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Choosing Computerized Maintenance Management Systems for Facility Management

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What is CMMS?

A Computerized Maintenance Management System (CMMS) is a software package that can track, schedule, and organize facility maintenance. It can include equipment history and inventory and also generate work and purchase orders. For very small facilities, paper records may be adequate. For more complex operations, a CMMS can be an invaluable tool for a facilities manager.

A CMMS is not intended to replace or duplicate the Forest Service's INFRA database. Instead, it is a tool to organize, schedule, and track the details of day-to-day facilities management.

Many CMMS software packages are available. This Tech Tip is designed to help you select the best system for your particular operation.

Why Use a CMMS?

A CMMS can keep track of past repairs, schedule future maintenance, and provide a ready list of vendors and parts sources. It can be used to generate detailed work orders for maintenance personnel. These work orders can contain specific safety precautions and special tools for individual jobs. A CMMS installed on a computer network can be used to manage the maintenance of several remote facilities from a central location. The ability to track historical costs and project future maintenance expenses make a CMMS useful for budgeting.

Selecting a CMMS

CMMS programs offer a wide range of features. A manager will have to decide which features are compatible with a particular facility and generate the information that is most helpful. One manager may be more interested in an equipment inventory and maintenance history. A manager who supervises a number of employees may want to prepare a work order for every job and schedule each worker's time. Another manager may only be interested in budgetary information.

For example, maintenance at the North Central Research Station is handled by one person who uses Maintenance Manager by Symbiotic Systems to track equipment part numbers and repair dates. The manager of the Mount St. Helens Visitors Centers uses Datastream MP2 Professional to track work history and equipment, and to generate work orders. The work orders include specific safety instructions and special tools required for each job.

Before picking a specific program, a manager should list goals in order of priority and try demonstration versions of several CMMS programs. Program manufacturers, phone numbers, addresses, and web sites are listed at the end of this report.

Program Comparisons

The Missoula Technology and Development Center considered over 300 CMMS programs during a year-long review. These programs were evaluated using demonstration software supplied by the manufacturers. Table 1 compares features of seven programs determined to be most suitable for Forest Service facility maintenance.

The table assumes that the programs will be used by personnel with beginning to average personal computer skills. When features could not be tested with the demonstration software, a result of average was assumed.

Price: Only programs that cost $1,500 or less at the time this Tech Tip was being prepared were included in the table. The lower the program's cost, the higher its rating.

Program Age: This rating was subjective. In general, the program should not be fresh from beta testing (just released), nor should it be so old that it shows signs of lagging behind current technology.

Number of Customers: This rating is based on the number of customers the manufacturer claims are already using the software. More customers produces higher ratings.

Company Age: The only way to determine the probability of a

Table 1—Features of the seven computerized maintenance management systems MTDC determined to be most suitable for facility management in the Forest Service.

Ratings

• Exceptional	⊙ Good	○ Average	◎ Below average	↻ Poor or nonexistent

System Tested	Price (dollars)	System Info				User Needs					Data Features					Scheduling				Planning	
		Price	Program age	Number of customers	Company age	Simplicity	Program help	Automation	Customization	Interface	Employees	Inventory	Vendors	ODBC	Maintenance	Work Orders	Employees	Maintenance	Purchases	Planning	Analysis
MS2000	1,495	◎	○	○	•	⊙	•	•	⊙	•	•	•	•	•	•	•	•	•	•	•	•
Work Order Wonder	895	○	•	◎	•	•	•	⊙	○	⊙	⊙	⊙	⊙	○	⊙	•	•	•	⊙	⊙	⊙
Mpulse Pro	1,295	◎	⊙	•	•	○	◎	○	◎	⊙	⊙	⊙	⊙	•	⊙	⊙	○	⊙	○	○	○
Mpulse LTD	695	⊙	⊙	•	•	○	◎	○	↻	⊙	◎	◎	◎	•	◎	⊙	○	⊙	○	↻	↻
COGZ	995	○	⊙	•	•	•	⊙	◎	◎	•	○	⊙	⊙	↻	•	⊙	○	⊙	○	◎	◎
Atlas Professional	950	○	⊙	•	•	○	○	○	○	○	⊙	⊙	⊙	○	⊙	○	○	○	○	○	○
Atlas Classic	550	•	○	•	•	○	○	○	◎	○	○	⊙	○	○	○	○	○	○	○	○	○

company's surviving into the future is to look at how long it has already survived. The longer it has survived, the higher the rating.

Simplicity: The less intimidating and confusing the program, the higher its rating.

Program Help: All the programs require a reference. If the reference is available within the program and easy to understand, the program gets a high rating.

Automation: If the program allows the computer to handle mundane tasks (such as transferring data from one section of the program to another), it gets a high rating.

Customization: Programs that allow interface changes to suit the needs of individual users get a higher rating.

Interface: Programs that have intuitive, familiar, and easy-to-use features are rated higher.

Data Features: High ratings went to programs that allowed complete, easily entered data for each feature category.

ODBC: Open Data Base Connectivity (ODBC) is an indication of a program's ability to communicate with other programs. The greater the ability to share data with other programs, the higher the rating.

Scheduling: Programs that simplify task assignments and due dates received high ratings.

Planning and Analysis: Programs that allow the user to forecast costs within the program received high ratings. Programs that provide historical data without projecting future costs received lower ratings.

CMMS Program Comments

MS2000—Micromain Corp.
MS2000 may be slightly more difficult to use than some of the other programs, but it is very flexible. It has property screens that can be used to input building data. Although MS2000 is one of the most expensive programs, it is still a good buy.

Work Order Wonder—Field and Screens
Work Order Wonder is one of the easiest programs to use. It has screens to input building data as well as screens for equipment in the building.

Mpulse Pro and Mpulse LTD—Mpulse Maintenance Software
Mpulse is another very easy program to use. Not only does it have screens to enter building data, but it also has separate screens for grounds, meter readings, and individual room details. In addition, there are screens for equipment in the building. Mpulse LTD is a version of Mpulse Pro that is limited to tracking 100 resources.

COGZ—Advanced Maintenance Solutions
COGZ is easy to use. It does not have screens to input building properties and is best suited for maintenance of facility equipment.

Atlas Professional and Classic—Data-Trak, Inc.
Atlas Professional is a moderately easy program to use. Like COGZ it has no building screens and is best suited for maintenance of facility equipment. Atlas Classic is a limited version of Atlas Professional.

Conclusions

A CMMS program can be a valuable tool for tracking and scheduling the details of day-to-day maintenance. No single CMMS program can meet everyone's needs. This Tech Tip is a good place to start, but you should try demonstration versions of programs from several manufacturers to determine the best CMMS program for your facilities. Only you can determine which CMMS program best suits your needs.

This Tech Tip is not intended to select a single CMMS program for use throughout the Forest Service. The Forest Service has chartered a team to explore options for a nationwide CMMS program. Contact team leader Steve Oravetz; Lotus Notes: Steve Oravetz/WO/USDAFS or (406) 329-1037 for more information.

References

Micromain Corp. (MS2000)
5100 Bee Caves Road
Austin, TX 78746
Telephone: 512–328–3235
Fax: 512–328–4584
http://www.micromain.com

Fields & Screens, Inc. (Work Order Wonder For Windows)
14800 Quorum Drive
Suite 200
Dallas, TX 75240
Telephone: 800–867–8124
Fax: 972–450–6526
http://www.screens.com

MPulse Maintenance Software (MPulse Pro, MPulse LTD)
44 West Broadway, Suite 302
Eugene, OR 97401-3020
Telephone: 800–944–1796
Fax: 541–302–6680
http://www.mpulsecmms.com

Advanced Maintenance Solutions
(COGZ)
14 White Gate Road
Oxford, CT 06478
Telephone: 203–881–1450
Fax: 203–888–7362
http://www.cogz.com

Data-Trak, Inc. (Atlas Professional
3.1, Atlas Classic)
135 Oyster Creek Drive
Lake Jackson, TX 77566
Telephone: 800–453-3972
Fax: 409– 297–7725
http://www.data-trak.com

Symbiotic Systems Corp.
(Maintenance Manager)
1625 Range Street
Boulder, CO 80301
Telephone: 800–459–8848
http://www.symbioticsys.com

Datastream Systems, Inc.
(MP2 Professional)
50 Datastream Plaza
Greenville, SC 29605
Telephone: 864–422–5001
Fax: 864–422–5000
http://www.dstm.com

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