

7 things you should know about...

RSS

Scenario

For several semesters, Dr. Shaw has maintained Web sites for his chemistry courses. Each site includes reading lists and the syllabus, and he also uses a blog on the site to inform students about additional resources and changes to lab times and locations. Each lab group, consisting of five students, also has its own blog, where they report results from experiments. Beginning in the spring semester, Shaw adds RSS feeds to the site—one each for his blog and the lab group blogs. RSS feeds deliver updated Web content to subscribed users, and Shaw tells the students to subscribe to all of the feeds in the course. He also suggests that they subscribe to the chemistry department's RSS feed for its Web page, which includes events and news that might be of interest to the students, as well as podcasts of pertinent lectures, both on campus and from other institutions.

Students subscribe to the feeds using a variety of RSS aggregators, chosen based on personal preference. At regular intervals, the aggregators automatically check for and download new content from the RSS feeds. When they look at their aggregators, the students see a list of all the feeds they are subscribed to and which ones have new content, which they can quickly access through the aggregator. Several of the students are in other classes that also use RSS for course updates. By organizing all of their RSS feeds in their aggregators, those students establish a single point of contact for updates to their classes. Many students also add RSS feeds from other online sources relevant to their coursework, creating a customized, up-to-date resource for their academic work.

Shaw follows the RSS feeds to monitor the progress of the lab groups. Each day he checks his aggregator for new content, and, when he is away from campus, he monitors the feeds on his PDA. With two introductory courses of more than one hundred students each, using RSS feeds allows Shaw to keep tabs on all of his lab groups more easily than he could with e-mail updates from students or by looking for blog updates on the course Web site.

What is it?

RSS is a protocol that lets users subscribe to online content using an RSS “reader” or “aggregator,” which checks subscribed Web pages and automatically downloads new content. The aggregators display a list of subscriptions, with highlighting or another indicator of RSS feeds that have added content since the user last logged in. Without having to go to all of the individual Web sites, users can quickly and easily access new material from sites that interest them. For many, RSS has become the pipe through which content flows from providers to consumers. What makes RSS important is that users decide exactly what content is allowed through that pipe.

Since its introduction in the late 1990s, RSS has become almost ubiquitous. An excellent mechanism for distributing regularly updated content, RSS is a natural complement to blogs, news sites, photo-sharing applications, and podcasts. The popularity of podcasting results on some level from RSS technology. When new podcasts are available, the aggregator (or, in this case, pod-catcher) automatically downloads the new file to your computer or portable music player.

Who's doing it?

Bloggers represented many of the early users of RSS, which has since been widely adopted as a way to share information from virtually any source, including machine data. At both the institutional and departmental levels, large numbers of colleges and universities have incorporated RSS feeds into their online offerings. Peterson's maintains a College and University Feed Directory that catalogs hundreds of higher education RSS feeds organized by topic area, such as admissions, libraries, research centers, and technology. Listed in “research centers,” for example, is a Harvard University *Gazette* RSS feed that provides updates about scientific research conducted at the university. Other feeds relate to scholarship opportunities, calendars of campus events, new acquisitions by libraries, tips for students from university IT staff, and numerous other areas of interest to students, faculty, staff, or alumni.

How does it work?

Making content available through RSS requires adding a small bit of code to a Web site, typically with an accompanying icon that lets users know that the content on the page is available through RSS. Users click on the icon or other RSS link to add a subscription to their aggregators, which allow users to set parameters such as how

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frequently the application looks for new content and how long downloaded items are kept. Rather than checking 20 or 50 or 100 blogs every day, for example, you can subscribe to the blogs' RSS feeds and simply check your aggregator to see new content added to any of them. For some content, RSS feeds deliver headlines and short bits of "teaser" text, driving users to the content provider's site to access the full resource. In other cases, such as podcasts and photos, RSS feeds deliver all of the content to users. If you subscribe to a Flickr feed, for example, new photos added to that feed will be downloaded to your aggregator, where you can access them locally.

In the early days of RSS, users needed separate reader or aggregator applications for their RSS subscriptions. Increasingly, Web browsers and even operating systems incorporate RSS functionality, giving a much wider range of users access to RSS feeds through applications they already use. In addition, devices such as PDAs and cell phones now support RSS.

Why is it significant?

In many ways, RSS answers the question of how to filter and organize the vast amount of information on the Web. Internet users tend to settle on preferred sources of information, whether news sites, blogs, wikis, or other online resources that regularly update content. RSS allows users to create a list of those sources in an application that automatically retrieves updates, saving considerable time and effort. RSS feeds can be offered at varying levels of granularity, further enhancing users' ability to specify exactly what information they want to receive. For example, a college or university might offer one RSS feed for the institution's main news page, sharing information that concerns the institution broadly, and other feeds focused on the college of arts and sciences, the history department, or research being conducted by a professor of European history. Users can subscribe to feeds independently, tailoring the content they receive to their unique interests and needs.

Growing numbers of online resources offer RSS functionality. Because applications such as browsers and operating systems increasingly support RSS, the technology has the potential to become the primary vehicle through which users interact with the Internet. Further, RSS can offer an alternative to e-mail newsletters, which raise concerns about privacy and spam.

What are the downsides?

To take advantage of RSS feeds, users must locate online sources they trust, which can be a time-consuming task. Even if a site is deemed reliable, it may not offer RSS feeds. Moreover, because using RSS depends on making specific choices about which content you see, users who limit their Internet usage to reading RSS feeds will miss the serendipity of pulling up a site's home page just to see if something catches their attention. The flipside of placing limits on the overflow of online information is that you cut yourself off from resources that might prove valuable.

Not all content is appropriate for RSS, such as a published article that is not going to change. Nevertheless, Web pages like these sometimes offer RSS feeds, indicating that appropriate guidelines

for how the technology should be used are still evolving. In addition to several versions of RSS, a competing protocol from Atom offers an alternative technology for the same purpose. Underlying the various protocols are fundamental disagreements among developers about how the tools should work.

Where is it going?

Increasing numbers of Web sites will offer RSS feeds, and RSS enables new ways for data to flow between applications. A course management system, for example, can be configured to send an RSS feed about its current status. If trouble is detected, an update about the problem is sent to users or other systems subscribed to that feed. Mashup applications that combine data from disparate systems can also take advantage of RSS technology to maintain awareness of data updates. Similarly, some social networking sites allow users to add RSS subscriptions to their pages. For instance, a Facebook user can subscribe her profile page to her Flickr RSS feed. When she adds a picture to her Flickr account, that photo is added to her Facebook page (with Facebook acting as the aggregator).

Some services attempt to quantify the number of individuals subscribed to specific RSS feeds, though these numbers are currently only estimates. Tools to track RSS usage—including how many people are subscribed, how many of those subscribers open specific links, and other usage data—will likely become more sophisticated and more accurate as organizations seek to understand the effectiveness of RSS efforts. By enabling new channels of data exchange, as with research data and communities of learners, RSS has the potential to create a stronger connection between knowledge creation with individual learning.

What are the implications for teaching and learning?

RSS provides an efficient way for students to keep in touch with faculty, stay informed about coursework and other academic activities, and follow developments in their fields of study, which for many will be an important skill in their professional lives. The exchange of information that RSS facilitates can also take place from students to faculty or among the students in various courses within a department. Faculty use RSS to help them efficiently use the Internet to exchange disciplinary information and increase awareness of important developments. Many faculty also use online repositories of learning objects to locate educational resources to include in their courses, and initiatives including MERLOT and OpenCourseWare offer RSS feeds that notify subscribers when new content has been added in particular academic areas.