Why so many Web-based serials (or “e-journals”)? Publishers quickly saw distinct advantages of journals for Web sites.

• They are easily identifiable by title. If you call your Web site “Journal of Religious Ethics,” readers of the printed Journal of Religious Ethics know exactly what the site is about.
• The use of existing volume and numbering systems gives a sense of control and organization to the data (even though the ability to continuously update a site can make the very idea of “volumes” obsolete).
• The organization of journal issues, with their relatively short, discrete pieces of text, melds perfectly with the Web’s structure of interconnected computer files.

How much content is enough?

What publishers quickly realized was that a journal’s Web site did not need to contain the full text of the printed issues. The question of “How much content?” is being explored every day by Web journal publishers, and the answers vary widely.

Many scholarly journals have taken the electronic high road, placing the full text of their journals on the Web. However, more publishers are now choosing to put only portions of their journals on the Web. The most common approaches are:

• Providing tables of contents, but without access to articles. This is an easy solution for journals with limited computing support that want some sort of Web presence. Often the real purpose of such sites is to be an advertisement for the print version.
• Providing tables of contents linked to abstracts of articles only. This requires some editorial work, but gives online readers a sense of each article’s content.
• Providing access to selected articles from each issue. This is particularly common among online newspapers, which usually contain only selected articles from that day’s printed paper. Some journal publishers also favor this approach, fearing that too-broad access will erode their subscriber base.

Along with the above options, many publishers offer additional material not available on paper. Many now
host “discussion rooms” on their sites, so that readers can communicate directly with the journal’s writers and editors, as well as with other readers.

Other titles, particularly newspapers, exploit the Web’s timeliness. *Philadelphia Online*, for instance, which contains the full text of each day’s *Inquirer* and *Daily News*, also posts additional news bulletins throughout the day. Similarly, *Time Magazine* runs a separate Web-only news service, *Time Daily*, on its site.

With such varying levels of content, the problem for librarians is how to decide which sites are worthy of linkage. The Penn Library approaches this question by applying the same collection development criteria to electronic journals as to those in print. All e-journal titles linked on the Library’s home page have been selected by bibliographers, according to established guidelines.

The Library does not link to e-journal sites if they contain too little content, or if the site’s real purpose is judged to be advertising the print edition. The Library also catalogs its e-journals on Franklin, just as it does paper publications, and indicates within the Franklin record any known limits to the site’s content.

How much content for free?

Giving the whole world free access to your journal is fine for scholarship, but it’s not necessarily good business. A growing number of scholarly publishers are now trying to balance their provision of Web-based content with their need to generate income from Web versions.

A major technical drawback of fee-based or contract-based Web sites is the need to limit access to the contracting group—in Penn’s case, current Penn faculty, staff and students. So far, each publisher is coming up with its own variation on access restrictions, involving IP address limits, passwords, or authentication scripts. The Library is quickly learning to handle each of these variations, but hopes the day comes soon when publishers start using standardized security setups.

The Library is linking to several of the more interesting fee-based projects, which exemplify the various pricing tactics:

- **Shareware**: The *Chicago Journal of Theoretical Computer Science*, produced at the University of Chicago and published by MIT Press, is a major new Web-only journal containing significant computer science research. MIT Press has chosen the simplest method of charging for this title: the honor system. The site is freely available to anyone, but MIT asks organizations linking to it to pay a subscription fee.

- **Print & Web combinations**: The Institute of Physics publishes such important...
• Check your system for viruses, which can damage the Windows 95 disks or disrupt the installation.

• Check for damaged files or bad sectors on your hard drive by running a disk-scanning utility like SCANDISK.EXE or Norton Disk Doctor from Norton Utilities. (The Windows 95 installation can do a similar procedure but doing it before the actual installation is an extra precaution.)

• Back up your hard drive so that you can recover your files if the upgrade doesn’t work the way you expected it to.

• Create a bootable disk containing your backup program in case you need to restore the files that you just backed up. This disk should also contain a disk repair utility, like Norton Utilities, and any other utilities you might need, like FDISK.EXE and FORMAT.COM, to repair your hard drive and get it back to its pre-Windows 95 state.

• Run a defragmentation utility to make available as much contiguous disk space as possible.

• Consider investing in one of the new utilities (e.g., Uninstaller 3.0 or CleanSweep) that analyze your system and identify problematic applications, utilities, or lines in the CONFIG.SYS and the AUTOEXEC.BAT files.

The Windows 95 Upgrade package includes either CD-ROM or disk media, and a 95-page book, Introducing Microsoft Windows 95, which is an installation guide and an introduction to Windows 95. The book does not offer detailed technical information about either the installation or Windows 95. The “Backing up your files” section tells you to save copies of your .ini, .dat, and other Windows 3.1 files but implies that backing up your personal data files is optional. This is not the case: The most important files on your computer are probably your personal files (e.g., your word-processing documents, your Excel spreadsheets, or e-mail in your Eudora directory).

The installation can be run from MS-DOS or Windows 3.1. Installation is highly automated: The most typical choices are set as defaults and a mouse click is all that is needed to select them. If you install Windows 95 in your current Windows directory, all program items that you had previously set up in Windows 3.1 will be available in Windows 95. The installation takes 30 to 60 minutes and requires 40 MB of storage.

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physics journals as the Journal of Physics and Classical and Quantum Gravity. IOP plans to have Web access to all its journals within the next three months, at no additional charge to print subscribers. Users can only access the titles subscribed to by their institution.

By including the Web cost in the print subscription price, the Institute avoids one of the hardest problems facing Web publishers: knowing how much to charge. There is no pricing history to guide publishers, yet offering these extra services does cost them money (though no one can agree on how much).

• Package pricing: Project Muse is an impressive effort by Johns Hopkins University Press to make all 42 of its print journals fully available. Currently available are such well-known titles as English Literary History, Modern Fiction Studies, and Reviews in American History. At least 20 titles will be available by December 1996. JHU Press is currently offering Project Muse as a package, with one fixed price for access to all the journals.

One attractive feature of Project Muse is that it doesn’t entirely exclude the general public. Anyone can access tables of contents at the JHU site; only access to the full text of articles is restricted. Another major asset is Muse’s full indexing of articles. A search engine allows you to search for a word in any article in any of the Muse online issues—much broader access than traditional journal indexing provides.

There are literally dozens more publishers that expect to start fee-based Web sites in the next one to three years. Publishers who have announced Web access include Elsevier, Springer-Verlag, and an alphabet soup of the scientific and technical societies; ACM, AIP, AMS, IEE, etc. It is not unreasonable to expect that all the major science publishers will have some form of Web access before the millennium. Which pricing method becomes most common, though, remains to be seen.

The future

With major publishers now plunging headfirst into Web distribution, it seems probable that e-journals will have a permanent place in the scholarly communication system. Which paradigms of coverage and cost will become predominant must be worked out over time by scholars, publishers, and librarians. As these paradigms develop, the Library will continue to proactively select appropriate e-journals, cataloging them fully on Franklin and organizing them for easy access and use.

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