Weblogs, RSS and the Rise of the Active Web

Everyone sees the world through his own eyes. At the last PC Forum, we talked about data as the ultimate raison d’etre for the infrastructure the computer/software industry has built out. This may have been news to the vendors, but the customers knew it all along. Meanwhile, journalists and writers see the purpose of blogging and related content-syndication tools as writing and journalism, but in fact these tools are programming and communication tools that can help the rich data and content that already fill the World Wide Web to become easier to manipulate and more “active.” In short, the tools showed up, and now people are using them for – guess what – data.

Up until now, most applications and tools, other than “office productivity” tools, search engines and some canned (though customizable) applications for calendars, flight bookings, account updates and the like, were the products of professional programmers working for the companies who “own” the data, and who have their own agenda in making it available to consumers on the companies’ terms. But now we see tools to enable users to manage Web content, not just personal content, for themselves.

In this issue, we show how blogging – originally a cross between self-expression and journalism – and its tools have morphed to give users some of the power promised by the so-called Semantic Web. With blogs and RSS, they can construct personal news or commerce portals for themselves or for third parties, track multi-person blog conversations across the Web, or figure out other ways to control their digital environment that we have not thought of yet.
Blogs and RSS are surely not the final form of end-user empowerment on the Web, but they are a solid start. As the World Wide Web showed, things really take off when users build out their own real estate rather than relying on vendors to supply accommodations. The success of the Web was due not to mass production and economies of scale, but rather to distributed development of local content and economies driven by individual passion.

While structured content will still require canned applications, much of the less structured content on the Web is now likely to become accessible to end-users – on their own terms. The Web, HTTP and search gave people access to information; RSS enables them to manipulate how they receive and distribute the information. The useful, innovative, surprising applications that capability will foster are exciting to anticipate. While Google surprised everyone by using links between content to define an invisible, “you-are-here”-centric structure for the Web, RSS aggregators are using links between people (instantiated by blogs) to do the same for real-time text conversations. Other users are exploring commercial applications; what started out as content management has broadened – surely beyond the original design goals, and perhaps even beyond what the software handles best. But the question is not what the software does; it’s what users can make it do. The outlines are just beginning to emerge. . . .

Dan Gillmor, a journalist with vision, is the perfect person to provide the first glimpses of the RSS-based future in the following pages of Release 1.0. Gillmor, currently business and technology columnist at the San Jose Mercury News, joined the Merc in September 1994 after about six years with the Detroit Free Press. Before that, he was with the Kansas City Times and several newspapers in Vermont. He has freelanced for publications including the New York Times, Boston Globe and the Economist magazine, and enjoys teaching and speaking about his trade. Naturally enough, he has had his own blog since 1999, on platforms including UserLand’s and Six Apart’s. He is recognized as influential (we hesitate to use the word “authoritative” in his hearing) on the subject of journalism and its transformation by technology.

– Esther Dyson
More than a decade ago, when Tim Berners-Lee came up with the core technologies that underlie the World Wide Web, he wasn’t thinking of a system that delivers information mostly from centralized servers to individual clients. He believed it would be as important to write to the Web as to read from it, and that the writing should be as simple as writing to a local text file. Commercial interests and the lack of easy-to-use tools delayed his vision for almost a decade, and it remained vastly easier to browse than to post.

In the past several years, the read-write Web finally has begun to emerge. Like other phases of the Net’s evolution, it builds on what came before. Like many other major shifts (how big this one is remains to be seen) it spread from a linchpin technology. This time, it is weblogs, or “blogs” for short, and an ecosystem of standards and applications surrounding them, that will change the equation.

From something of a cultural backwater, blogs are moving into the consciousness of the wider community. They are truly a different kind of communication – a many-to-many blast of reporting, informality and conversation, linked through word of mouth and increasingly sophisticated tools. Newsmakers have come to realize they need to read what bloggers are saying about them and, if they are selling things, their products. Bloggers and other online activists have been credited with bringing down powerful politicians, and they are helping a dark horse candidate, Howard Dean, become a credible contender for the Democratic presidential nomination.

Blogs are getting easier and easier to create, thanks to a rapidly improving set of software tools from a variety of vendors. Businesses have come to understand that blogging tools might be useful in a business context. Weblogs can reach people outside a company, including customers, suppliers and the general public. They can also serve a valuable internal role. “Just as the average human being is said to use only a tenth of his brainpower, so too does the average organization know [only a tenth of] its own story,” says Phil Gomes, co-founder and senior manager of technology programs at G2B Group, a California PR firm. Gomes writes his own weblog and has become one of his industry’s most acute observers of the blogging world. “The determination of what is ‘news’ within a company could certainly be more democratic,” he says. Now, with the impending entry of AOL into the space, weblogs are set to become a mass medium – but not one-way, unlike most mass media.
The active Web

For all the well-deserved excitement surrounding weblogs themselves, something even bigger is emerging. Early in the development of page-posting (blogging) software, programmers incorporated a content syndication format called RSS, which stands for (among other things) Really Simple Syndication. This syndication capability is spawning a content revolution that is only now beginning to be understood and appreciated. It could well become the next mainstream method of distributing, collecting and receiving various kinds of information. If the Web is a content store, the blogging world is a conversation.

The beauty of RSS lies largely in its relative simplicity. It is an XML format created with limited aims, namely to give people the ability to aggregate “news feeds” from a variety of sources, either in a single browser window or in a stand-alone application generally called a newsreader.

In many ways, RSS is just another programming tool, but one that delivers its power to individuals, allowing them to get the content they want when they want it. What we once called “push” – a failed model that forced huge downloads on users who quickly turned it off – may have been brought back to life in a way that fulfills the hopes of its original proponents. While the original idea of RSS may have been to deliver website content in a way that avoids the pop-ups and ads on websites, it is also a way to deliver the sort of content e-mail is often used for in a way that avoids spam. Of course, while RSS has the benefit of obviating advertising, it has the drawback of lacking any visible means of support. That means that RSS feeds may end up with a lot of embedded marketing (including self-marketing by promotion-minded individuals) – or that pretty soon many of them will cost the recipients money.

Weblogs: The Phenomenon

So what is a weblog, anyway? Generally speaking, it’s an online journal comprised of links and postings in reverse chronological order. As Meg Hourihan, co-founder of Pyra Labs, the blogging software company acquired by Google in February 2003, has noted, weblogs are “post-centric” rather than “page-centric”: The posting is the key topical unit, with many posts (and topics) per page – and unlike most websites which have one main topic per page. Weblogs typically link to other Web pages and blog postings, and many support audience discussions linked to the original postings.
Weblogging lives in an area of software and services broadly known as “social software” (see Release 1.0, May 2003). What makes it social is the linking, and the conversations it spawns. Aside from links within the posts, the most common interconnection among weblogs is a blogroll, a sidebar containing links to other weblogs. It signals to readers and search engines that the author finds the linked-to weblogs worth reading. In a sense, blog authors “talk” with each other through their postings, by commenting separately on their own blogs. The discussions can be quite elaborate, not to mention difficult to follow. It’s evident that the blogging world needs better tools to follow such conversations.

Individual blogs run the gamut of topics. One may be a running commentary on current events in a specific arena. It may be a series of personal musings. It may be a purely political tract, as with Joshua Micah Marshall’s TalkingPoints.com. (Marshall deserves some of the credit, or blame if you wish, for Senator Trent Lott’s resignation as majority leader; see below.) It may be pointers to other people’s work or products, such as Gizmodo, a site devoted to the latest and greatest gadgets. Or it may be a constantly updated “what’s new” by a domain expert, such as Glenn Fleishman’s excellent WiFi news and commentary page. Some popular blogging software permits the blog owner to allow discussion postings by readers; many do, but a significant number of prominent bloggers have eschewed the comment feature. At the other extreme, the Slashdot weblog, featuring news about technology and tech policy, essentially is written by its audience.

What the best blogs tend to have in common is voice: They are visibly written by human beings with genuine human passion. This doesn’t mean that more traditionally business-oriented blog postings, such as compilations of press releases, won’t have value; indeed, the genre is rapidly expanding beyond its early character. But what brings readers back to personal weblogs is their individualized perspective. When Groove Networks’ Ray Ozzie explains something on his blog, the reader is gaining insight into the CEO’s way of thinking, not just the company’s products.

**In from the edges**

Until recently, blogs have been noticed mostly in a populist context: the empowerment of people at the edges of our networks. The genre crossed its Rubicon last December, when US Senator Trent Lott, the Mississippi Republican, gave up his post as Senate majority leader. He had publicly waxed nostalgic for a racist past in a speech that went largely unnoticed by the major media. But incensed webloggers, including several on the political Right, hammered away on Lott – and at the nation-
al press for failing to hold him to account. They kept the story alive long enough that Big Media picked it up again, ultimately generating enough bad publicity that Lott felt obliged to step down. Weblogs had claimed “their first scalp,” wrote card-carrying establishment conservative John Podhoretz in the New York Post.

Blogs achieved even wider notice in the mainstream media during the Iraq war. “Warbloggers” galore debated the conflict and posted links to news about happenings on the ground and in the political debate. Postings from Baghdad by a man who called himself “Salam Pax” achieved widespread notice. His audience ranged from average people, who wanted an on-the-ground sense of what was happening, to diplomats and the military. This was the real thing, it seemed, an ear to the ground that brought context beyond the scope of a foreign correspondent. (There was a mini-furor over whether he was real or an invention of someone outside Iraq. He turned out to have been a translator for another journalist. The Guardian in London ultimately hired him to write for the newspaper, and he recently announced a book deal with Atlantic Books in the UK).
While the most popular blogs draw tens of thousands of readers daily, most blogs are conversations among a few people. It’s safe to say that several million people have at least tried blogging. How many do it regularly is unclear, but the best bet is several hundred thousand. From the outskirts of the Internet they’re creating a new brand of media – what Azeem Azhar, a principal in 20six, a European weblog tool company, calls the “eBay-ization of media – everyone can be a buyer and a seller.” Others call it “nanopublishing” – small sites, run by one or a very few people, focusing on a relatively narrow niche topic.

With the tools described below, it’s possible to identify influential blogs on any topic. “These aren’t influential [on a mass-media scale],” notes Azhar. “They are a teenage boy who drives the mobile-phone purchase decisions of his group of teenage friends; or the London yoga practitioner who has 60 or 80 fellow yogi readers on his blog, and who influences their yoga-related purchasing.” The audiences are akin to those of newsletters, whether paper or online. That’s traditionally the province of paid circulation, not advertising. . .

Bloggers are not, by and large, making money from their content production. But business models are emerging. Some bloggers are accepting advertising, following the model of Google’s AdWords. Others have used online “tip jars” to raise funds. In one remarkable experiment, freelance journalist Chris Allbritton asked readers for contributions so he could travel to Iraq to cover the war. He says he got more than $14,000 from 320 contributors.

**Weblog Tools: Click-’n’-Post**

You could count on one hand the number of weblogs until 1999. The slow uptake in blogging wasn’t due to people’s reluctance to put personal thoughts on the Web; the popularity of companies such as GeoCities showed a strong interest in personal sites. To move beyond early adopters, blogging needed a technological breakthrough from the somewhat haphazard early tools. It came in the form of the first dedicated posting tools to hit the Net, in 1999. Blog advocates such as UserLand Software’s Dave Winer and Pyra Labs’ Evan Williams and Meg Hourihan wanted to make it simpler for average people to create their own, personal sites – with text, links and pictures – with tools that didn’t require knowledge of HTML or specialized software such as Microsoft FrontPage or Macromedia DreamWeaver. The user would write in the browser itself, click on a button and, voila, the posting would make its way into a
pre-designed template and out onto the Web. “Edit This Page,” said the button inside the browser: Suddenly the Web was writable.

Weblog-creation tools fall into two broad categories. In server-based, thin-client systems such as Six Apart’s Movable Type and Blogger, the server handles just about everything but the writing; once the blog is set up, all users need to edit and maintain it is a browser. In client-side systems such as Winer’s Radio UserLand, the content is maintained and created on the desktop before it’s posted to Web servers. The most popular blog-creation tools are UserLand’s Manila and Radio, Blogger and Movable Type. LiveJournal, a hosted blog service made for use by groups (and explicitly for a younger, more social crowd), provides a unique and much more complex conversational environment than most other weblog tools because it supports the explicit naming of “friends.” Most blog tools support one or both standard APIs, Blogger and MetaWeblog, as well as Web communications standards such as SOAP and XML-RPC.

Early blogs consisted entirely of text and graphics. As bandwidth improves, more multimedia will find its way onto the pages. Audio blogs are beginning to show up on the Web, as are photo-blogs where users post from camera-equipped phones (often called “moblogs,” short for mobile weblogs), and even – for those with serious bandwidth to use (waste?) – video blogs. Probably the most exciting new area is in mobility: the ability to make quick posts from anywhere to a blog or blog-like site, with obvious implications for journalists and real-estate people, among others. Whether the blog format is appropriate for multimedia is a separate question, but the rampaging experimentation guarantees that we’ll find out.

**Posting in the picture**

As the Trent Lott case made clear, when bloggers get excited about something they can stir the pot in a dramatic way. Several Web developers have created tools designed to discover what bloggers are talking about. One such tool is Daypop, a search engine developed and maintained by video game programmer Dan Chan to keep an eye on links both from traditional news sites and from weblogs. Recently, when Lawrence Lessig, a Stanford University law professor and Internet activist, asked for signatures on a Web petition to Congress, dozens of sites pointed to the petition. It hit the top of the Daypop “top 40” list, and Lessig had more than 10,000 signatures in just a couple of days. Blogdex, an MIT Media Lab project, has similar capabilities but focuses solely on blogs. Technorati, examined below in detail, is a
more ambitious effort, and Google has all the capabilities needed to launch a major entry in this area.

**Blogging Tool Vendors: Bloggers’ workbenches**

**UserLand: Dave 24/7 (until 7/2003)**

(The prospects for UserLand are unclear, with the departure of president and chief operating officer John Robb in early July, following founder Dave Winer’s move to Harvard Law School, where he’s a Fellow at the Berkman Center for Internet and Society.)

Dave Winer, founder of UserLand Software, started writing online because he was weary of what he considered inaccurate reporting by technology publications: The computer press was saying nobody was writing for the Macintosh anymore . . . .

Winer, among others, was doing so, and he couldn’t get people to pay attention. He was in a position to do something about it, and from that annoyance grew some of the pivotal pieces of the weblog puzzle.

Winer started with an e-mail newsletter, DaveNet, which he still circulates to an elite industry audience. Then he started posting his thoughts publicly on his Scripting News website, which became and remains one of the most popular weblogs.

According to John Robb, UserLand’s former president and chief operating officer, the focus of blogging has been personal diaries, “but within a business context it’s more of a Web word processor.”

Before leaving UserLand, Robb told us that UserLand is focusing, from a business perspective, on weblogs running inside firewalls. The current state of the art of internal portals, he says, tends to be a one-way flow of information, not the robust multi-directional flow that modern enterprises must embrace. “There’s no easy way to write back to the intranet,” he said, let alone communicate with other readers of the same site. Weblogs and related tools solve this problem.

UserLand’s Manila, launched in late 1999 as “Edit This Page,” wasn’t the first blogging application for end-users. But it was by far the most powerful. It was a subset of Frontier, the company’s main product, a scripting, database and content-management application. UserLand offered Manila both as a Web-hosted application and as part of Frontier, which a customer could install on his own server and then create
any number of weblogs. Robb called it the only “turnkey weblog solution.” In 2002, the company – funded by Winer, who made money on earlier software ventures – launched Radio UserLand, a stand-alone, Mac (OS X) and PC-based application that costs $39.95 and includes one year of hosting.

Among the major blogging platforms, UserLand’s set of offerings have an unsurpassed range of power and flexibility. There’s very little the user cannot do to tweak the interface and internal workings of the content management.

Robb said Manila is now running inside 3500 corporations and universities. One of the company’s most visible customers is the online magazine Salon, which is using UserLand’s software as a base for reader weblogs running on Radio. Salon and UserLand share revenue from this venture, but haven’t disclosed any details.

**Six Apart: Six [links] together**

Six Apart was founded by Ben and Mena Trott to capitalize on the remarkable success of Movable Type, their weblog software. (The name “Six Apart” is a reference to the fact that Ben and Mena were born six days apart.) Before co-founding Six Apart, both Trott's worked at a small Web-design firm in San Francisco – Mena as a designer and Ben as a developer. Movable Type, first released in 2001 and now at version 2.6, is a standalone blog-publishing application that users download and install on their own servers, rather than a hosted application such as Blogger (see page 14) or LiveJournal.

“Movable Type began as a pet project that I developed in my spare time, because I was unsatisfied with the performance and stability of existing weblog tools,” says CTO Ben Trott. Starting later than other blogging toolmakers, the Trott's could take the core features of a weblog for granted and focus on improving the user experience. As a result, Movable Type offers a mix of customizability and clean user interface that sets it apart from other download-and-install applications.

“From the beginning, we offered Movable Type as donationware,” says CEO Mena Trott. “For personal users, the software is free, and if they like it we ask them to pay what they feel it is worth to them. Almost from day one, the voluntary revenue paid our bills, and these payments, along with $150 license fees for commercial use, have allowed us to develop Movable Type full-time for almost two years.”

One of Movable Type’s most important contributions to the blogging community is not even a product, but rather a spec that the company published in August 2002.
Called TrackBack as a product, the feature allows weblogs to notify other weblogs (or content aggregators) of a post. Think of it as a push version of RSS, actively notifying remote parties of new content rather than waiting for them to spider the site. The remote parties, for their part, need a TrackBack “reader,” another part of the spec that enables them to receive and publish the TrackBack URLs, and to link to them.

For example, TrackBack-user Alice posts a story on her weblog about her trip to Rome – including details about the wonderful hotel she stayed in. Juan takes her hotel advice when he visits Rome. When he returns, he posts his experiences on his weblog – along with advice on a great restaurant near Alice’s recommended hotel (along with a description of the crummy pool at the hotel). Using the TrackBack URL from Alice’s post, he notifies – or pings – Alice’s weblog of his post. His comments are now listed on the TrackBack list for Alice’s post on her blog as well as being posted on his own weblog. Similarly, Nike, for example, could post a routine statement about its labor practices (is it commercial speech or not? the technology doesn’t care) each time it is mentioned in a blog that supports TrackBack.

The Trotts intelligently introduced TrackBack as an implementation of an open spec, encouraging other vendors and users to play. As a result, a critical mass of TrackBack links is emerging, independent of any single vendor or tool. “We know of at least 20 other content-management systems which implement TrackBack, and at least a few hundred thousand users are currently TrackBack-enabled,” asserts Anil Dash, VP of business development.

Due to launch this year is Movable Type Pro, aimed at power users and enterprises, with better features for managing multi-user weblogs and large archives of content. Six Apart has also just launched a preview release of TypePad, a hosted blog service aimed at the personal publishing market, although as with other platforms it will doubtless have enterprise potential.

Six Apart recently closed a funding round (the amount wasn’t disclosed) from Neoteny, a Japan-based venture firm run by Internet entrepreneur Joi Ito. At the same time, the Trotts hired Dash, who previously worked in new media development for Village Voice Media – the parent company of the Village Voice and other alternative weeklies – and who has held senior technology positions in music and television production.
Each of Six Apart’s three products – the original Movable Type, Movable Type Pro, and TypePad – has its own target audience and revenue stream. The original Movable Type will remain donationware with a commercial licensing option. Movable Type Pro will have features that make it better suited to nanopublishing of the sort practiced by Gawker and Gizmodo and to enterprise knowledge-management uses. TypePad is a packaged service that includes set-up, hosting and management for fees ranging from $4.95 to $14.95 per month (with discounts for annual subscriptions), depending on the number of features, such as support for photo albums and advanced site customization.

Though Movable Type has always been free for personal use and its source code is visible and modifiable, it is not full open-source: The license does not permit commercial redistribution.

20six: Speak to me in Bloglish

“We see blogs as mass communications tools for audiences of five to 5000,” says Azem Azhar, UK-based director of 20six, the first commercial blogging platform designed to be multilingual from the start. The company was founded in March 2003 by Stefan Glänzer, Stefan Wiskemann and Christoph Linkwitz, a team of serial entrepreneurs whose most recent project was ricardo.de (now part of QXLricardo), one of Germany’s largest online auction sites. The technology used is based on InfoAsset, a German knowledge-management system developed by 20six shareholder Florian Matthes.

Since its launch, the company has started to host blogs for thousands of customers in Germany, where it was founded, as well as in France, the Netherlands and, most recently, the UK and the US. Localization helps make 20six stand out from the crowd. “We’ve got local interfaces, local support, a local team in each country,” Azhar says.

20six, which has banner advertising, is free to users at the moment. 20six hopes to gain a critical mass of users and add features that will attract paying customers. It recently rolled out XML (RSS) output, aggregation and team-editing and project-management capabilities. The company will roll out a premium version in September, priced at roughly 50 Euros per year and with banner ads removed, says Azhar. A Pro version is under discussion.
One of 20six’s more intriguing capabilities is what Azhar calls a “mobile blogging platform,” well-suited to Europe’s more cell-phone-literate culture. Assuming communications capabilities, users can post Short Message Service (SMS) text messages or Multimedia Message Service (MMS) photos directly onto a blog from their mobile phones. This is potentially a major advance, not just for hobbyists but for certain kinds of corporate users; consider, for example, a real-estate professional sending a picture back to his office’s server. There may be cross-over marketing possibilities, Azhar says: “We’ve been talking to [unspecified European] mobile operators about where we can take this.”

**Interland: Not just for techies anymore**

One of the few companies to offer a blogging tool aimed at businesses, especially small businesses, is Interland, an Atlanta-based Web-hosting and online services company. It acquired Dan Bricklin’s Trellix and its Web authoring software last year. Selling through a variety of partners including Earthlink, Interland offers one of the easiest site-creation tools around for novices, and offers blogging as one option.

Interland’s Business Solutions package targets small businesses that haven’t had a Web presence or that want to beef up currently rudimentary sites. Its edge in this genre is the integration of blogs into the overall website. The weblog isn’t an add-on; it’s part of a consistent look and feel across the site, automatically integrating the interactive aspects of weblogs using site-wide templates.

“Small business people understand the value of a weblog once you explain it to them,” Bricklin, Interland CTO, says. “It’s not as obvious as [the importance of] being in a search engine, even though it can help you get into one.”

Interland’s customers do not appear to be a natural market for blog tools. However, precisely because its website templates slip them in as part of the whole, Interland could in fact be an important avenue for their spread outside their current following. The blogging part of the software lacks the overwhelming flexibility of competitive offerings from UserLand and Six Apart. Then again, small business people rarely have time to tweak code. They may be happy to find something they can set up and use easily without having to do any programming or even customization.
**Pyra Labs: Blogger to Boogle**

The blogging community was electrified February 15, 2003, with the announcement that Google had purchased Pyra Labs, creator of the Blogger software. The small San Francisco company that had created some of the earliest weblog-writing tools was joining the Web’s premier search operation. For Pyra co-founder Evan Williams, the deal (terms weren’t disclosed) was a dream come true. It would give Pyra the “resources to build on the vision I’ve been working on for years,” he said at the time.

Blogger was launched in August 1999. Users had to host their own blogs, using FTP to update. That led to the launch, a little more than a year later, of BlogSpot, a blog hosting service that is free to use, though the weblogs contain banner advertising. Blogger Pro, which eliminates the ads, costs $35 a year. Williams says Blogger/Google is “reconfiguring the product mix,” but doesn’t offer specifics.

The posting interface is clean and simple, though the application isn’t as fully flexible and configurable overall as Manila or Movable Type. An upcoming WYSIWYG interface is an obvious, and necessary, improvement. Blogger will keep a “low-fidelity” interface for older browsers, and will take advantage of technology appearing in newer ones, including cascading style sheets. Another project on the drawing board is to enhance posting capabilities from handheld devices, similar to 20six. It’s a “blog-anywhere philosophy,” says Jason Shellen, the associate program manager for Blogger, who came with Williams from Pyra to Google.

But it’s vital to remember what Google does best: search and link analysis. It’s in that context that Pyra may be most interesting. “Writing and reading are two sides of the same coin,” Williams says. Posting via weblogs covers the writing part, of course. Google could be the missing link to the reading and link-navigation piece of the puzzle. Pyra’s first order of business after the buyout was to upgrade the blog-posting software and to put the Blogger-hosted weblogs on Google’s more reliable servers, but now, enhancing the blog-reading side is high on the new agenda. There’s “a world of services on the reading side we want to help people out with,” Williams says. “We sense that things like search, directory, tracking and rating stuff are the biggest things needed in the blogging world.” Current tools such as Daypop and Blogdex are fairly useful in their own right, but they’re just a hint of what could be done, and Blogger/Google has an inside track on what will come.

After initially causing some controversy with its equal treatment of links from blogs in its search algorithms, Google now understands that blogs are different from other Web content, according to Williams. Part of its vision is to interoperate with other
WHERE ARE THE USUAL SUSPECTS?

America Online: You've Got Blog

AOL has announced its intention to enter the weblog fray with its own offering, called AOL Journals. An early, pre-beta look reveals what one would expect from AOL: a solid, attractive and easy-to-use product. Its strengths and weaknesses are AOL's strengths and weaknesses: Photo-blogging is linked to “You've Got Pictures,” and users can post directly from AIM, but the user interface is more cluttered than other blogging tools (mostly with icons for other AOL services and other branding).

Rick Robinson, AOL's VP for community products, understands that unlike its early bet on IM, AOL is coming late to the weblog party, and emphasizes AOL's interest in playing well with others. Hearteningly, AOL Journals supports RSS out of the box, making all AOL Journals easy to syndicate.

The feature list, though, is of secondary importance compared to AOL's ability to offer a blogging platform to tens of millions of people. If even 2 percent of AOL users take up blogging, that will mean more weblogs than are currently indexed by Technorati (see page 22). AOL chose the name “Journals” because only about one fifth of AOL users recognized the word “weblog” or “blog.”

In keeping with the AOL community tradition, the ability to use the IM buddy list as a kind of watch list for recently published weblog entries will make the product especially valuable for groups who are all AOL subscribers, in the same way LiveJournal is most valuable for clusters of friends or acquaintances who all use LiveJournal. Though there is some hand-wringing in the weblog world about AOL's entry, the likeliest outcome is a colonnaded garden: permeable in both directions but not completely open, and a place where the conversation among AOL Journal users is richer than the conversation between those users and the rest of the weblog world.

Microsoft: Fresh new face in blogdom?

Microsoft's upcoming SharePoint Portal Server is all about group communications, says Erik Ryan, product manager in the Information Worker Product Management Group. Microsoft will offer its own blogging software (in its usual manner, tying one Microsoft product to another). The company says Front Page users will be able to use that tool to create blogs using the new SharePoint Portal Server, but SharePoint won't have its own blog functionality. However, SharePoint is extensible, and Microsoft expects that third parties will use “Web Parts” - customizable components - to create blog tools.

One issue to watch will be the company's traditional business methods. Not only would any move to “embrace and extend” RSS be greeted with boos and cat-calls from the blogging community, but to the extent that blogging will have become commercially significant by that time, such a move by Microsoft would likely serve only to marginalize its own offerings. It doesn't have the online community AOL has, and the tools the blogging community is building depend only on the browser, a capability Microsoft will most likely continue to offer (in the operating system or not). Microsoft hasn't tried to rewrite the SQL standard nor to replace HTML. A successful blogging community probably has no more to fear from Microsoft than SQL or HTML users do.
**RSS: The World Wide Blog**

Don’t think of RSS as just another technology abbreviation. Think of it as a Rosetta Stone to tomorrow’s information – or at least some of it, says Chris Pirillo, founder of LockerGnome, a provider of tech-oriented e-mail newsletters.

RSS was originally developed by Netscape Communications as a spec for companies who wanted to publish their content through the MyNetscape portal. If they applied the proper XML markup to their content, MyNetscape could pick it up automatically and publish it to the portal’s visitors, providing formatted headlines and other pointers, and linking to the original content. When MyNetscape faded, UserLand took control of and responsibility for maintaining the standard. It also decided to have its Radio blogging tool automatically create RSS feeds. Other weblog platforms, such as Blogger Pro and Movable Type, soon followed suit, making the capability nearly ubiquitous among tools targeted at power bloggers.

In various guises, RSS stands for RDF Site Summary (RDF in turn stands for Resource Description Framework), Rich Site Summary or – best of all to explain what’s going on – Really Simple Syndication. RSS is a defined but evolving set of XML tags that – depending on the version – communicate metadata about website content or the content itself. An RSS feed, says Mark Pilgrim on the O’Reilly Network’s XML.com website, “comprises a channel, which has a title, link, description, and (optional) language, followed by a series of items, each of which have a title, link, and description.” Boiled down, RSS is a structured view of information, designed to be parsed and displayed in a variety of ways. Like other Web services, RSS feeds can be extended to add additional information or content in XML tags or to interact with other applications, such as ordering software that might accompany an RSS feed from an online merchant.

Though the Site Summary and Simple Syndication versions of RSS have different internal XML formatting, they serve the same purpose: They expose the contents of any Web page as XML, usually stripped of HTML formatting information. The major difference between the various flavors is how the data is defined, but it’s fair to say that Rich Site Summary focuses (or originated to focus) on delivering headlines with links back to the sources, whereas Really Simple Syndication tends to include more of the content (and perhaps other functions) within the feeds. Many weblog tools allow the blogger to offer multiple RSS flavors of the same content. The effect is to expose the contents of a website without the need for spidering. Whether the concept of RSS succeeds as RSS or in some other form, the basic idea will live on.
From metadata to message

Typical RSS metadata includes elements such as title, summary, author, topic and a time/date stamp, as well as a GUID (for Globally Unique ID). It can also include administrative information such as how often the blog is updated (to help aggregators schedule their crawls), and arbitrary extensions, such as TrackBack links.

Complementary reading tools transform the RSS data into content fit for human consumption, as headlines, listings, tables, blocks of text and the like. These clients come in several forms: a portal that periodically checks with the blogs or other RSS feeds it has subscribed to and republishes them (in a server-server-client model), a simple client newsreader on a user’s PC that likewise checks a set of blogs at intervals to see if there’s anything new, or a function within a larger application suite. The client then downloads the changes and updates (its listings of) content.

Of course, RSS (especially the syndication version) is so extensible that the amount of content downloaded by the reader and the variety of metadata annotating it varies hugely. If you create a new data element called, for example, “rating by Juan and Alice” (and you fill it by reference to Juan and Alice’s blogs), any compliant newsreader can display that information in any format it wants – such as a thermometer, a simple number, a histogram. . .or it can ignore an unfamiliar field completely.

Because RSS feeds use XML to clearly define content, they are a good way to make material available on non-PC platforms such as smart phones and PDAs, as well as providing a way for websites to syndicate content from one another. XML allows programmers to choose how best to display data in the available real estate – unlike HTML, which includes much more specific formatting and display information. While XML has seen some take-up on the wider Web, its use in the weblog world has been nothing short of astonishing.

The messages spread themselves

The automatic integration of RSS by many blog tools has had profound effects on the weblog world. The first and most obvious is that most weblogs are syndicatable by default. While it took years and a good deal of effort for syndication to become common for other sorts of dynamic websites, weblog readers and writers now assume that the content of a weblog may appear in many different guises and contexts. This sort of syndication enables – and simplifies – an assortment of other business models, such as the Lafayette Project’s plan to monitor, filter and publish the contents of many thousands of weblogs (see page 26).
The second immediate effect has been the rise of newsreaders, client software that allows the user to subscribe to the contents of weblogs as feeds. This saves the (human) readers from having to remember to check infrequently updated weblogs, and gathers their potential reading list into one place.

The extensibility of RSS creates the usual benefits and drawbacks. Many weblogs expose only headlines and summaries to newsreaders, requiring the user to click through to the source to read the full text. (Groove’s Ozzie says this is the proper way to handle things; otherwise you end up downloading too much into the newsreader.) The irony here is that the newsreader actually undoes the idiosyncratic feel of many weblogs, by stripping them of visual elements such as layout or logos, as well as eliminating the context produced by blogrolls or the writer’s bio. . .and any ads. The same drawback, or benefit, often occurs with text versions of e-mail newsletters.

Also, newsreaders assign equal weight to everything they display. So the headlines and text from Joe’s Weblog get roughly the same display treatment as material from, say, The New York Times. For some users, this will be entirely appropriate. But others will demand – and vendors will surely provide – more nuanced newsreading tools, with the ability to highlight by topic, by writer, by metrics such as how many other people subscribe to a particular blog (its popularity), or by other parameters.

The world is waiting for such creative approaches, and RSS and related tools will make them possible. Nick Bradbury, who wrote the popular HomeSite HTML editor and site-design tool, has made first steps in that direction with the upcoming “FeedDemon” – a Windows RSS reader that creates a newspaper-like view of RSS content; for better or worse, it controls display details and takes layout flexibility away from the human reader.

The next step in the evolution: Not just for blogs anymore
As exciting as RSS has become in the personal weblog context, its possibilities are vastly wider. Information from all kinds of sources can be syndicated this way. The New York Times makes some of its content available via RSS. Microsoft, while slow to embrace weblogs, latched onto RSS recently in a way that was both useful and that honored the spirit of the community. The company is making available feeds of its Microsoft Developers Network (MSDN) articles, so a programmer can subscribe to MSDN rather than hunting through the Microsoft site. Cisco Systems, similarly, has begun making some material available via RSS. Several sites provide lists and descriptions of what’s available, including NewsIsFree and Syndic8.
Now consider what other providers of information could syndicate their content in this way — and use RSS-based tools to get feedback. Gomes, the PR executive, is especially thoughtful about the corporate possibilities. Obviously, he says, PR people should use newsreaders to keep an eye on trends. But more businesses should use it to expose their own information to others, he adds. “Also consider that the usage logs of the RSS feeds would offer some valuable data, especially if the company offered several channels. The number of unique users and the frequency of accesses could supply volumes of intelligence in terms of what content is most interesting.”

One valuable potential impact of RSS is its ability to replace and thereby reduce unwanted e-mail — if properly used. It is definitely changing the original business model of e-mail newsletter publisher LockerGnome, says founder Pirillo. “RSS is evolving as a replacement for e-mail publishing and marketing,” he says. “RSS sud-
denly makes the Internet work the way it should. Instead of you searching for every-
thing, the Internet comes to you on your terms.”

Press releases also could be transformed. If public relations people start creating RSS
feeds of releases, journalists and the public at large could see the material they want,
and the PR industry would be able to stop blasting huge amounts of e-mail to peo-
ple whose inboxes are already over-cluttered. There will continue to be a use for e-
mail in PR, but the volume could be cut substantially – if PR people can be
persuaded to do so. John Udell, an Infoworld columnist, last year described (in his
blog, of course) a communication he’d like to receive: “Hi, I’m [name], [CTO,
Architect, Product Manager] for [COMPANY] which does [PRODUCT OR SER-
VICE]. I have started a weblog that describes what we do, how we do it, and why it
matters. If this information is useful and relevant, our RSS feed can be found here.
Thanks!” (Your correspondent, who has a publicly posted “Dear PR People” letter on
his website, plans to tell PR people that, as of some date in the relatively near future,
he wants to receive most communications – apart from those that are truly intended
only for him – only via RSS. He won’t hold his breath. . . .)

More radical still, RSS can be used for syndicating different kinds of content from any
source. Most visible in this direction are the new RSS feeds from Amazon (page 27).

**Readers/Aggregators: Blogs Get Clients They Deserve**

Once you’ve got an RSS feed, you need something at the other end to receive it, to
turn the XML back into something a normal human can read. The community’s use
of the terminology is still a little casual, but the main such tool is a newsreader,
somewhat like a special-purpose browser designed to import and list a set of RSS
feeds, and to display a particular one in a window. Obviously, precise design features
vary: how many windows, how long a list, and so forth. Some newsreaders, such as
Ranchero Software’s NetNewsWire – popular among Mac users – are clients that sit
directly on a PC (or Mac); Greg Reinacker’s NewsGator runs inside Microsoft
Outlook, avoiding the need to start up another client application; other readers
operate through a browser from a server.

A somewhat more sophisticated version of the newsreader is generally called an
aggregator. The aggregator can be a user-side client, or it can be the middle layer in a
client/server-client/server arrangement where an end-user client reads RSS feeds
from a server that itself operates as a client receiving (and aggregating) RSS feeds from a variety of sources. Regardless, the aggregator tends to focus more on managing the content from different sources, rather than simply delivering a variety of channels to the user. (Think Internet, where the user actively manages his content, vs. television, where the user switches channels.)

With an aggregator, which typically defaults to sorting headlines from a variety of news feeds by time (latest first), a user can also filter/search for certain keywords, authors, topics or other parameters. The client newsreaders/aggregators perform a useful service, allowing individuals to subscribe to the blogs they want and to analyze various metrics. But what they don’t do is provide individuals with the broader context created by the blogs they don’t subscribe to.

Although the premise of the blog world is decentralization, bottom-up, user-centered content and so forth, the value of the World Wide Blog is in clustering: helping individuals to find like-minded people, or like-interested people of different minds. Aggregators sit not so much in-between as above direct one-to-one communications (e.g. e-mail) and one-to-many communications (e.g. broadcasting or traditional portals).

Hosted aggregating services check stats on a broad universe of blogs and let users (indirectly) use the resulting link structure to find blogs they might like or to understand the context around them. The services, clustered rather than centralized, also manage the nitty-gritty details of combing sites for statistics and updates. (And they ease the strain on the blogs themselves that would result if every user pinged them for himself.) “If this was something you had to do for yourself,” says Technorati founder David Levendel Sifry, “you’d never do it. As a user, you just get to take advantage of it.” That applies both on the aggregator side, and to the fact that most Pro-level blog tools now automatically generate RSS feeds, offering updating services and other metadata that the aggregators can use.

**NewsMonster: Blogs in context**

The browser isn’t dead, though innovation has slowed until recently. Kevin Burton, who was an engineer at Excite@Home and created an enterprise portal for the Apache Project, is using the open-source Mozilla code (also used in later versions of Netscape) as the platform for NewsMonster, the RSS news aggregator he developed. It runs inside the browser on Windows, Mac OS and Linux. It comes in two flavors, the free version and a paid Pro version that costs $29.95. Predictably, the no-cost ver-
NewsMonster Pro is much more ambitious. It drops the advertising, of course, but its advanced features do considerably more.

Burton, who used to do research on distributed reputation systems for OpenPrivacy.org, extracts a variety of data from RSS feeds and blogs in general for two features in the Pro version: a news popularity index and sorting by reputation. The client measures popularity and reputation within the user’s subscription list using several metrics. One is using blogrolls to discover friends of friends. Another is a page rank based on the number of postings about a particular topic and how “important” the poster is (determined by various measures, including the number of NewsMonster RSS subscribers to that blog). Users can also discover and recommend additional weblogs to others in the NewsMonster community (aka customer base).

These views on the data, like the product, are early in their development, but they point the way toward more complex and useful ways to manage the flow of information. For example, Burton says, imagine a “distributed eBay,” where Alice can put a guitar on sale on her blog and Bob, who wants a guitar, finds that she’s in San Francisco (where he lives) and is a friend of one of his friends.

NewsMonster runs on a single user’s machine, but it’s obvious that the kinds of analysis it does would be more interesting applied across the activity of a customer base rather than per user. We would expect NM to have a server-based service that could do this at some point, though the company has not announced such an offering. Certainly, that kind of multi-user analysis is key to the appeal of Technorati, below.

The overall project is open, with source code available to developers. But Burton, who has funded the early development himself from earnings in earlier ventures, doesn’t allow redistribution of the binaries. He’s in the process of setting up a company to commercialize the Pro version.

**Technorati: Mirror, mirror on the wall**

Like many weblog businesses, Technorati started without a formal business plan. The service, which mines rich information about the weblog world, was designed by Sifry to fill a personal need. “I had been running my own blog for about a year, and referrer logs [about site visitors and pages viewed on the site] weren’t enough,” he says. “I wanted to know what people were talking about, and what they were saying
about me, and about the people I cared about.” So he wrote some code to crawl the Web and find out. Since the company got started last November, its database has grown to encompass 770,000 weblogs, and is adding 8000 or 9000 daily.

Technorati’s tools are basically semi-canned queries into a giant, constantly updated database that Sifry likens to a just-in-time search engine. Many of them are so much work-in-progress that they lack formal names – or prices. The service helps people search or browse for interesting or popular weblogs, breaking news, and hot topics of conversation. It also lets them rank people and their blogs and blog-topics not just by popularity – number of blogs linking to something – but by weighted popularity, determined by the popularity of the linking blogs. You can also see not just the most popular blogs, but the fastest-rising ones: I.e. if Juan is cited by 100 blogs already and adds three, no big deal. But if Alice, cited only five times, gets mentioned by three new bloggers, that is a big deal. There’s also a buzzmeter, for determining how fast you are rising – or cooling off.

The core intuition behind Technorati might be called the Google Hypothesis: Link structure matters. Knowing who is linking to whom can take a seemingly random collection of weblogs and extract a highly structured set of information. This information can then be filtered in a variety of ways. The original Technorati application was the “Link Cosmos” – what Sifry calls “an annotated listing of all weblog sources pointing to a site [blog] in recent time.” Type in the URL of a weblog (or an individual posting), and the engine shows a list of weblogs pointing to that URL, sorted by time of linking or by “authority” – the “most popular” linking weblog is ranked first. Searching on any linking weblog will show its Cosmos as well, and so on. (Imagine what this would look like displayed as a web of links. Inevitably, someone will offer such a tool.)

In addition to the Cosmos, the Technorati data can also be expressed as ordered lists. The Top 100 list, for example, shows the hundred most popular sites on the Web (whether weblogs or sites such as Slashdot), based on the number of outgoing links from blogs. Though Technorati’s algorithms are simpler than Google’s, Technorati is able to offer the blogging community what Google offers news junkies with the Google News site – timeliness. Because the weblog world moves so fast, it’s helpful to know when something was posted. Technorati’s Current Events list, for example, contains the items most linked to in the last three hours, whether serious news or a Matrix trailer.
Breaking News is a similar list, but limited to items that appear in traditional news outlets such as CNN or The New York Times.

Sifry is still experimenting with these sorts of lists: “I’ve started using the Technorati database as a huge collaborative filter on world events. There’s no reason why this analytical capability can’t be used to discover and filter other areas of interest.” Also, he notes, you could “thread the Web” and follow links to find the source of a rumor: “Then you have to decide: Do you give him a free vacation, or a cease-and-desist?”

Other services, such as Daypop or Blogdex, also use collaborative filtering to rank weblog links by popularity, but for a smaller subset of weblogs. Technorati further differentiates itself by making public its APIs, creating “a platform for developers who want to tap into explicit and implicit social network information,” says Sifry.

“There are opportunities to resell the data to media companies, PR and marcom departments in big companies, and to branding companies,” Sifry says. His goal is to launch every new service as a Web-based interface and an API at the same time. He reports that Technorati is already being integrated into RSS newsreaders, and Movable Type now has a plug-in that allows blog sites to display their Technorati Link Cosmos (down to the posting level) inside the blog content.

As with many businesses that start by accident, Technorati’s revenue streams are still in flux. In addition to re-selling data to media-focused clients, the company has sold 2000 subscriptions to its Watchlist service: Users enter a set of URLs and are alerted whenever those sites or pages are updated or linked to from the weblogs Technorati knows about. The subscribers pay for the convenience of an automated feed; they can get the information for themselves for free at the Technorati website. “At just $10 per year per person,” he notes, “it already pays for all of our own hosting costs. We’re also working on reselling the Watchlists through domain registrars, for example,” says Sifry, a model that saves Technorati from direct sales efforts while providing broad availability.

The company has just expanded 100 percent with the addition VP of sales Dan Beldy, formerly a partner at Hummer-Winblad Venture Partners. It seems there is a business in there somewhere!
**Feedster: Less is more**

Feedster also crawls the blogosphere, but co-founders Scott Johnson and Francois Schiettecatte focus on supporting keyword search rather than discovering the structure of the blogosphere; think of it as the Google of RSS feeds. (It’s clear that the company does: The Feedster website is remarkably similar to Google’s.) Prior to Feedster, Johnson founded Ntergaid, which made hypertext publishing tools that included a search engine, in 1987. He sold it in 1996 to Dataware, running its knowledge-management unit for more than three years before becoming VP, engineering at Mascot Network, a provider of higher-education portals. Schiettecatte sold the search engine ScienceServer to Elsevier Science, a division of Reed-Elsevier, in 1999. Both Johnson and Schiettecatte worked as information retrieval consultants before co-founding Feedster.

Unlike Technorati, Feedster crawls only the RSS feeds, not the blogs themselves. As a result, a keyword search on Feedster returns a link to the actual posting, while a search on Technorati returns only the blog homepage (and might be listed because of misleading metatags rather than the visible content), leaving the searcher to find the actual post in the blog archive. “Given the known problems with people spamming HTML search engines and the amount of resources that even companies like Google put into fighting this, I’m more convinced than ever that our feed-centric approach is the correct way to go,” says Johnson. A drawback is that not all RSS feeds include entire postings, something Feedster intends to remedy by creating what Johnson calls a “synthetic full-content feed” of individual posts by following the RSS pointers back to the actual postings and indexing them, too (while still avoiding other blog-page content).

Feedster offers a variety of sorting options, including dates and extensive search operators, with RSS feeds from more than 160,000 blogs now being indexed. The service also has special tools for bloggers including “trusted blog search” that lets readers search only their own blog and any blogs that they read, as well as a filtered search that leaves out specific blogs.

The company, based in Newton, MA, is a three-person bootstrap operation. Like Technorati, Feedster is making deals with other RSS vendors such as Bradbury Software, NewsMonster, NewsGator and BottomFeeder, to allow its searches to be called from several newsreaders and aggregators. The company, already earning revenues from text-matched advertising, plans to offer special options such as custom
feeds and to outsource search to portal sites. Another idea is to create a composite list of one’s own searches and turn that into an RSS feed itself.

As with Technorati, some business risks and opportunities seem evident. Should Google decide to create an RSS-only search, Feedster will feel serious pain. On the other hand, perhaps Google (or Yahoo! or Microsoft) will conclude that RSS search is a feature that it should buy rather than develop internally – and Feedster is an obvious candidate for such a purchase.

**Lafayette Project: Market-makers**

Nick Denton likes weblogs and understands their power. A financial journalist turned entrepreneur (he founded the superb Moreover.com syndicated news site), he has turned his considerable talents to nanopublishing. This has taken early shape in the form of several notable commercial weblogs, including Gizmodo and Gawker, a gossip site about the New York City media scene.

Most recently, Denton has teamed up with Meg Hourihan, co-founder of Pyra Labs and a well-known blogger, on an RSS-related project they want to take beyond Moreover. Stand-alone RSS readers are fine for what they do and for techies, say Denton and Hourihan. But to ask average people to go out and download one, install it and then figure out how to subscribe to RSS feeds is asking a bit too much. Besides, the sheer number of weblogs has gotten too massive for a single person to navigate in any sensible way. “The content out there is becoming unmanageable,” says Hourihan. “Today’s solutions won’t scale.”

Hence the Lafayette Project (see **RELEASE 1.0, MARCH 2003**), a code name that will change before launch. In its first incarnation, it is to be a browser-based RSS reader, a meta-weblog that users will be able to customize for themselves. Hourihan says users will be able to designate their favorite weblogs, import bookmarks and more. Newest material will show up (with links) at the top of the page, as with a standard weblog. As with other RSS reading tools, the idea is to “make it easier to read sites you already like,” she says.

A soon-to-follow version will make recommendations based on what other LP users like, calculated by analyzing the relationships between weblogs – via links, blogrolls, and so on. Denton and Hourihan want to leverage recommendations into “some-
thing much more encompassing, bringing serendipity and focus to the same pages” and giving users much more flexibility in finding valuable information. Eventually, bloggers will be able to opt in to be listed in the community and to be contacted for commercial purposes.

Denton stresses that this isn’t about renting names, but “more about bloggers saying whether they want to receive review copies of books or CDs, invitations to openings, early warning on stories, or press material on specific subjects of interest.” The service sounds targeted to information brokers or PR people, a world Denton is familiar with. “We’re all marketers,” he says. “We all need to identify influencers and contact them. For instance, if I do an article on eastern Europe, it would be useful to alert bloggers who write on that subject. Good for them, good for me.”

Consider the possibilities for marketing, he continues, notably for “marketers who are inclined toward a PR-centric word-of-mouth strategy.” He offers an example: A maker of high-end bicycles can’t effectively advertise in mass-audience newspapers or television, and the coverage from bicycle magazines doesn’t meet the manufacturer’s needs either. Without the resources to hire an expensive PR agency, the bicycle maker might look online for “the 15 people most influential in writing about bicycles and extreme sports – to identify who writes about this stuff, who’s listened to [by the Web community] and who spreads memes,” and approach those bloggers for coverage. For a fee, Lafayette would broker the initial interaction, finding bloggers who meet the bicycle maker’s need and asking them if they want to be contacted.

**Aggregating Amazon: An RSS runs through it**

RSS isn’t just for the little guys, for news or for marketing. It can also foster sales. In fact, Amazon has picked it up as a way to make its Web services more accessible to more people. It has been offering various kinds of functionality and access to product data through Web services to developers, Associates (affiliate marketers), buyers and sellers for about a year now. One thing you can do with Amazon Web services is create RSS feeds that notify end-users of information about Amazon.com products. To make creating and using Amazon.com RSS feeds easier, the company started offering “Amazon.com Syndicated Content” in late July.

The response has been immediate and enthusiastic, says Jeff Barr, Web services technical program manager and formerly the first VP of engineering at KnowNow; he joined the company a year ago specifically to work on Web services. “It turns on a light bulb inside developers’ heads,” he says. RSS is a way to make the use of Web ser-
ervices incrementally easier; any developer can subscribe to a feed, customized by a variety of typical parameters (author, sales status, price, topic, category, etc.). And, says, Barr, developers are already building tools to help other people find or build their own feeds. “These things are popping up out of the woodwork,” says Barr.

A developer can use Amazon Web services to create feeds and end-users can subscribe to Amazon.com’s RSS feeds via news aggregators. An Amazon.com Associate can also get commissions for any sales he generates by adding his Amazon Associates ID tag to the feed. Or someone can build feeds for others as a (paid) service. Business models vary. (Meanwhile, developers need to sign up to use Amazon Web services, but the program is free. Amazon has 30,000 registered developers so far. Business partners, independently, need to sign up and meet certain minimal criteria to receive commissions as Amazon Associates, of which there are now 900,000.

As with RSS in general, nothing is possible now that was not possible before, but it is much easier. Users can subscribe to feeds developed by server-aggregators such as Rory Blyth at neopoleon.com. Users of his RSS4C (RSS for Charity) can select and customize from a variety of options. Neopoleon then returns a URL – with the invitation “your feed is ready, my dear…” – for the user to paste into his own reader and – voila! – a readymade feed of Amazon products. (The URL is specific to Neopoleon and generates commissions from Amazon.com; Blyth sends the proceeds to charity.)

It’s hard to measure the specific impact of RSS on Amazon’s business, says Barr. “To us, it just looks like a use of the Web services interface.” But it is an increasing portion of the 6 to 8 million Web services calls a day that Amazon gets. It’s a great way for Amazon to extend its reach and make life easy for Associates.

It’s wonderful to see Amazon “get it” and open up its powerful capabilities – and its products – to the world at large. Why don’t, say, Wal-Mart, eBay and the airlines immediately follow suit? There’s a tension here that reflects more than just the character of a single company. Companies that sell products from inventory make money by selling them, so they welcome visibility and make their money off the margins. They are likely to welcome the world of blogs and feeds and transparency.

By contrast, other companies have different business models and attitudes. Wal-Mart, for example, may not think it makes much sense to expose its offering to a broader market (or a narrower, more techy one) since it already reaches a large percentage of the US population, and its margins may not support the kinds of commissions Amazon offers to Associates (5 to 15 percent).
EBay, for its part, makes money by bringing people in to trade. . . . In theory, and there’s no reason it couldn’t use constantly updated RSS feeds to bring in more traffic. However, it may be concerned about losing control; it wants to make sure that customers buy through eBay (rather than just from its sellers). Would people see the RSS feed and then try to bypass eBay (despite various anonymizing features)? EBay, too, is unlikely to embrace RSS – and ultimately could be most transformed by it.

Finally, the transparency and broad distribution of RSS feeds only add to the loss of price control for airlines and hotels. In the past, they explicitly segmented their markets with obscurity, offering different prices and terms to different audiences with different levels of price sensitivity, and changing them frequently. But transparency is already catching up with them.

**RSS: Radical, Simple and Stupendous**

Ultimately, the impact of RSS will stretch far beyond the news space, but even this arena has barely been explored. RSS, with its structured form, may help solve an increasingly vexing problem – getting information to various kinds of devices that have wildly varying user interfaces, everything from mobile phones to personal computers. Using RSS, a mobile phone will know to pull down just the headline and summary, while a PC browser or newsreader would scoop up all available content.

Given how much Google accomplished with raw text and links, moreover, imagine what we can do when we add the kind of metadata RSS can manipulate. Webloggers are keen to have threaded “conversations” across blogs, to include the kind of tangential topics, agreements and disagreements that are found today mostly by trial and error. RSS has a date stamp, which newsreaders and authors will use more effectively over time. And developers and users will come up with more: Anything Juan can define, Alice can use as a parameter or criterion.

Already, creative people are taking advantage of the new capabilities, as Blyth’s RSS4C shows. The possibilities are almost limitless, if retailers such as Amazon work with other sites to add value. For instance, Amazon’s product feeds could be linked with a relevant discussion group. Vendors could route news – product recalls and

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enhancements – through Amazon, and so on. RSS is surely part of tomorrow’s open, loosely joined commerce.

Anyone either looking for a job or posting a job opening could create or subscribe to a relevant, filtered RSS feed...and so could anyone in search of any other kind of thing commonly listed in classified ads – or on eBay, for that matter. For now, eBay has its reputation system and a lot of other infrastructure to protect it from competition, but we can also imagine RSS-based reputation systems. Every time someone sights (or cites) Jennifer Lopez, a watch list somewhere could spread the news.

Ultimately, says Technorati’s Sifry, the connections among physical and virtual spaces offer opportunities for innovation: “The utility of having a webcam that automatically posts a picture of its environment via RSS whenever a motion sensor is triggered is not very powerful in and of itself, but when combined with the mix-and-match qualities that a standardized metadata format provides, the potential for powerful new applications really emerges. How about getting an alert whenever your backyard motion sensor goes off? That’s easy. But what about combining that with the feeds from the other cameras in your neighborhood? How about taking the aggregate information from traffic cameras to be able to more effectively predict traffic flow during rush hour? How about entirely new industrial applications made possible because the sensors are all describing information in the same format?”

All these applications were possible before RSS, but RSS makes them easier for people to build – and for people from different places to patch together. In short, RSS is making the Web writable and programmable. Weblogs were the surprising catalyst, and RSS is moving us toward a Net that truly is comprised of “small pieces, loosely joined,” as David Weinberger put it in his book of that name.

We may well be on the verge of explosive new capabilities, not just for assembling content from multiple sources, but for assembling content-rich applications – a kind of poor man’s Web services that normal people can actually use.

RSS is probably not the best possible framework long-term for a variety of applications, if only because just what it is remains up in the air and the volatility of the community that spawned it is likely to keep it up in the air for quite a while. Nonetheless, RSS will spawn a host of new enterprises and cause creative juices to flow in older companies. It could also spur the creation of other tools and protocols to carry things even further. This news is just starting to be written.
Resources & Contact Information

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Weblogs and tools:
Tim Bray's weblog: http://tbray.org/ongoing/
Buzz Bruggeman's weblog: http://65.33.41.168:8089/
Conversations with Mr. Safe: http://tbray.org/ongoing/When/200x/2003/06/19/RSS4All
FeedDemon: http://www.bradsoft.com/feeddemon/index.asp
Glenn Fleishman's WiFi weblog: http://80211b.weblogger.com/
LiveJournal: http://www.livejournal.com
NewsIsFree (news site and RSS directory) http://www.newsisfree.com
Ray Ozzie’s weblog: http://www.ozzie.net/blog/
Salam Pax weblog: http://dear_raed.blogspot.com/
Syndic8 (RSS directory): http://www.syndic8.com
Jon Udell’s weblog: http://weblog.infoworld.com/udell/

For further reading:
RSS-DEV Working Group (RSS 1.0): http://groups.yahoo.com/group/rss-dev/
RSS 2.0: http://blogs.law.harvard.edu/tech/rss
Wiki on Echo/Atom: http://www.intertwingly.net/wiki/pie/FrontPage
Dan Gillmor's "Making the News" website: http://www.dangillmor.com/mtn.htm
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