Elsewhere

From the Newsstand

Internet & Society

Information Week
www.informationweek.com
10 Sept. 2007
“Net Neutrality Dismissed,”
by K.C. Jones
In a filing with the US Department of Justice (DoJ) in September, the US Federal Communications Commission (FCC) indicated that net neutrality could hurt Internet innovation. The DoJ said any net neutrality regulations that the FCC puts in place could limit investment in broadband expansion and consumer choice. It also compared charging more for better performance to the US Postal Service charging tiered rates for various delivery options. “It may make economic sense for content providers who want a higher quality of service to pay for the Internet upgrades necessary to provide such services,” the FCC wrote.

Mobile & Wireless Computing

Information Week
www.informationweek.com
16 Oct. 2007
“A New Wireless Frontier,”
by Frank Washburn
Plans are in the works for the US Federal Communications Commission (FCC) to auction slices of the 700-MHz spec-

PC Magazine
www.pcmag.com
16 Oct. 2007
“The Mouse or the Remote?”
A recent IBM Research study revealed that Americans spend more time online than they do watching television, with 26 percent of respondents spending more than six hours a day surfing the Web. The survey included respondents from five countries: the US, Australia, Germany, Japan, and the UK. All five countries had a higher percentage of respondents online for four hours or more than respondents watching TV for the same amount of time.

The survey asked only about personal time spent on the Internet or watching TV, so respondents weren’t supposed to include time spent online for work, but they could include personal surfing while at work.

Mobile & Wireless Computing

Information Week
www.informationweek.com
3 Sept. 2007
“Who Owns Wireless Tech?”
by Richard Martin
As enterprise users — already uncertain about the emerging wireless local area network (WLAN) market — begin to make critical decisions about their WLAN infrastructures, two patent disputes over wireless network technology are under way.

In June, a US district judge granted the Commonwealth Scientific and Industrial Research Organization (CSIRO) an injunction against Buffalo Technology, a WLAN equipment maker, regarding Wi-Fi technology patents. CSIRO, an Australian science agency, is also involved in three other patent disputes with tech companies. And in August, Motorola filed a lawsuit claiming Aruba Networks violated four patents held by its Symbol Technologies and Wireless Valley Communications subsidiaries. Two patents involve 3D representations for WLAN management and design; the others involve WLAN switching technology.

Information Week
www.informationweek.com
17 Sept. 2007
“Mobile Web for the Masses,”
by Richard Martin
The iPhone’s success, with its full Safari browser, together with increased pressure from commercial customers looking to offer mobile browsing to their employees, might be creating an opportunity for the Opera Mini Web browser to capture a larger market share.

Opera Mini users view 1 billion pages a month on its low- to mid-priced cell phones. The latest version — Opera Mini 4.0, which is easier to use and offers faster downloads than earlier versions — provides users with an almost-full browsing experience on mass-market cell phones.

In addition to Safari, Opera Mini’s other primary competitors on high-end phones include Nokia’s Konqueror, which is based on JavaScriptCore and open source WebCore, and Windows’ mobile Internet Explorer.

PC Magazine
www.pcmag.com
16 Oct. 2007
“A New Wireless Frontier,”
by Frank Washburn
Plans are in the works for the US Federal Communications Commission (FCC) to auction slices of the 700-MHz spec-

Alison Skratt
trum currently used by analog TV, which might mean cheaper and faster wireless broadband services with download speeds up to 5 mbit/s per second faster than Wi-Fi.

Uncertainties are involved, however. First, the plan for analog TV signals to stop in early 2009 in the US must actually occur. Second, wireless capabilities will depend on how the FCC sells or licenses portions of the spectrum.

When the spectrum does go silent, it will create a third broadband conduit into US homes that has “no noise, no interference” because the FCC hasn’t licensed anyone to broadcast anything but UHF in it. Also, most of the infrastructure required for broadcasting wireless broadband within the 700-MHz spectrum already exists, meaning spectrum owners won’t have to build it, just negotiate for space on existing towers.

Google has already said it will bid at least US$4.6 billion for a part of the spectrum. AT&T and Verizon have also expressed interest. The auction is scheduled for January 2008.

Widgets can help an RIA interact with client systems to do things such as read files or check how much memory is being used. The authors point out that widgets also use client-only resources and let programmers avoid the costs associated with developing a functional utility program from scratch.

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**Programming & Development**

*Dr. Dobb’s Journal*

**www.ddj.com**

**September 2007**

“Widgets and Rich Internet Applications,”

by Dana Moore and Ray Budd

As the popularity of rich Internet applications (RIAs) such as Gmail and Flickr continues to expand, Moore and Budd suggest programmers consider using desktop widgets with RIAs to significantly enhance the user experience.

RIAs combine Web applications with traditional desktop applications, moving some of the processing to the client. Moore and Budd explain that widgets are low-cost, lightweight client applications that can “bridge the gap between the RIA and the desktop.”

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**Technology Review**

**www.technologyreview.com**

**September/October 2007**

“TR 35: 2007,” by Jason Pontin, Wade Roush, Neil Savage, David Talbot, Kate Greene, and Erika Jonietz

Since 1999, the editors of Technology Review have selected 35 innovators under the age of 35, whose inventions and research they find most exciting. Of the 35 winners for 2007, seven are involved with the Internet:

- Garrett Camp, the architect behind StumbleUpon.com. This downloadable toolbar gives users the opportunity to surf more than 10 million interesting sites that their friends or other users with similar interests have “stumbled upon.”
- Tadayoshi Kohno, an assistant professor of computer science and engineering at the University of Washington. Kohno invented systems-oriented provable security, which examines all things at the systems level.
- Tariq Krim of Netvibes, a free Web service that lets users build customized, dynamic Web pages based on their interests. The pages can include a variety of modules from search modules to blog RSS feeds to competing news sites.
- Anna Lysyanskaya, an assistant professor of computer science at Brown University, who helped improve online privacy by developing a secure Web site login method that uses zero-knowledge proofs. She also created algorithms that avoid the enormous computing power usually required by zero-

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**IEEE Pervasive Computing**

**www.computer.org/pervasive/**

**July–September 2007**


The opportunities for supporting pervasive document access and sharing are greater today than at any other point in the past, thanks to wireless networks and devices and the Web. However, coverage remains uneven at best.

In an effort to address this, Trevor and Hilbert created AnySpot, a “Web-service-based platform for seamlessly...”
Elsewhere

continued from p. 11

connecting people to their personal and shared documents wherever they go.”

AnySpot lets users access and share resources in any filesystem remotely by using a range of wired and wireless devices. As a result, users can tap into networked resources from their PCs at home, Internet terminals and wireless hotspots, or print shops. They can also use shared-document and mobile devices to share documents while on the road.

Trevor and Hilbert say they chose a service-oriented architecture based on Web services to extend their platform and include a range of clients, networked services, and file sources. They describe AnySpot’s design and detail their efforts to deploy AnySpot in a large, multinational organization.

IEEE Software
www.computer.org/software/
September/October 2007

“Ajax Frameworks for Interactive Web Apps,” by Nicolás Serrano and Juan Pablo Aroztegi

Since 2005, developers have been using Asynchronous JavaScript and XML (Ajax) to create dynamic Web applications such as Google Maps and Netvibes in which the user interface mimics that of desktop applications. The Ajax features in these applications require detailed coding, but a variety of Ajax frameworks can help.

One of these, the Google Web Toolkit, is well documented. Serrano and Aroztegi review various other Ajax frameworks that make it easier to create applications that use the Ajax features increasingly demanded by users. These include

• Direct Web Remoting, a Java open source library that lets a browser’s JavaScript access an application’s server classes. Serrano and Aroztegi use it to create editing windows in which users can edit data and look at other records without reloading a form;
• Rico, a JavaScript toolkit with controls that support Ajax that has served as a base to create an enhanced grid to let users edit data in cells and sort records; and
• Dojo, another JavaScript toolkit that makes it easier to develop rich Internet applications.

“Seaside: A Flexible Environment for Building Dynamic Web Applications,” by Stéphane Ducasse, Adrian Lienhard, and Lukas Renggli

Web application development poses several key challenges, among them the fact that go-to statements in a program can hamper the reuse of pages in other parts of the application and the limited support in Web application frameworks for creating a range of parts on the same page.

Ducasse, Lienhard, and Renggli review these difficulties and describe Seaside (www.seaside.st), a highly dynamic framework they created for developing Web applications in the Smalltalk programming language.

The authors chose Smalltalk, with its dynamic nature and reflective capabilities, because it allows Seaside to have multiple control flows active simultaneously on the same page. Also, they say there’s no need to restart Seaside application servers after each modification, so developers can troubleshoot and update applications “on the fly,” shortening development time noticeably.

knowledge proofs to generate and test credentials more efficiently.

• Kevin Rose, founder and chief architect of Digg, a news site that aims to democratize digital media by featuring user-selected stories. Users post stories, then the Digg community votes on whether they like them or not, resulting in a constantly shuffling list of what interests users most (see IC’s special issue article about Digg on p. 16).

• Luis von Ahn, an assistant professor of computer science at Carnegie Mellon University. Von Ahn created CAPTCHAS, or Completely Automated Public Turing Test to Tell Computers and Humans Apart, which appears on screens as strings of distorted characters that users are asked to type in to prove they’re human and not malware. Von Ahn created CAPTCHAS for Yahoo in 2000 to battle automated email account registration. Now, he’s trying to use CAPTCHAS to help digitize millions of books to make them searchable online.

• Mark Zuckerberg, Facebook CEO. The social networking site started in 2004 as a way to share personal profiles and photos with other Harvard students.

The list, which took the magazine’s editors almost a year to compile, was whittled down from 300 nominees.

Web Services

Visual Studio Magazine Online
www.visualstudiomagazine.com
September 2007

“Creating Ajax-Enabled Web Services in .NET,” by Dan Wahlin

When a browser and a Web service exchange data, it usually involves the latter sending XML messages that conform to the SOAP specification, which requires XML parsing. Unfortunately, XML parsing support varies widely in browsers and is very limited on Internet Explorer.

Wahlin details a method for overcoming this challenge: exchanging messages using JavaScript Object Notation (JSON) instead of SOAP because support for JSON is included in all major browsers. He also explains how users can let .NET Web services handle JSON messages and create Web services that can interact with Asynchronous JavaScript and XML (Ajax) applications.

Alison Skratt is a freelance writer based in Connecticut.