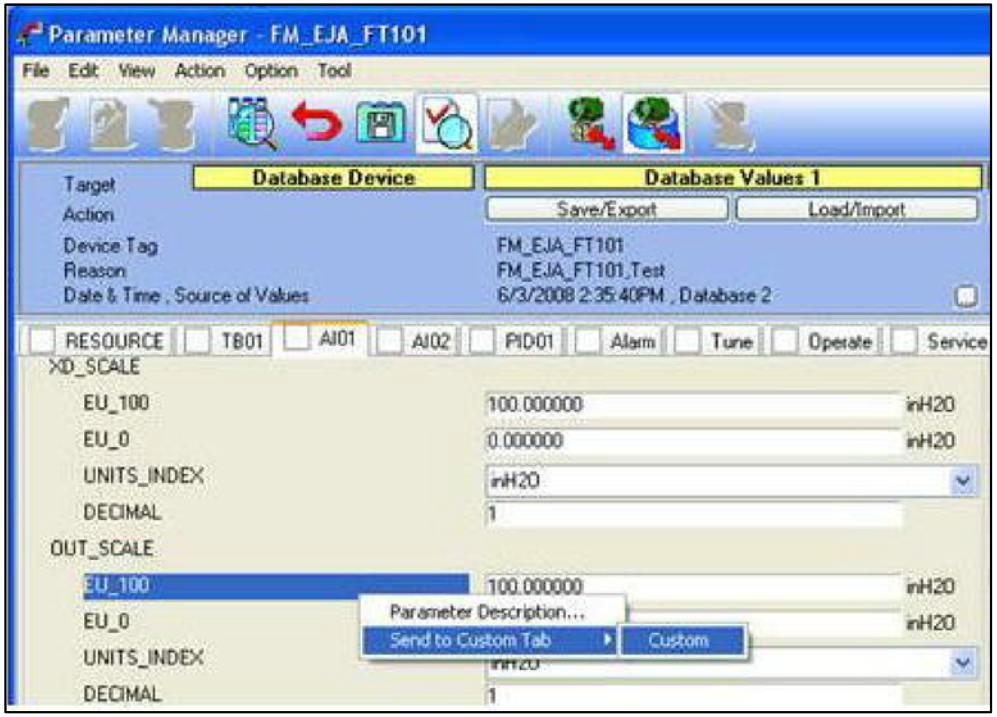
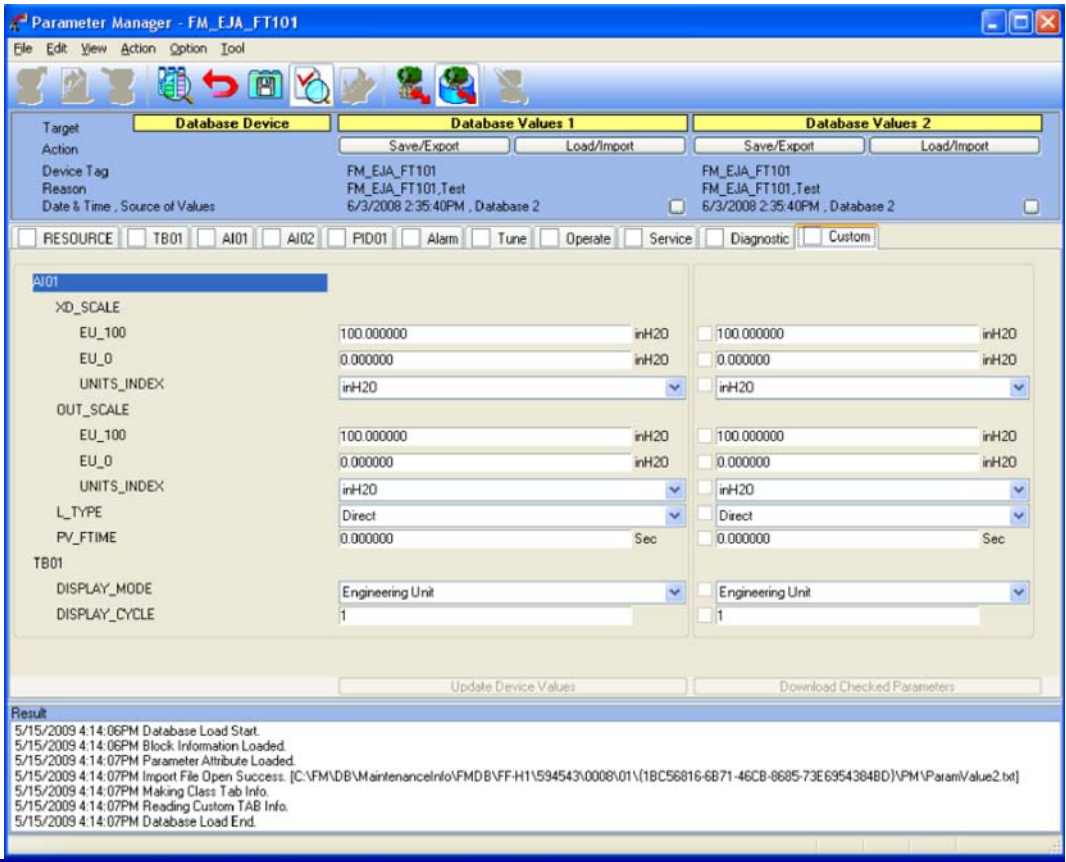
- Identify and store any key parameters for configuration
- Only show the parameters that matter to you
- Reduce confusion and simply device setup





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User Management

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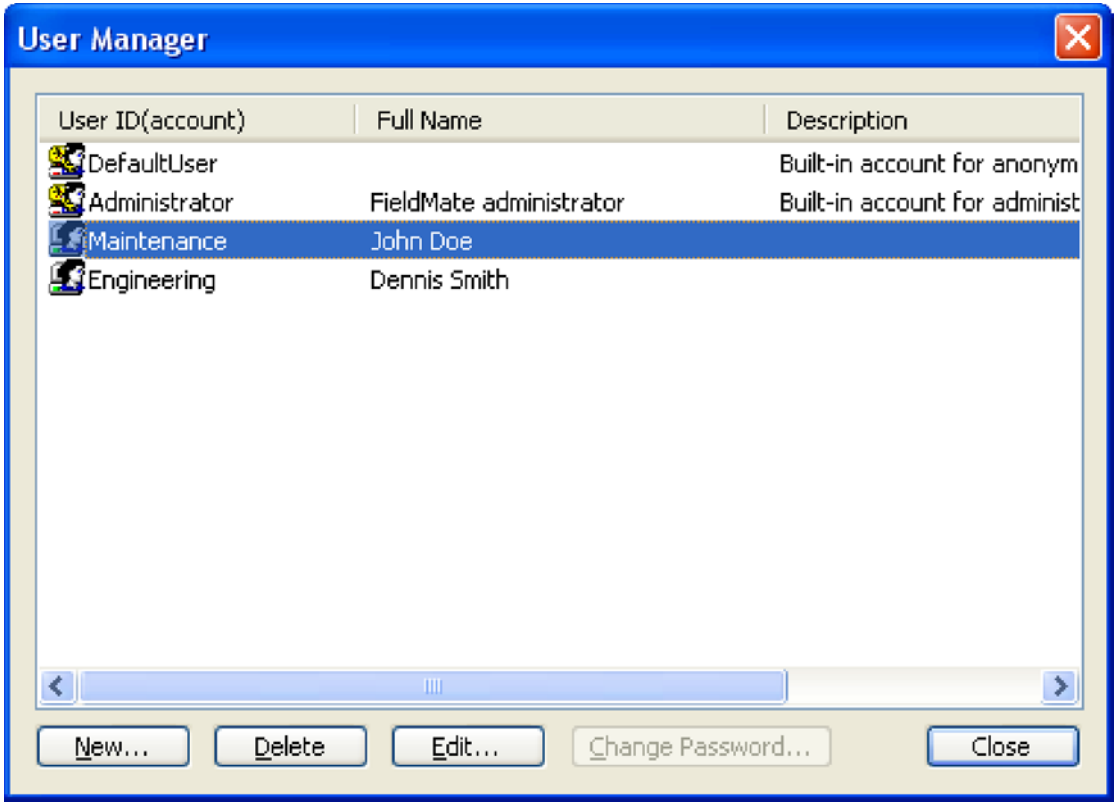
- Create multiple users to enhance audit trail
- All users have the same level of access to FieldMate functions



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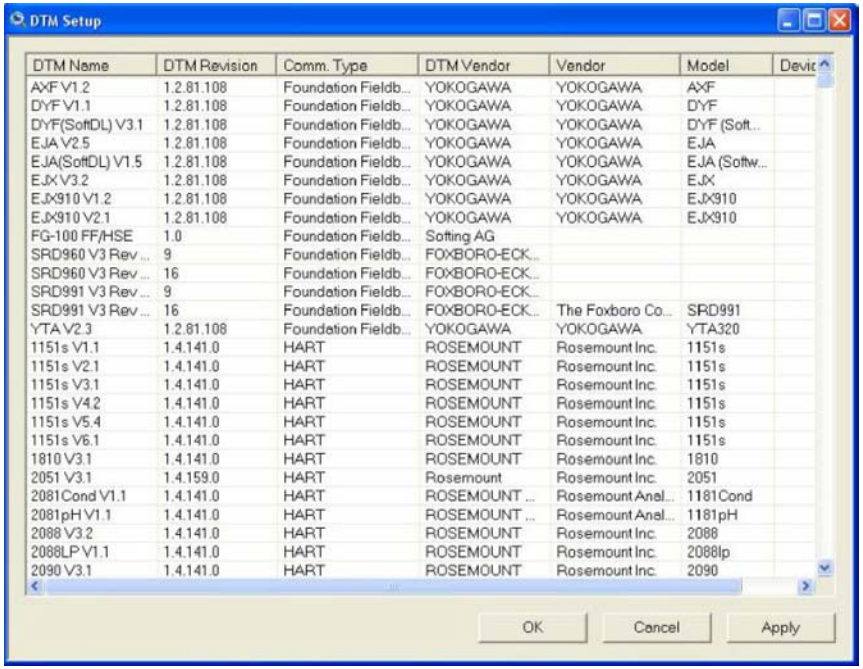
Updating DTM and DD Files

- New DD's and DTM's are often created to reflect new product improvements or design.
- Updating FieldMate's DD and DTM libraries allow users to enjoy the benefits of the new product enhancements.



- FieldMate uses standard HART and FF DD files.
  - www.hartcomm.org
  - www.fieldbus.org

- New DTM's can be installed using the device manufacturer's installer file.

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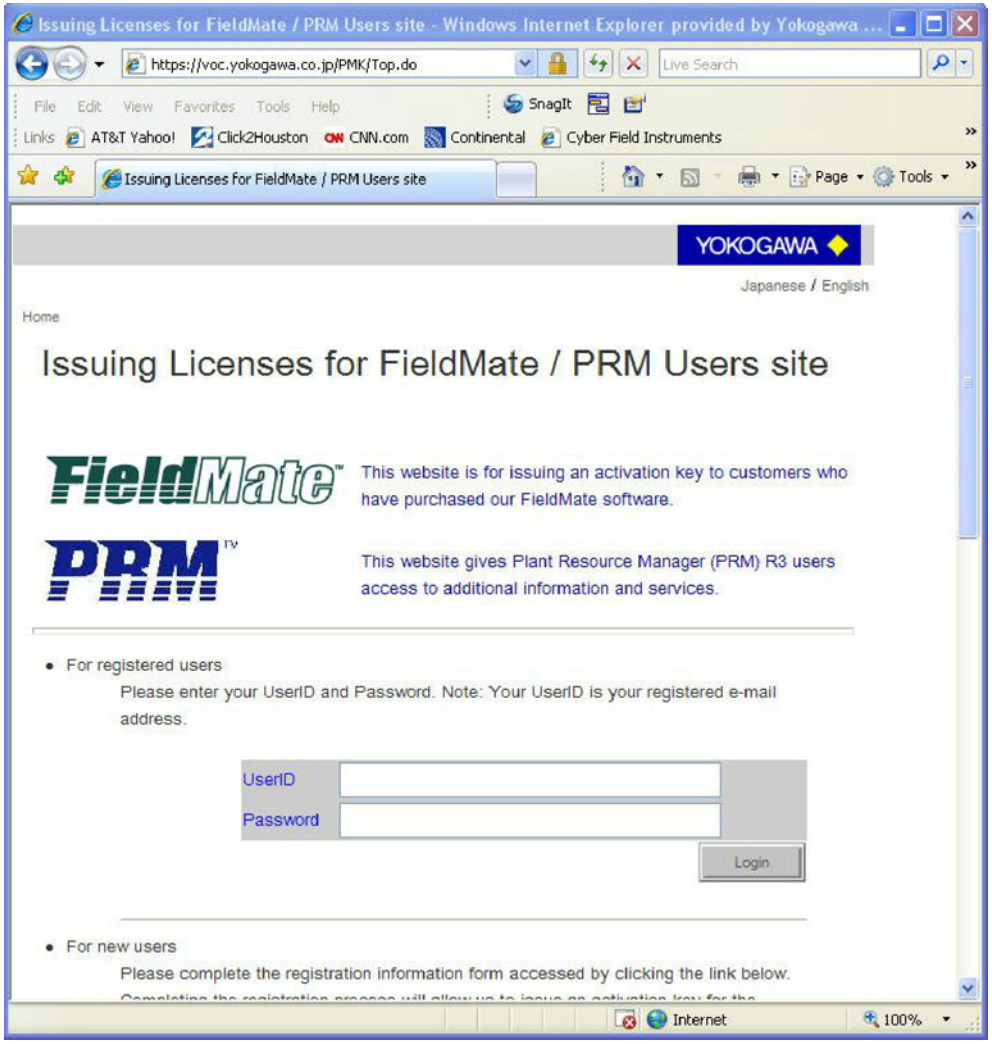
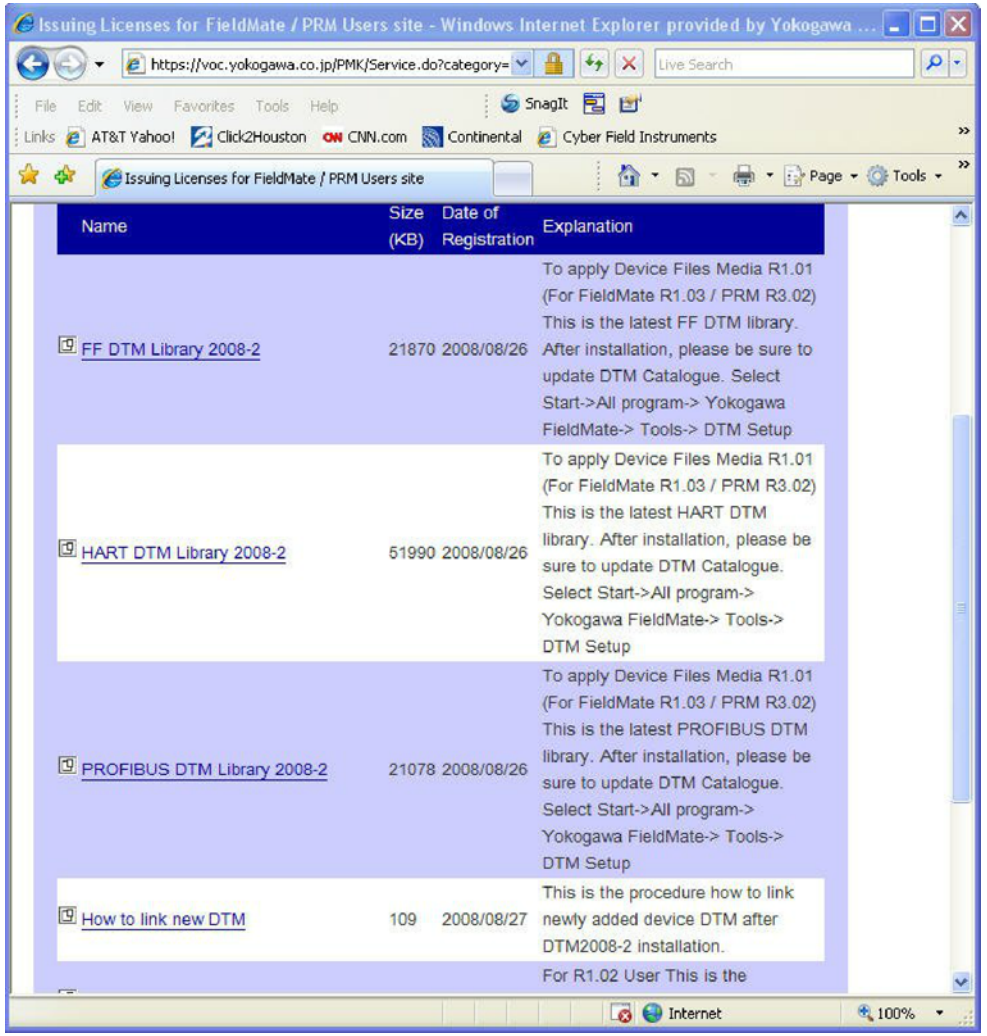
FieldMate User Site





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Wrap-up / Q&A

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One Tool over Device Lifecycle

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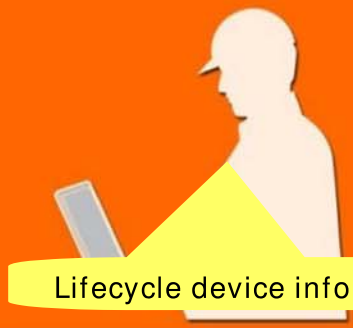
Before

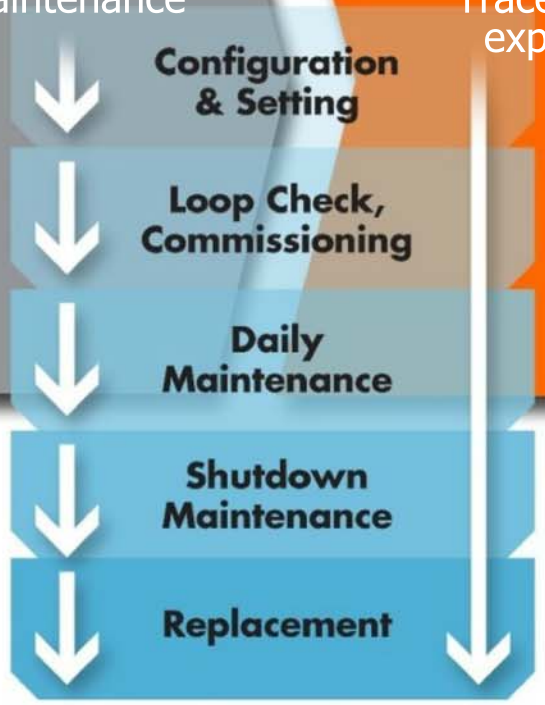
Multiple tools
x
Records in paper form
=
Discontinuous work log and isolated maintenance know-how

After

One tool
x
Record in electronic form
=
Traceable maintenance database and explicit sharing of work know-how



Lifecycle device information management



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Continuous Enhancement and User Support

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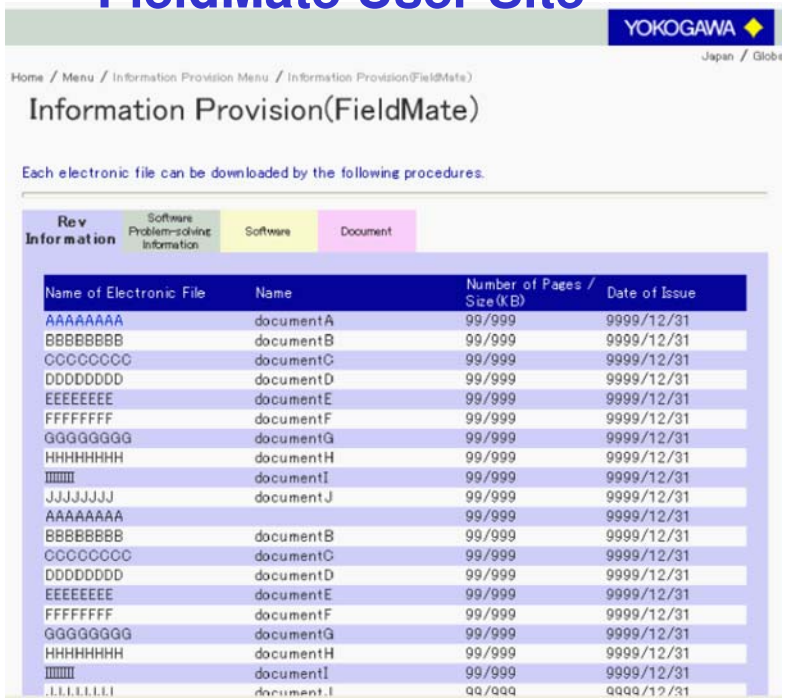
- FieldMate and DTMs continuous evolution
  - Diagnostic , Functional upgrade, Interoperability, Wireless support etc.
- Provide latest software operation environment all the time!!
  - User Web site supports information provision
    - DTM Library, FieldMate Update program, DD file set
  - Broadcast mail are sent to user upon information release
  - Free for FieldMate user

FieldMate User Site



Contents on the web

DTM Library

DD files

Update program

Keep your PC always latest

- Login on User Site
- Select required contents
- Download to your PC
- Click Setup.exe only
- Install and finish

Foolproof Operation

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Thank you very much for your attention

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