

Asset Optimization CMMS Integration

System 800xA Asset Optimization uses Maximo CMMS (Computerized Maintenance Management System) Integration to make information within the Maximo CMMS database software transparently accessible to users in the process control and maintenance system environments. Presently, Industrial IT System 800xA supports two Computerized Maintenance Management Systems, MRO Maximo[®] and SAP PM[®]. Under ABB's Industrial IT Enablement program, third-party integration is supported, such as with IFS CMMS. This data sheet discusses the functionality associated with Maximo CMMS Integration. Data sheets discussing integration of asset optimization with other CMMS are also available from ABB.

Maximo CMMS Integration brings maintenance management to the operator environment to give a single window interface for multiple systems. Context menus on process graphics, the Alarm and Event List, etc. provide access to several views and actions for the specific Maximo CMMS item. This allows plant personnel to collect, compare and monitor field device data to accurately assess equipment conditions in real time. The maintenance workflow is further reduced through the elimination of paperwork and by providing a single, electronic audit trail for all actions.

800xA's Maximo CMMS Integrations include a CMMS Equipment ID aspect, a CMMS Credentials aspect, CMMS Views aspects and Fault Report viewer and submitter aspects.

Maximo CMMS Equipment ID

One of the issues that traditionally inhibits free interchange of data between the operations and maintenance functional areas is their different naming conventions: an asset often has one



name in the operations environment and another in the maintenance environment. With System 800xA, the Maximo CMMS Equipment ID aspect provides a simple solution to what would otherwise be a very costly and project specific interface. It provides information for mapping the 800xA object to the Maximo CMMS equipment in the maintenance system's database for a particular Maximo CMMS Server. Multiple Equipment IDs can be associated with the same asset in System 800xA, thus providing the ability to map to more than one piece of equipment defined in the Maximo CMMS.

Maximo CMMS Credentials

The Maximo CMMS uses a different user administration system than System 800xA. To overcome the need for manual login while accessing Maximo CMMS views, System 800xA combines Maximo user profiles with its own user profiles through the CMMS Credential aspect. Specifically, ABB's AO Systems' credentials contain the Maximo CMMS user credentials needed for a specific System 800xA user to access the Maximo CMMS Server.

Maximo CMMS Views

The Maximo CMMS Views consist of the following:

Supported Maximo CMMS Views
Active Work Orders
Work Order History
Equipment Status
Preventive Maintenance Schedule
Spare Parts / Availability of Spare Parts
Fault Report Submitter / Viewer
CMMS Portal

Table 1

Active Work Order The Active Work Orders view (Figure 1) lists all active Work Orders in the Maximo CMMS for a particular asset or group of assets in System 800xA, independent of whether the work order was initialized from the 800xA workplace or from a Maximo workplace. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Work Order History View The Work Order History view (Figure 2) lists the history of all Work Orders in the Maximo CMMS for a particular asset or group of assets in System 800xA, independent of whether the work order was initialized from the 800xA workplace or from a Maximo workplace. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Equipment Status View The Equipment Status view (Figure 3) allows viewing of data returned from a status assessment of an asset or group of assets. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Preventive Maintenance Schedule View The Preventive Maintenance Schedule view (Figure 4) lists the preventive maintenance schedule for an asset or group of assets. To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

Spare Parts / Availability of Spare Parts Views The Spare Parts view (Figure 5) lists spare parts in the Maximo CMMS for a particular asset or group of assets. The Item Number column

Work Order	Description	Location	Equipment	Year Comment	Value Date	Status	Priority	Reported By	Report Date	Work Type	Value Class	Order
11222	Fix & the upgrade work order	800X02	12750		Friday, September 08, 2006 12:30:30 PM	Open	3	Optima IT	Friday, September 08, 2006 12:30:30 PM	PM	PLC	
11223	Liquid Unit	800X02	12750	11	Thursday, September 07, 2006 9:00:00 AM	Open	3	Optima IT	Thursday, September 07, 2006 9:13:00 AM	PM	PLC	
11227		800X02	12750		Friday, September 08, 2006 9:11:00 AM	Open	3	Optima IT	Friday, September 08, 2006 9:54:00 AM	PM	PLC	
11228		800X02	12750		Thursday, September 07, 2006 1:26:00 PM	Open	3	Optima IT	Thursday, August 31, 2006 1:24:33 PM	PM	PLC	
11231		800X02	12750		Monday, August 28, 2006 7:28:20 AM	Open	3	Optima IT	Monday, August 28, 2006 7:31:00 AM	PM	PLC	
11232	Test	800X02	12750	01	Monday, August 28, 2006 10:30:00 AM	Open	3	Optima IT	Monday, August 28, 2006 10:30:00 AM	PM	PLC	
11233		800X02	12750		Monday, August 28, 2006 12:21:40 PM	Open	3	Optima IT	Monday, August 28, 2006 12:21:40 PM	PM	PLC	

Figure 1. Active work orders view

Work Order	Description	Location	Equipment	Year Comment	Value Date	Status	Priority	Reported By	Report Date	Work Type	Value Class	Order
11222	Change Oil for	800X02	12750	Change Oil for	Thursday, August 24, 2006 9:43:00 AM	CLOSE	3	Optima IT	Thursday, August 24, 2006 9:43:00 AM	PM	PLC	
11223	work	800X02	12750		Monday, May 22, 2006 9:30:00 AM	CLOSE	3	Optima IT	Monday, May 22, 2006 9:34:00 AM	PM	PLC	
11224	Maintenance-Submittal, PUMP-002, Report for 800X02, 800X02	800X02	12750	Maintenance-Submittal, PUMP-002, Report for 800X02, 800X02 - Process Control	Wednesday, May 24, 2006 1:00:00 AM	Open	3	Optima IT	Wednesday, May 24, 2006 1:00:00 PM	PM	PLC	
11225	Create FR list for 70221	800X02	12750	FR list for 70221	Friday, November 03, 2006 9:20:00 AM	CLOSE	3	Optima IT	Friday, November 03, 2006 9:20:00 AM	PM	PLC	
11226	Test new process workstation here	800X02	12750	the will be an FR	Monday, February 13, 2006 10:55:30 AM	CLOSE	-	JB	Monday, February 13, 2006 10:55:30 AM	PM	PLC	
11227	Mobile maintenance on Operating Panel	800X02	12750	Mobile maintenance on Operating Panel	Friday, July 07, 2006 11:08:00 AM	CLOSE	3	Optima IT	Monday, August 28, 2006 11:07:00 AM	PM	PLC	

Figure 2. Work order history view

Equipment Description	Location	In Service	Percent	Vendor	Manufacturer	Warranty Expiration Date	Status Date
12750 Converter System #2	800X02	Y	100%	ALPS	ALPS	Monday, September 18, 2006 12:30:30 AM	Wednesday, September 28, 2006 12:30:30 AM

Figure 3. Equipment status view

Preventive Maintenance ID	Description	Equipment	Frequency	Frequency Unit	PM Date	Next Scheduled PM Date
84-0002	Converter System #2	12750	90	Days	Wednesday, November 15, 2006 12:30:00 AM	Monday, June 05, 2006 12:30:00 AM

Figure 4. Preventive Maintenance Schedule View

contains links to the Availability of Spare Parts view that shows the location, quantity available, measurement unit and cost of the selected spare part. Clicking on a link produces an Availability of Spare Parts view (Figure 6). To make these views more efficient, sorting is supported. Clicking a column header sorts the list with respect to that header topic.

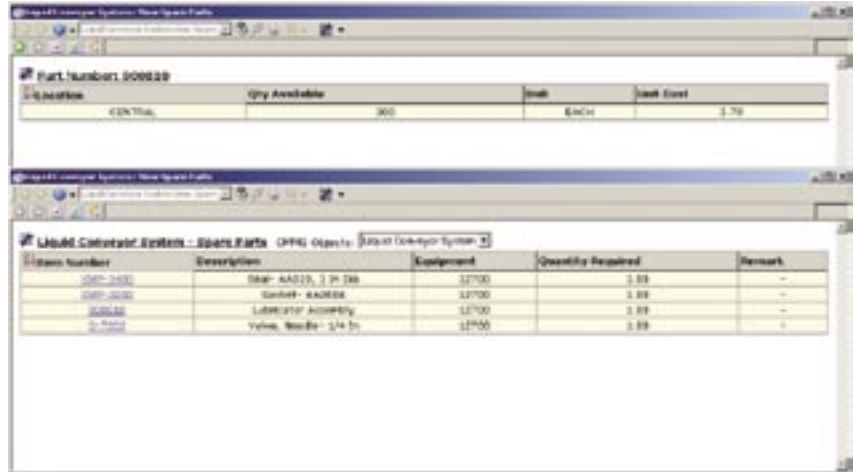
Fault Report (FR) Submitter / Viewer

For a particular asset problem, the fault report submitter allows a user to electronically generate and submit a work request to the Maximo CMMS. The fault report carries forward all information contained in the asset monitor. The Fault Report Viewer summarizes all fault reports for a given asset (Figure 7).

The FR State column shows the status of the Fault Report at any instance in time. It can either be a current condition of the asset, or the Most Severe Unacknowledged (MSU) sub condition of the asset. If the alarm line corresponding to the condition is not acknowledged, the Fault Report Viewer keeps the MSU even when the condition goes back to normal, in which case the FR State column reads Most Severe Unacknowledged. If the MSU is the current condition, then the FR State column reads Current.

Dismiss after successful submittal The Dismiss after successful submittal check box in the Submit Fault Report view is a configurable option. If it is unchecked, the Fault Report is retained with a Fault Report status of “Submitted.” It can be dismissed later or automatically replaced with subsequent Fault Reports. Right-clicking anywhere in a Fault Report row produces a context menu with the option to dismiss the Fault Report or submit it. Selecting “Dismiss” deletes the selected Fault Report from the Asset Optimization system. It also acknowledges the alarm in the Alarm and Event List.

Selecting “Submit” launches the Submit Fault Report view (Figure 7). There are three different Submit Fault Report views: one for submission to the CMMS only, one for submission to the Meriam Process Technologies Device Management System (DMS) only and one for submission to both systems. The view that comes up depends on the configuration of the system. Figure 7 shows the Submit Fault Report View for submission to both systems.



Figures 5 and 6. Spare parts / availability of spare parts view

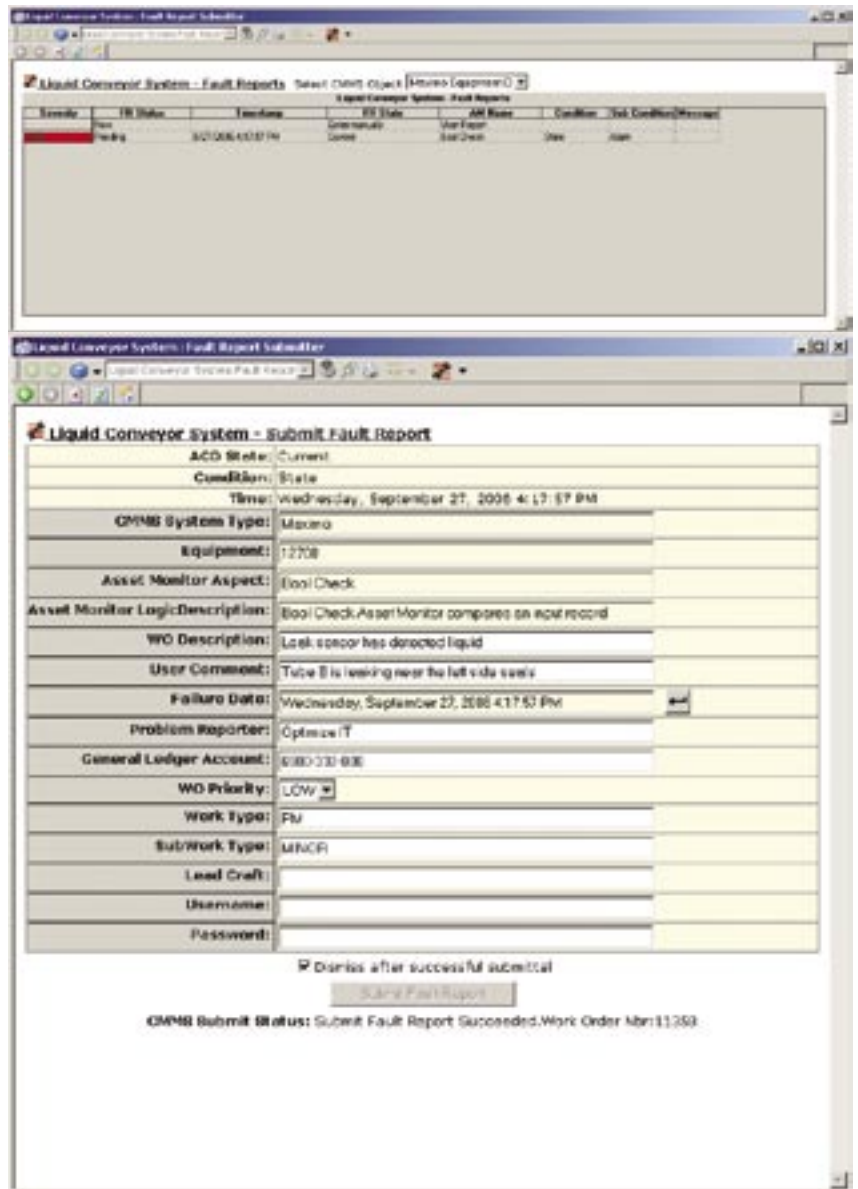


Figure 7. Fault report view and submitter

Maximo CMMS portal views For every entry in the Maximo CMMS view, it is possible to navigate to the related Maximo CMMS portal view (Figure 8). The portal view is a web view that allows direct interaction with the Maximo data to make changes to the data possible (if the user has appropriate rights).

Additional Maximo CMMS Integration System Requirements:

CMMS Package	CMMS Requirements
Maximo	800xA Maximo Integration requires Maximo software obtained from MRO Software: <ul style="list-style-type: none"> ■ Maximo SDK for Business Components (Version compatible with Maximo Server version) ■ Maximo Server version 4.1, 4.1.1, 5.1, or 5.2

Table 2. Maximo CMMS requirements

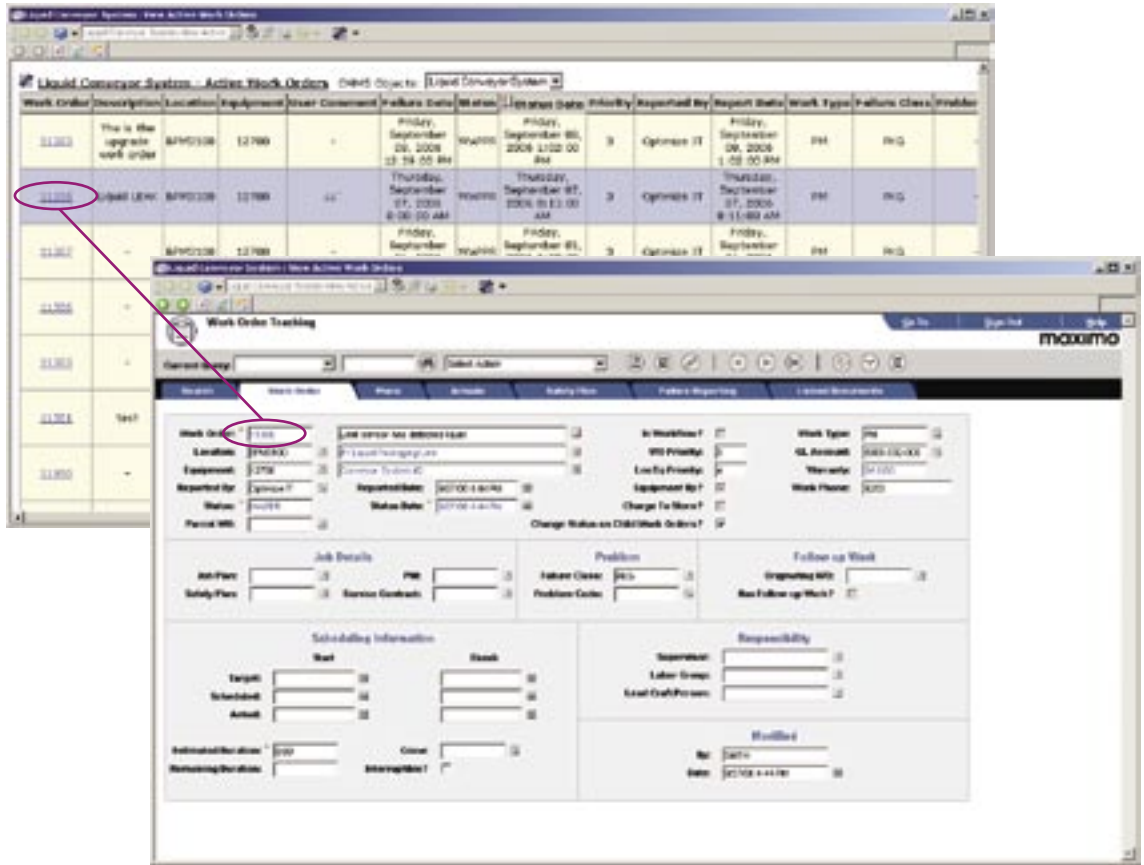


Figure 8. Maximo CMMS portal views

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