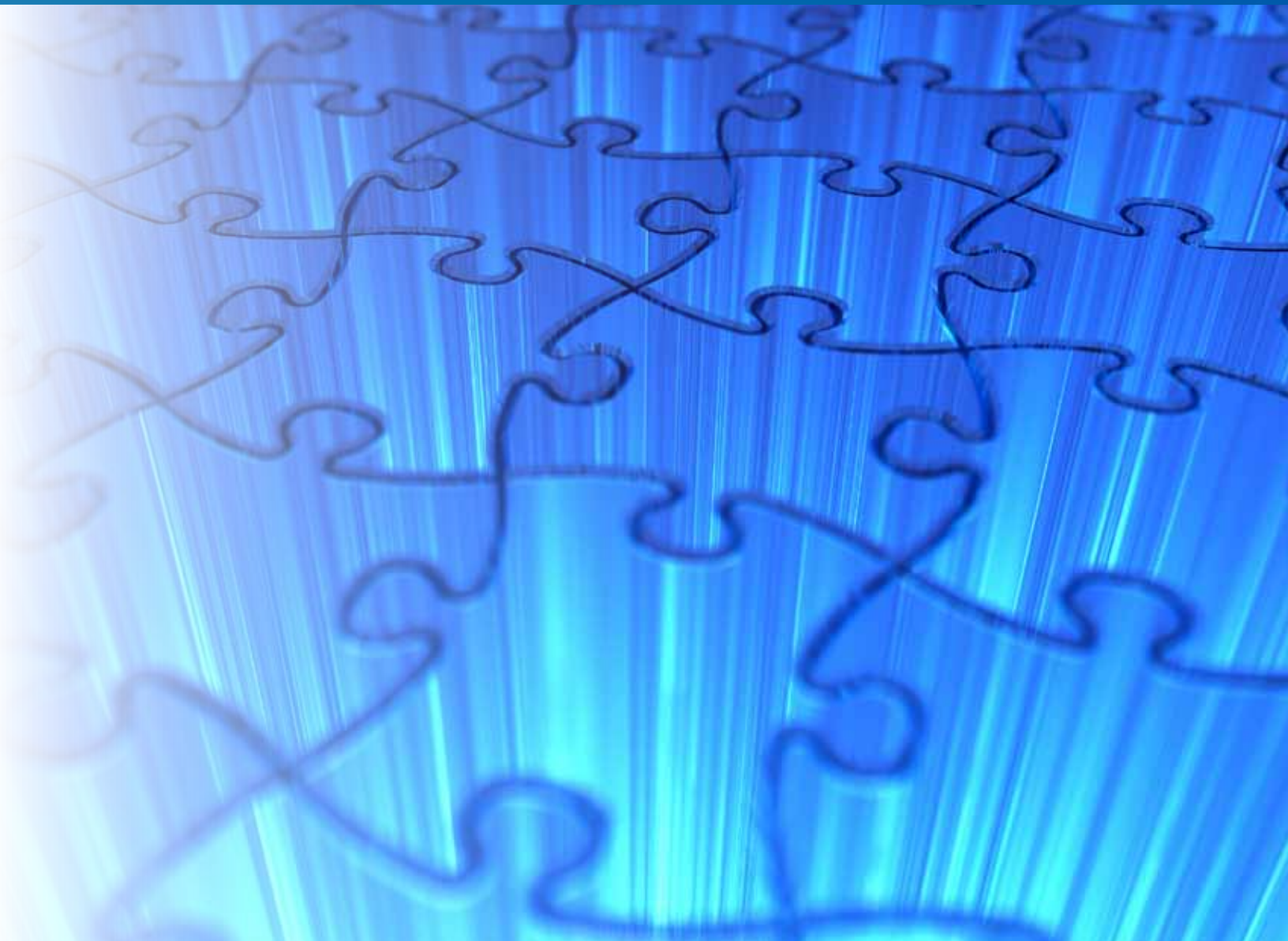


# MAINT*elligence*

Asset  
Performance  
Management



## Maximizing Asset Utilization...

Built on a multi-tiered approach to reliability, MAINTelligence™ starts with a solid foundation in asset management and maintenance scheduling, and/or Asset Basic Care expanding into all condition based maintenance technologies in a manner and rate that suits your organization. Advanced applications take advantage of our customizable intelligent agents for equipment health assessment – all of these elements are combined to create a complete, integrated and automated equipment reliability system.

### A Reliability Focused CMMS

MAINTelligence creates a framework that incorporates the CMMS aspects, (collecting costs and allocating resources) but it differs from most CMMS's in that it has a greater focus on reliability. Thus, MAINTelligence provides management tools for predictive and inspection based maintenance data, along with standard corrective and preventive maintenance work orders.

### Automatically Generate Work Orders based on PM Data

One major problem with condition-based maintenance management programs is that inspection and/or measurement data is collected, but recommendations for proactive maintenance never get turned into actual work orders. By integrating both asset basic care and predictive maintenance findings directly into the maintenance task schedule, work from PdM procedures is automatically generated in MAINTelligence, just like time or meter-based PM tasks. This allows maintenance planners to handle all tasks the same way, no matter what their origin. The significance of this is that maintenance schedules can automatically change based on the inspected or measured condition of the asset. And it doesn't have to just be MAINTelligence as the CMMS – DMSI supplies interfaces to many other ERP and EAM systems that allow us to trigger work orders automatically.





# The Intelligent Approach

## It's all there...

Assets requiring attention, data on why and the work status are readily apparent and accessible. Work requests and work orders can be scheduled along with the applicable resources for the work, (parts, tools, personnel and contractor). Work can also be automatically triggered via intelligent diagnostics and alarms. The reliability expert saves both valuable time and money while improving the success of the reliability program.



## Connect MAINTelligence with Your Plant Software

A great reliability program is backed by a partnership between maintenance, operations, planning and other departments. It is built with tools that facilitate and create these partnerships, fostering company-wide support. That is why MAINTelligence provides the flexibility to choose which key information to share for strengthening partnerships and support between programs and departments. Built with an open data exchange, MAINTelligence connects with non-proprietary systems and hardware.

### MAINTelligence Connects With:

1. Condition Monitoring Data Collectors (all disciplines).
2. All major Oil Analysis laboratories.
3. ERP / EAM systems (SAP R/3, IBM MAXIMO, Ventyx, JD Edwards etc.).
4. Process Historian Systems (OSISoft PI).
5. Remote Citrix Metaframe.

Ask us to see if MAINTelligence connects with your system.

## Create the Exact Report or Graph You Need

MAINTelligence includes a large variety of reports, which can be sorted and filtered according to your preferences and requirements. The built-in Report Editor makes it easy to modify any report or label in MAINTelligence—or you can create your own reports from scratch.

- Include drawings, images, graphs, checklists, detailed instructions and special notes on your work orders and reports.
- Customize reports with your company's logo, and control colors, fonts, page numbering method, and record separator lines.
- Preview on-screen with pan, scroll, and zoom options.
- Print, export to Excel, Word, PDF, e-mail—even web pages—or fax the reports through your fax modem.
- Instantly generate a bar code and add to a report or label.

Item No.	Description	Quantity	Unit Price	Total Price
1.1	CD-R	1000	0.25	250.00
1.2	CD-RW	1000	0.25	250.00
1.3	CD-RW	1000	0.25	250.00
1.4	CD-RW	1000	0.25	250.00
1.5	CD-RW	1000	0.25	250.00

Part No.	Description	Quantity
6305	Ball Bearing	10
6306	Ball Bearing	10
6307	Ball Bearing	10

Equipment	Volume	Unit
Equipment A	1000	Units
Equipment B	2000	Units
Equipment C	3000	Units

## Giving you control... tools and features

### Equipment Reliability

The tools you need to plan, control, and monitor all of your maintenance-based expenditures. MAINTelligence provides for accurate and timely maintenance tracking, cost-effective inventory control, tool crib and contractor management, root cause failure analysis, and much more...

### Maximize Plant Asset Usage

All the asset information you need to make timely decisions that maximize asset usage and minimize maintenance costs:

Track all types of equipment, components, their systems & locations.
Manage repairable spares, components and sub-assemblies through their entire lifecycle — from acquisition and installation, through repair cycles and to eventual replacement.
Customize asset information with user-defined fields for any class of facility, equipment or component.
Enter meter data for tracking usage, mileage, etc. directly, or automatically acquire it from one of MAINTelligence's numerous data sources.
Use bar coding to design and print labels for assets providing increased mobility and system functionality.
Track extensive asset information: Criticality, Status, Manufacturer /service / support contacts, Warranty information, Nameplate data, and so much more!
Track work histories, operational event logs, current condition status and costs for all of your assets.

### Work Management

#### Work Requests

MAINTelligence allows designated plant personnel to submit maintenance requests to the maintenance planner and track the progress of their work request from request approval through to completion. Work requests can be entered directly into MAINTelligence, or submitted from a program or handheld device.

#### Work Orders

From installing new equipment, carrying out preventive maintenance work, or managing critical shutdowns, MAINTelligence tracks all aspects related to work performed on assets. The ability to track and manage work requests, labor, planning, and scheduling allows companies to make the most of their resources while improving productivity.

Approve tasks / requests upon entry, or approve several tasks / requests at once.
Assign priority status, labor time, parts, tools, contractors, and costs to each work order.
Parts inventory records are updated automatically.
Work Order backlog provides outstanding Work Orders lists searchable by any field.
Capture meter readings, downtime and/or lost production on work order records.
Manage work order assignments —view all work orders, or all work orders assigned to or by a particular person.
Record work already completed quickly and easily via non-scheduled or emergency work orders.

### Parts and Purchasing

#### Control Inventory

MAINTelligence can help you realize considerable savings through a well-managed parts inventory system. Take advantage of the Parts Manager's features.

#### Control, Identify and Track:

Control your inventory of spare parts, lubricants, and other consumable items.
Identify obsolete parts and ensure stock levels reflect current usage.
Identify out-of-stock items or make substitutions with alternate parts, vendor and location tracking capabilities.
Track items, costs and balances by bin, lot and store room location.
Track item costs by first cost, last cost, average cost or user-defined standard cost.

#### Plan, View and Automate

Automatic parts reservations for work orders and viewing work order reservations/usage for inventory items.
Share information on spare parts across multiple storage locations (warehouses / oil houses / docks, etc.).
Easy access to all part / supplier purchase history.
Automatic cross-references to Bill Of Materials (in Plant Manager).
Automatic purchase requisitions when quantities fall below minimum levels.
User-defined EOQ, ROP, and Safety Stock Methods can automatically reorder materials.
ABC analysis for inventory item prioritization of physical item counts frequencies.
Employ just-in-time methodologies by utilizing WO Reservation Dates as well as lead time to generate POs.
Display all assets on which a given part is used, via BOM or work history.
Access latest cost information and item levels instantly.

#### Manage Purchase Requisitions and Purchase Orders

The MAINTelligence's Purchasing Module works closely with the Parts Manager to help simplify the Requisition – Order – Receiving cycle.

#### Resource Management

All the tools you need to organize and effectively manage your manpower with detailed information for making key decisions to maximize resources while minimizing costs.

#### Tools Management

The level of detail you want to include in the management of your tools is up to you. Include a little or lot, all the key areas are included for making the most of your tools.

#### Contractor Management

The Contract Manager lets you incorporate contractors and out-source labor information—keeping track of your external labor costs as they become increasingly important in all operations and maintenance environments.

Smart Scheduling

### Planning and Scheduling

#### Keeping on schedule has never been easier.

MAINTelligence is built around SmartSchedule™, a powerful dynamic scheduling system that can create and administer work orders based on preventive, inspection and condition-based maintenance information. MAINTelligence allows work orders to be generated automatically and will modify maintenance schedules based on alarms or knowledge-based diagnostics. Maintenance schedules reflect changes in the plant environment. For example, an operator on asset inspection rounds records data, uploads it to MAINTelligence and if the data exceeds controlled parameters, a work request/order will automatically be generated and the maintenance schedule changed accordingly.

#### Scheduling Flexibility

Control the scheduling of Preventive Maintenance tasks for any of the facility, equipment and component items in the database.

Group tasks together in a "task route", and/or schedule as a single item.
Numerous scheduling options available to trigger tasks and generate work orders.
Schedule by calendar, both fixed and elapsed dates.
Schedule by meters, such as: operating hours, mileage, production counts etc.
Schedule by equipment condition, alarms or knowledge-based diagnostics, and
Operations / Production schedules.
Opportunistic scheduling (based on machinery availability).

## Intuitive and Powerful Features

MAINTelligence has an intuitive user interface—you get quick access to the scheduling, work management and reporting tools that you use everyday.

All of your maintenance and reliability data can be viewed with a single mouse click. Finding assets is fast as Data Managers have a combination of hierarchical and list views that let you find what you are looking for quickly and easily. The result is maximum utilization by the end users and a significant reduction in start-up, implementation and training costs.

Job Overdue Status and Condition Alarm Status can be seen on the Plant Hierarchy and List Views at all times.

Data Entry forms are consistent and easy to understand.

Powerful find-and-replace capability makes bulk data edits easy.

Unlimited query and report capabilities.

Simply right mouse click for all object actions (editing, scheduling, and data display).

## Advanced Database Management

Access Control, Audit Trail Management, Database Replication

A host of database management tools to make your job easier...

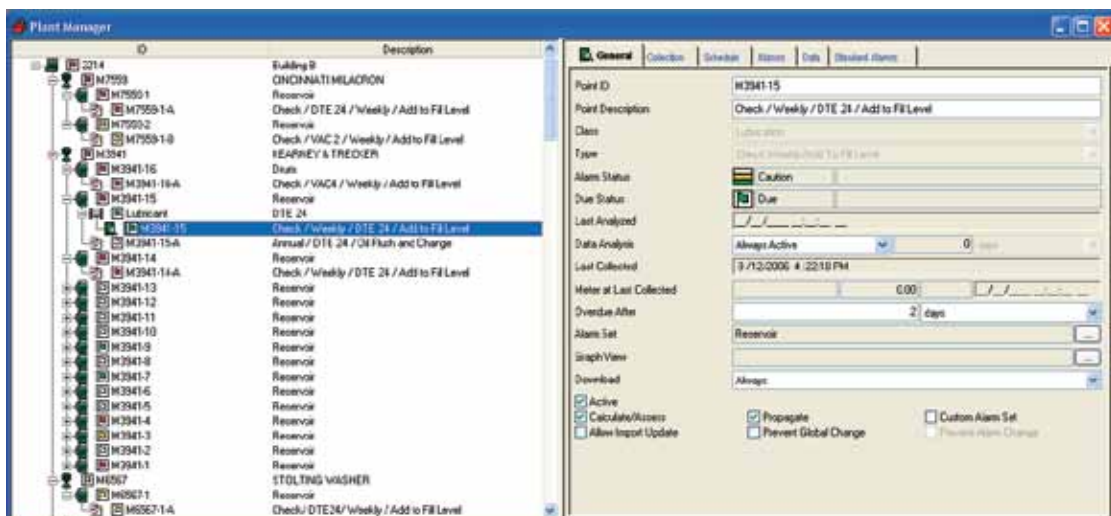
Administrators can easily add and maintain users, groups, group permissions, and object permissions. The advanced design ensures that different users see different features of the MAINTelligence system according to your specifications.

For added security, you can activate audit trail logging of all user actions; MAINTelligence audit trail is designed to help you meet the record-keeping requirements of 21 CFR Part 11 and other quality system requirements.

MAINTelligence's database is fully ANSI SQL 92 compliant.

Optional database replication functionality lets you carry out bi-directional replication of MAINTelligence databases, in real time, over your LAN, WAN or over the Internet.

MAINTelligence also includes utilities for database backups, archiving old records and service requests, database exports (to Excel, ODBC, ASCII and XML formats), and importing records from other databases.





# Mobility Options

## Handheld Portability for Workflow Management

MAINTelligence handheld solutions offer a wired upload/download solution or a real-time wireless solution—all in the same package. The unit fits into a shirt pocket or can be belt-holstered.

### InspectCE™

#### Record and Review PM Data on Routes



In addition, this system facilitates the use of Risk-Based Inspections (RBI). The easily accessible data results in improved asset performance, decreased lost-labor time, and increased availability of assets.

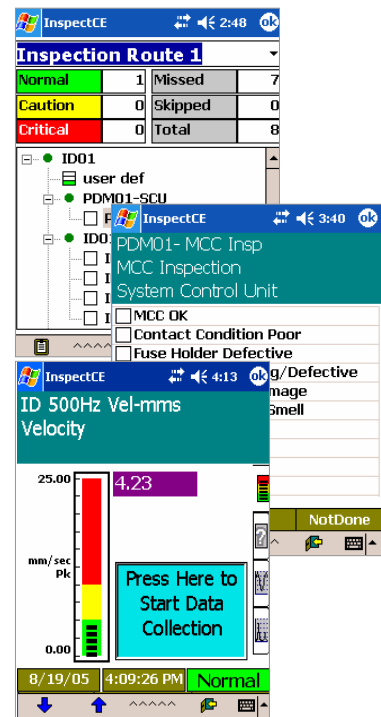
MAINTelligence also operates with the InspectCE™ handheld system to automate the time-consuming process of carrying out operations and maintenance-based inspections. This includes the capability to create inspection routes, enter specific measurement points and the elements to be measured, and record the results.

Running on a PDA, the software handles different asset basic care inspection rounds including:

- maintenance inspection data collection rounds
- operations asset inspection rounds
- lubrication management rounds
- safety, health and environmental rounds.

#### What data can you collect with InspectCE™?

- Pressure, current, flow, etc.
- Operating Hours/ Meter Readings
- Check Lists, single and multiple selection
- Usage and Level Recording
- Lubricant and Grease Application Recording
- Free form or predefined notes
- Sound Recording
- Images (using image capture cards)
- Temperature (using infrared thermometer)
- Vibration, Overall / Waveforms (using Inspect Vibe™ digital accelerometer)
- Work Requests for off-route assets



#### What information can InspectCE™ display to operators?

- Asset Identification (Bar Code / RFID tags)
- Pre-Inspection Instruction Notes
- Alarm Indication Response Notes
- Parts Lists / Bill Of Materials
- Work Orders (both open and completed)
- Trend Charts of previously recorded values

## **DMSI**—when you are looking for real-world solutions for operations and maintenance.

For over two decades we've been developing practical and inexpensive solutions to the everyday problems faced by industrial, military, and transportation organizations.

You may even have used our systems without ever hearing the name **DMSI**, because many of our products have been marketed through OEM relationships. In fact, **DMSI** is a leader in the number of installed maintenance systems worldwide.

The development of the **MAINTelligence** system lets us offer the full benefit of our technology directly to industry.

The advantages are clear—industry professionals now have access to a range of maintenance solutions that combine cutting edge technology with practical functionality and ease of use. At a price that any size of organization can afford. In fact, we'd go as far as to say - these are solutions you can't afford to be without!

At **DMSI**, we are looking forward to helping you achieve your operations and maintenance goals more easily, efficiently and cost-effectively than ever before.

**MAINTelligence** is the intelligent approach to maintenance.

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