FileOpen for Scientific/Technical/Medical (STM) Publishing

Scientific, Medical, & Technical (STM) Publishing encompasses a broad and complex market, including national standards organizations, universities, libraries, pharmaceuticals, manufacturers, and healthcare providers. While the subject matter they cover may be diverse, STM publishers share some common challenges in protecting their information and preserving revenues:

- STM publishers frequently distribute documents that contain proprietary or private information
- Enforcing the copyright of STM documents is essential to maintaining publishers' revenues
- STM documents are often subject to complex licensing arrangements and dissemination among diverse outlets (libraries, universities, etc.), with little auditing capability
- STM publishers are bound by regulatory requirements specific to their industry which impact their document distribution practices
- The users of STM documents must be able to trust that the information in them is official (from the authoritative source), authentic, and current
- Computing environments are heterogeneous and highly secure at both ends of the publishing relationship, necessitating the use of cross-platform, standards-based DRM solutions

FileOpen DRM Solutions: Ideal for STM Publishing

As early adopters of document rights management (DRM) technology, STM publishers numbered among many of FileOpen Systems' first customers in the mid-1990s. As a result, the FileOpen solutions have rich feature sets that address the particular demands of the STM market.

Built on Standards

The FileOpen approach begins with a standards-based architecture. Knowing the importance of standards to this market, FileOpen built its first DRM solution on the Adobe PDF platform, which had been enthusiastically adopted by STM publishers as a means to move away from costly print-based publishing.

PDF solves the problems of preserving data integrity in an open, standard, searchable file format and displaying in a trusted, ubiquitous viewer. By disabling copying of text and changes to the document using Adobe Acrobat's standard security features, STM publishers can ensure the authenticity of their publications.

Copy prevention and access controls

FileOpen's DRM solutions extend these advantages by preventing the copying, redistribution, and regeneration of PDFs. As an integrated security handler to Adobe Acrobat (per the PDF Specification), the FileOpen client plug-in controls access to PDFs from within the Adobe Reader (or Adobe Acrobat) interface. The Adobe Reader will not display a FileOpen-encrypted PDF unless permission has been explicitly granted by the publisher for that user.

FileOpen watermarking features allow printouts of STM documents to be stamped for authenticity, or dynamically watermarked with auditable user data. Printing restrictions may be placed on FileOpen-encrypted documents to prevent printing more than a designated number of times, or after a certain period of time. These fine-tuned printing controls, combined with watermarking, have enabled several STM publishers to better manage their reprint services.

Lightweight, communicating plug-in

The FileOpen plug-in for Acrobat is easily installed and is already widely in use among STM end-users. FileOpen-encrypted PDF files will be recognized as specification-compliant PDF by IT content analysis systems and/or proxy servers and will not be intercepted by anti-virus programs. After an initial registration interaction, users may access their documents without any password entry required. Because the plug-in communicates with the STM publisher's server for permission for each open and print command, the publisher can easily revoke permissions or grant them anew, as necessary. FileOpen's document expiration features can be used to ensure that users always have the most current version of a document. Publishers may also grant offline permissions to documents so that users can view them in non-Internet settings.

FileOpen's DRM solutions furnish STM publishers with valuable usage data about their documents. Publishers can track when and where documents have been viewed and printed, how many times, and by whom. This audit trail enables STM publishers to monitor and enforce licensing arrangements with third parties.

FileOpen STM Customer Focus: SUBITO

Subito is a service operated by research libraries in Germany, Austria and Switzerland, and was one of the first FileOpen licensees in the STM document delivery market[1]. The Subito service provides an online mechanism for ordering reprints of current STM journals and other research held in the collections of the member libraries, and also retrieves paper documents, many of them historical and unavailable from any other source, from the library archives. These documents are scanned into PDF and delivered for remote viewing and printing. The PDF copies are not licensed for redistribution or other use, and in some cases additional control is mandated by the publishers, so DRM is a requirement for the service. The Subito service implements fine-grained control over the opening and printing of documents, and requires the ability to record all transactions and usage. The ability to meter printing was a key requirement which FileOpen was able to support.

The Subito back-end is operated using a combination of open source and proprietary tools, but the primary computing environment is Linux. So a solution was required that would enable the high-volume encryption of PDF documents on that platform, and the FileOpen software was chosen partly for this reason.

The consumers of Subito documents, who are researchers in academia and industry, use a variety of computing platforms. Accordingly, support for Windows, Mac and Linux at the client end was also an important consideration. The FileOpen implementation at Subito was performed internally using the FileOpen Developer Toolkit and has been operating without interruption since 2004.

The Result: Using FileOpen's control for PDFs with printing restrictions, Subito was able to deploy a high-volume document reprint service to the STM market.

Conclusion

FileOpen's DRM solutions have achieved wide adoption among the publishers and distributors of STM documents because it was originally designed to address a set of

[1] Others include CISTI, INIST, TIB, Infotrieve the British Library, and the Canadian National Library.

problems that is nowhere more critical than in that market. Among these are the requirement for real-time, automated processing of documents on multiple server platforms; the ability for the licensee to generate and retain full control over all metadata, including encryption keys; and most importantly, the opportunity for licensees to maintain complete, end-to-end control of their documents on their own servers.