

Maintenance and the Internet

Written by Joel Levitt, Springfield Resources
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Fifteen reliability and maintenance uses for the Internet, plus information on newsgroups and forums, from the new book Internet Management. Guide for Maintenance

The Internet is getting better for maintenance users on a daily basis. It is changing rapidly because users are becoming more demanding.

Internet pioneers were once wowed by the technology, brochureware (catalogs on the Web), and the ability to send a message and get a response. Today, maintenance professionals active on the Internet are more sophisticated and need more return on their time invested than even just a year ago. We have good reason to think that even greater change will come in the next years.

The funny thing about the Internet is its multiple personalities. It is easy to use (the learning curve is about an hour after you are hooked up, assuming you can already use a computer), and is mostly filled with trivia; yet at the same time, it is the answer to the prayer of maintenance professionals for around-the-clock access to information. Even as teenagers are chatting about the newest music, a researcher is accessing breakthrough up-to-the-minute research on the human gnome project.

The Internet is changing the way we communicate. E-mail alone has brought together families across the globe, authors writing books on three continents (at the same time), and presidents of companies with their employees. The change is radical, like the changes brought to maintenance by the fax machine or the computer itself.

Fifteen uses of the Internet

The Internet is being used by the maintenance profession in many ways. Since the capabilities are online, they are available around the clock, 365 days a year. Usually the servers (computers where the information is located that are connected directly to the Internet) are available except when they are being backed-up or serviced. Here are some ways you can put the Internet to work.

1. The biggest use of the Internet is carrying messages or e-mail. According to one study, 80 percent of the business uses of the Internet were for e-mail.
2. Finding vendors of everything from valves to engineering services. Companies can make their latest catalogs available as soon as they are complete. It is much less

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expensive to provide catalogs online than to print them. On-line catalogs save your shelf space and trees too. Because of the increasing cost of paper, expect to see a push for on-line catalogs. Since storage on computers is inexpensive, a huge volume of information can be made available, such as complete technical specifications, photographs, video clips, audio descriptions, or drawings. All of the information is just a click away. Locating vendors is the second most popular use for the Internet after e-mail. The driving force is the advertising budget. The fee for an entire Web site for a year is comparable in cost to a single full-page ad in a leading maintenance magazine.

3. Technical bulletins: Information about the latest technical problem and fixes can be available minutes after the vendor's engineers decide to put it on-line. No longer is there a weeks-to-months lead-time to publish and mail the bulletins. The software vendors are light-years ahead of everyone else in this area and give a higher level of support at a lower cost through this method (see item 10 below on software bug fix, software distribution).

4. Drawings, field modifications, and manuals: The same way that you can be updated by technical bulletins, you can view manuals and download drawings. (Download means to copy a file from the server computer to your computer.) The file can be a manual, a drawing, just about anything. Wouldn't that be great at 3 a.m. when you can't find the wiring diagram? Also, field modifications can be fed back to the original equipment manufacturer (OEM) engineering department if that is appropriate.

5. Parts information, parts purchasing, reducing the cost of acquisition: Some sites allow you to look up part numbers from exploded drawings. You can move your mouse cursor to the part and then drag its number to an order form. Once you add your Purchase Order number and ship-to address, you have placed an order.

6. Commerce: This use is an expansion of the previous idea. You can currently shop for many MRO items from storefronts on the Internet. Major industrial distributors such as Grainger and McMaster-Carr have a large presence on the World Wide Web. These storefronts currently cover all types of consumer goods and a few offer tools, maintenance supplies, uniforms, and other items. Encryption (a fancy way to scramble transmissions to make them hard to intercept and make sense of) is becoming widespread to allow high security for credit card numbers and bank information.

7. FAQ (frequently asked questions): Every field and every piece of equipment has FAQs. These types of basic questions take up most of the time of the telephone support department. Novices, new customers, or customers new to a specific product can read the FAQ file. Many of the larger FAQ files have search engines that allow the user to make specific inquiries. FAQs are on-line and available 24 hours a day, when you, the new user, have a question.

8. Technical help: Technical help is one of the greatest uses of the Internet. You can ask questions of the vendor's technical departments and get answers back to solve your problems. Technical departments develop a menu of canned e-mails that provide solutions to common problems and can be sent immediately. The technician can then spend time on the more uncommon or complicated problems.

9. Locating used equipment and parts: There are many classified ad sites where companies and individuals can buy, sell, and trade equipment. For example, a local manufacturer buys and sells punch presses completely on the net.

10. Software changes: Almost all major software vendors allow access to the latest

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versions of their software. You can visit their site and download the latest version. Also, software that you may want to sample is available to download.

11. Directories of installers and vendors: When you are looking for vendors or installers, you can ask members of a newsgroup related to the topic, make an electronic query from a home page, or send an e-mail to the company's postmaster or webmaster.

12. Access to libraries: Many university libraries and information databases are available online. The Library of Congress is putting its enormous library online. Another group is making the complete texts of great books available via downloading.

13. User groups: Do you own a computerized maintenance management system (CMMS) and want to talk to others using the same system? Many user groups are going online as newsgroups. Here you can read others' comments about the software, ask questions of the whole group, get help, and gripe to your heart's content.

14. Newsgroups: These are groups that are bound by a common love, hate, interest, or membership. By mid-1998 there were almost 35,000 newsgroups on the Internet with new ones starting every day. Groups range from people who collect stamps or love anagrams, to people who hate politicians or fast food.

15. Killing time: If you have an hour or more to spare, the Internet can be more fun than TV and a lot less predictable. In some homes, Web surfing has almost replaced channel surfing.

Major capabilities of the Internet

E-mail is one of the most used and most powerful parts of the Internet. It links the entire world together and enables researchers, business people, and even elementary school kids to send messages worldwide. There are no extra charges beyond the local phone call to your internet service provider (ISP). A recent survey showed that over half of the users of the Internet just used e-mail.

Mailing lists are lists of people's e-mail addresses. The people on the list share some common interest. The postings (comments from other subscribers) get sent to their e-mail box. You send a message to the whole group by sending it to a special e-mail address, which resends the message to the whole list. Over 71,000 lists were identified by mid-1998.

The World Wide Web (WWW, or just the Web) is where the explosive growth is taking place on the Internet. Any organization that can afford \$100 per month can have a home page on the Web. All of the addresses that start with <http://www> are World Wide Web sites. The World Wide Web was designed to allow graphic transfers of information. Among the most powerful aspects of the Web is the ability to hot link (hyperlink) to related sites on the Web.

The hyperlink capability allows you to surf the net. Hyperlinking is also the area of great interest to the maintenance community.

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FTP (file transfer protocol) was one of the early ARPANet (predecessor to the Internet) capabilities. Using FTP you can visit thousands of computers and copy files to your own computer. These files could be weather maps, programs to solve engineering problems, games, electronic books, bibliographies, or just about anything else. FTP sites allow access to public directories that you can browse (although you have to use the next capability, Telnet, to browse). In the newest browsers, FTP sites are indistinguishable from Web sites. The interfaces look the same. The mechanics of FTP are handled entirely by the browser.

Telnet (the other original capability) allows you to go to a remote computer and act like you are directly connected. You can browse the directory, run programs, or can do almost anything a local person can do. Telnet and FTP were early great applications that made the whole idea of Internet computing powerful and useful. Telnet is common in scientific sites and less common in business.

Search sites are essential in an entity growing as fast as the Internet. These sites are the card catalogs of the Internet. Most of them include robot programs called spiders that periodically search all of the Internet sites for key words and ideas. The search engine's server creates an index file from the spider's walk through the Web.

Newsgroups and forums

The newsgroups (Usenet, Netnews) feature of the Internet is like a giant bulletin board with sections reserved for groups bound by a common interest. One can simply browse the messages on the board, respond to specific messages posted on the board, or post new messages asking for information. By early 1998 there were over 30,000 newsgroups on every conceivable topic.

To find newsgroups of interest, use your newsreader (one comes with your browser) and subscribe to those of interest. Then, each time you use your newsreader, new messages of your selected newsgroups will be available for reading in much the same form as your e-mail. You may unsubscribe when the information is no longer of interest.

Finding useful sites for discussion in the maintenance world requires detective work. One strategy is using search engines. Many of them will search for phrases, keywords, authors, and companies in newsgroups. DejaNews (<http://www.dejanews.com>) is one of the

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more useful newsgroup search engines.

The population of newsgroups changes rapidly. It might take several tries to find a few that are concerned with the problems and issues that you face. If you find one, consider posting a request for other newsgroups or mail lists.

Web-site-based forum or discussion groups are similar to newsgroups but they are more formal, are typically moderated as to what can be posted, and are more focused because they carry out the objectives of the hosting Web site.

The Society for Maintenance & Reliability Professionals operates a forum on its site www.smrp.org in the "discussion" section. A number of reliability and maintenance technology vendors operate forums for users of their software and hardware.

Newsgroups, discussion groups, and mail lists are powerful ways to participate in a field. They provide an important bond between the new people entering the field and the old timers. The groups also provide a community for people with common interests. However, the maintenance profession is in its infancy in the use of these types of resources. There may be a small explosion of forums, newsgroups, and mail lists in the next few years as more maintenance professionals get wired. **MT**

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