Federal Aviation Administration

FAA Reduces Time to Deliver Aviation Safety Handbooks From Months to Days With Adobe Acrobat and Adobe FrameMaker

Adobe[®] Acrobat[®] Adobe FrameMaker[®]



The FAA is replacing a costly paper-based system for distributing its Aviation Safety Inspector Handbooks with a Web-based system using Adobe Acrobat and Adobe FrameMaker software. The move to online document distribution in PDF is reducing administrative costs at the FAA and making critical safety information available in a more timely manner.

Key Benefits

- The time needed to create and distribute safety manuals has been reduced from months to days.
- The combination of Adobe Acrobat and FrameMaker allows the FAA to distribute more information to more people faster.
- Field inspectors can access critical safety manuals in PDF quickly via the Web.
- Updates on technology and regulations can be distributed nationwide in minutes.
- Aircraft manufacturers and airline carriers have immediate access to up-to-date safety information, instead of having to call and wait for materials to arrive by mail.
- Online access to documents in PDF reduces inspectors' administrative tasks, giving them more time to spend in the field.

Few activities inspire—and terrify—people as much as flying. At 30,000 feet with a vista of blue sky, snow-capped mountains, and shimmering lakes, the last thing a traveler wants to think about is an aircraft maintenance problem. Fortunately, the Federal Aviation Administration (FAA) has already done that: its team of 2,400 inspectors work round-the-clock to ensure that airplanes, from the smallest crop dusters to commercial 747s, meet stringent safety requirements long before they ever take off.

Inspectors check and recheck hundreds of systems, including airframe structures, power plants, and electronic flight instrumentation systems. It's the kind of work that gives new meaning to the phrase "attention to detail," with even minor problems causing concern. Valuable resources for inspectors are the Aviation Safety Inspector Handbooks, which consist of three manuals containing more than 6,000 pages. Until recently, the manuals were distributed only on paper—a lengthy and costly process that is being replaced by a Web-based system that uses a combination of Adobe Acrobat, Adobe Portable Document Format (PDF), and Adobe FrameMaker.

Critical Information In Real Time

"These books tell inspectors how to do their jobs and what to look for," explains Wayne Nutsch, an aviation safety inspector who oversees the production and distribution of handbooks, "so up-to-date materials have to be readily available. By authoring documents in Adobe FrameMaker and delivering them online in Adobe PDF, we accomplish in days what traditionally has taken months."

The FAA routinely sends safety handbooks to the Government Printing Office (GPO) for processing. The FAA creates the text and illustrations, and the GPO handles the rest: layout, printing, and mailing. In addition



to the high costs, the time to produce handbooks—two or three months—is problematic because inspectors need current information on hand.

The electronic workflow built around Acrobat and FrameMaker streamlines the process of updating manuals and helps eliminate delays. With FrameMaker, the FAA staff creates documents that have the same professional appearance as those produced by the GPO. Book-building features within FrameMaker streamline the creation of long handbooks by supporting varied layouts and automatically numbering chapters, figures, and tables. In addition, indexes and a table of contents—with links to chapters can be created instantly. The finished handbooks are then output directly from FrameMaker to PDF, with all links intact.

Full-Featured Acrobat

The FAA selected Adobe Acrobat for a number of reasons: compact file sizes, which allow documents in PDF to travel quickly over the Web; the ability to convert documents to PDF without reauthoring; widespread acceptance of PDF; and the ease of downloading Acrobat Reader. But, according to reviewers who evaluated Acrobat, the software's most impressive feature is its ability to retain the exact look of the originals. "We don't lose anything; the page layout, fonts, and charts look the same in PDF as they did in the printed originals—except now we end up with platform- and application-independent electronic files," explains Nutsch.

The first Aviation Safety Handbook went online in December 1997, with others following shortly thereafter. The availability of the handbooks in PDF not only reduces document production and distribution costs, but also simplifies an inspector's administrative work. For example, given the constant changes—technology, new regulations within the aviation industry, inspectors receive hundreds of updated pages throughout the year. The changes are sent by mail, requiring staff to remove sheets from threering binders and add the new information; inspectors often spend a few hours each week simply keeping binders up-to-date.

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> —Wayne Nutsch Aviation Safety Inspector for the FAA

The move to online document distribution, in contrast, reduces administrative tasks and frees up inspectors to spend more time out in the field. Updated handbooks can be downloaded from the Web (*www.faa.gov/avr/afs/ faa/home.html*), while time-sensitive changes are delivered as bulletins as often as necessary. E-mail alerts inspectors to the availability of new information that can be retrieved from anywhere and at anytime.

Saving Time and Resources All Around

The benefits of the online system extend beyond the agency's 2,400 safety inspectors. Aircraft manufacturers and air carriers also rely on the handbooks to ensure that their airplanes pass the FAA's detailed inspections. Key systems are reviewed and tested, with the Aviation Safety Handbooks acting as guides. Online availability of the manuals gives organizations instant access to free, up-todate information. The only other option for receiving this information is to call the GPO, pay for documents to be mailed, and wait a week or longer for the package to arrive.

A third Adobe tool, Adobe PageMill[®] software, also supports the FAA's transition from paper to Web-based document delivery. "It's great at helping us develop basic Web pages," Nutsch says. With PageMill, he designs Web pages and updates the agency's Web site quickly. Nutsch can easily edit text, drag and drop images where he wants, build tables and frames, and maintain the Web pages without writing a single line of HTML code.

"By combining the power of the Internet and Adobe software, we put timely safety information into the hands of FAA inspectors and the public," concludes Nutsch. "With fewer resources and in a fraction of the time, we deliver more information to more people."

Federal Aviation Administration Systems At-A-Glance

Software Adobe Acrobat Adobe FrameMaker Adobe PageMill Microsoft[®] Windows[®] 95

Hardware Pentium[®] processor-based PCs

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