Building on the momentum and excitement of the O'Reilly Peer-to-Peer & Web Services Conferences



O'REILLY® EMERGING TECHNOLOGY CONFERENCE™

Building the Internet Operating System

MAY 13-16, 2002 · WESTIN SANTA CLARA, SANTA CLARA, CA

"Peer-to-peer and Web Services are only the first steps towards the emergence of a distributed Internet operating system a new platform for next generation applications that are device and location independent, and provide increasingly transparent services."

- TIM O'REILLY, FOUNDER & PRESIDENT, O'REILLY & ASSOCIATES, INC.

EARLY BIRD REGISTRATION ENDS MARCH 22, 2002
REGISTER TODAY—SAVE UP TO \$695!

conferences.oreilly.com/etcon

Special Conference
Sneak Preview
Inside!



TIM O'REILLY



RAEL DORNFEST

Building the Internet Operating System

O'REILLY' EMERGING TECHNOLOGY CONFERENCE

MAY 13-16, 2002 SANTA CLARA, CA

KEYNOTE SPEAKERS INCLUDE:

ADAM BOSWORTH

VP of Engineering, BEA Systems, Inc.

STEVEN JOHNSON

Co-founder, Feed;
Author of Emergence
and Interface Culture

Dr. RICHARD F. RASHID

Senior Vice President, Research, Microsoft

Dr. Robert Morris

Vice President, Personal Systems & Storage; Director, Almaden Research Center, IBM Research

An Invitation from Tim O'Reilly & Rael Dornfest

Peer-to-peer, Web Services, and frameworks like Microsoft's .NET are just the tip of the iceberg. We're moving from a world of standalone devices, each with its own local operating system, to one in which every device is networked and applications are routinely built to rely on remote services. The race is on to define a next generation Internet operating system, because if one thing is clear, it's that whoever controls the application frameworks and foundation services will be in the driver's seat for the entire industry.

Web Services frameworks and distributed applications are not the only major drivers of the next generation. With broadband and high speed wireless networks growing in availability, "plugging-in" is becoming easier, less expensive, more powerful, and more pervasive. Add a new crop of Internet enabled tablet PC/pager/cell phones with better interfaces, and we will soon be tossing that old monitor on its ear. Untethered devices relying on remote services also require new programming paradigms, radical rethinking of user interfaces, and adaptive, self-healing programs and networks.

While the Internet OS is nowhere near as complete as the name suggests, it is very definitely the target of the strategic plans of the largest software companies. But they don't have all the answers. There are many critical bits and pieces in progress at research labs, start-up companies, and standards bodies.

In planning the O'Reilly Emerging Technology Conference, we asked ourselves: who is creating the software and services that will change the face of computing and the Internet as we know it? What are the key lessons we can learn from the pioneers? What links in the connectivity puzzle are weak and need work? How can we take the Internet Operating System to the next level? The speakers and exhibitors at this conference are not only inventing a new Internet, they are coming up with new ways of thinking about computing. By examining leading edge projects, approaches, and technologies that are not always looked at in the same context, we are able to "connect the dots" and see a more complete picture of the new world that is emerging.

We have comprehensive tutorials and sessions exploring the latest ideas about Web Services, peer-to-peer, wireless networking, security and identity, distributed computing, GPS, GIS and location-based computing, biological and autonomic computing models, as well as the business models, standards, and infrastructure required to make them work—right from the innovators who are making it all happen.

We look forward to seeing you there,

Tim O'Reilly

Founder & President

O'Reilly & Associates, Inc.

Rael Dornfest

Researcher, O'Reilly & Associates, Inc.

Program Chair, Emerging Technology Conference

Building the Internet Operating System-Distributed,

Distributed

Peer-to-peer turned the popular conception of client-server on its end. The P2P mindset questioned the arbitrary lines drawn between active network participant and passive content consumer, shining a light on the CPU, storage, and human resources at the edges of the network—your desktop, laptop, and palmtop.

Web Services promise to provide some of the new network services alongside DNS, mail, and news, starting with the hotbutton issue of identity. Sun, Microsoft, and AOL have aspirations for controlling the packaging and deployment of distributed network services while standards bodies rush to pave a road of interoperability.

PROGRAM HIGHLIGHTS

XML, Web Services, and the Semantic Wipeout

Clay Shirky, Senior Analyst, O'Reilly & Associates, Inc.
Real-world examples of Web service successes and failures
demonstrate that the limiting case for Web Services has nothing
to do with technology and everything to do with semantics: it will
work well in areas with well-understood transactional definitions
between parties (e.g. intranets), and badly where there are a large
number of anonymous actors (e.g. the Internet).

XML Web Services Part 1: The Data Model (Tutorial) XML Web Services Part 2: The Processing Model (Tutorial)

Don Box, Architect, Microsoft

The world of XML and Web Services can be viewed from two angles. One angle focuses on the underlying data model, which is based on XML Schemas. The other angle focuses on the processing model, which is based on an amalgam of technologies, including SOAP, WSDL, SLT, and XML Query.

SOAP Routing: The Essential Component to Making Web Services a Reality

Rohit Khare, CEO, KnowNow

SOAP Routers (or Relays or Switches...) will manage the flow of messages, providing reliable delivery, authorization and accounting, transformation, and other services. Most importantly, they enable any-to-any, asynchronous message flows between dynamic coalitions of loosely-coupled actors.

Continued Innovation in P2P File-Sharing

Kelly Truelove, Truelove Research

This talk surveys the popular file-sharing systems, the status of their developers, the legal picture, and recent technical innovations and the evolution of the systems.

Untethered

While cellular operators spend billions acquiring slices of the wireless spectrum on which to build their third generation (3G) network, **802.11b** is building free and open community wireless networks in a sliver of unlicensed frequency generally populated by cordless phones and microwave ovens.

Joining these **wireless networks** is a plethora of ever-smaller and more powerful laptops, handhelds, tablet PCs, pagers, home stereo equipment, and digital video recorders—even cell phones. As these tote-able and wearable devices for communication, entertainment, and network interaction become more pervasive, who will provide them with the needed connectivity, high quality audio and video, operating systems, and applications?

PROGRAM HIGHLIGHTS

Community Wireless Round Table

Rob Flickenger, Author, Building Wireless Community Networks, System Administrator, O'Reilly & Associates, Inc.

Community Group leaders Terry Schmidt, Matt Westervelt, Matt Peterson, Adam Shand, Matthew Asham, and Rob Flickenger will discuss how we can work together to build the Next Internet, where low-cost (and very high-speed) communication is the primary concern.

Wireless Network in NYC in the WTC Aftermath

Terry Schmidt, Co-founder, NYCwireless

Terry Schmidt talks about his work and experiences with wireless 802.11b networking for business and individuals affected in the aftermath of the WTC attacks.

FCC's Rules and Regulations on 802.11

Tim Pozar, Co-founder, Bay Area Wireless User Group (BAWUG) This session describes the FCC rules and how they relate to the ISM bands that contain 802.11 devices. What you can and can't do with 802.11, such as type-acceptance and power/frequency limitations.

Location-based Web Services

Chris Dix, Lead Developer, NavTraK, Inc.

This session examines methods for locating an asset, components needed, and the services that should be offered for location-based Web Services. Attendees will learn about the industry initiatives and standards that exist and participate in developing a picture of the business and technical hurdles ahead.

Untethered, Adaptive

Adaptive

Amazing things happen when computer scientists explore **biological models** as an organizing principle in hardware, software, and network design. Through the combined efforts of computer scientists, biologists, systems theorists, sociologists, and behavioral scientists, organized complexity promises to play a large part in solving some of today's Internet computing and management challenges. How do we apply an **immune system** model to computing and reduce the amount of time that the computer professional must spend maintaining systems? What do ants have to say about network optimization?

PROGRAM HIGHLIGHTS

Swarm Intelligence

Eric Bonabeau, Founder & Chief Scientist, Icosystems Corporation An introduction to swarm intelligence and its applications in peer-to-peer computing: (1) organizing emergent communities of interest in a P2P network; (2) ant-based P2P routing algorithms; (3) ant-based P2P approaches for inventory management; (4) ant-based algorithms for distributed caching.

Networked Experience Design

J.C. Herz, CEO, Joystick Nation, Inc.

Drawing on lessons from the social ecology of online games and other multiplayer systems, J.C. Herz lays out the principles, and highlights the pitfalls and unintended consequences of many-to-many interaction design.

Toward a Biological Framework for Computation

Geoff Cohen, Senior Consultant, Cap Gemini Ernst & Young Center for Business Innovation

Using biological techniques such as developmental differentiation, combinatorics, and homeostasis, it may be possible to build more robust, more effective software. Adapting these mechanisms will require a significant change in the way we think, plan, write, debug, and even use software.

Descriptions for Sensor Technologies for Responsive Environments

Joseph Paradiso, Director, MIT Media Lab's Responsive Environments Group

The narrow interaction of the keyboard and traditional pointing devices keeps the digital world locked to a desk or palm top, preventing it from fully realizing its potential as a powerful medium of interaction and expression. Paradiso describes the work in the Responsive Environments Group, where the development of new user interface devices for interactive spaces and multimodal, dexterous expression, can eliminate this barrier.

Building on the momentum and excitement of the O'Reilly Peer-to-Peer & Web Services Conferences REGISTER TODAY: conferences.oreilly.com/etcon

Business Models

We feature a range of technologies that are growing just below the horizon of commercial viability, and place a spotlight on projects and people who are likely to become very important to the future of Internet computing. Equally important is a careful study of what the new business models will look like. Who is putting a stake in the ground and attempting to build the new network and routing infrastructure?

PROGRAM HIGHLIGHTS

The Future of Ideas

Lawrence Lessig, Professor, Stanford Law School
Lawrence Lessig will be joined by advocates of the open
source, open spectrum, Web Services, and standards
worlds for a frank discussion on the future of innovation
in a time when commercial and governmental interests
are exercising their control over plumbing, software,
content, and patent laws to impede innovation.

Digital Copyright Law Threatens Science

Robin Gross, Intellectual Property Attorney, Electronic Frontier Foundation

The 1998 Digital Millennium Copyright Act (DMCA) introduces legal pitfalls and new liabilities for researchers involved in encryption research, programming, and security testing. Learn about this dangerous new law and its enforcement in recent cases.

If You've Got The Killer App, How Come I'm Not Dead Yet?

Michael Masnick, Techdirt

This presentation reviews various "killer apps" of years, decades, and centuries past, while pushing a simple plan for creating real technologies that solve real problems and make real, happy customers.

conferences.oreilly.com/etcon

VISIT OUR CONFERENCE WEB SITE FOR:

- Program Committee Weblogs
- Presentation Abstracts
- Interviews with Featured Speakers
- Presenter Biographies
- Hotel Rates & Travel Info
- Local Area "See and Do"

Register by March 22, 2002—save \$695!

Building the Internet Operating System

MAY 13-16, 2002 WESTIN SANTA CLARA SANTA CLARA, CALIFORNIA



			100000000000000000000000000000000000000	AND STATE OF THE S			
-							
	SELECT TUTORIALS	MONDAY MO	ORNING TUTORIALS (select one)			MONDAY AFTERNOON TUTORIALS (select one)	
	For the latest information	eless Community Networks, Rob Flickenger			 ☐ Writing JXTA Applications, Juan Carlos Soto ☐ XML Web Services Part 2: The Processing Model, Don Box 		
	on tutorial offerings, see	ervices Part 1: The Data Model, <i>Don Box</i>					
	onferences.oreilly.com/etcon			ework, <i>Brian Je</i> j			
					Brian Jepson, James Duncan Davidson		vidson
2 SELECT CONFERENCE FEES 7 SPECIAL PRICING (Check one if applicable)							
4	5 SPE					L PRICING (Check one if applica	ıble)
		Early Bird	y Bird Standard		☐ Studer	ent Discount – 65% off with proof of status, a copy of ID, and	
		(By March 22, 2002)	(After March 22, 2002)		class so	chedule. DISCOUNT CODE ET02ST	.,
	Conference Pass – 2 tutorials		□ \$2290			mic Instructor Discount - 50% off v	
	SAVE \$695! Register by March 22	□ \$1595				nic instructor status on organization le JNT CODE ET02AC	etterhead.
	Conference Pass – 1 tutorial	□ \$1595	□ \$1990			cademic Staff Discount – 25% off with proof of full-time academic	
	Conference Pass – no tutorials	□ \$1395	□ \$1395 □ \$1595			employee status on organization letterhead. DISCOUNT CODE ET02SA	
	Tutorial only – 2 tutorials	□ \$595	□ \$695		3 or m	Company Team Discount – \$50 off per person when registering 3 or more people from one company. <i>Fax registration for all</i>	
	Tutorial only – 1 tutorial	□ \$345	\$345 🗆 \$395			attendees at the same time. Federal Government Discount – 20% off with proof of agency connection. DISCOUNT CODE ET02GOV	
	On-site Registration – Add \$100 to y	- Add \$100 to your total fees if you register at the eve					
	Exhibit Hall-only Pass	☐ Free	□ \$35		PLE	ASE FAX PROOFS & FORMS TO	707-823-9746
4 TOTAL FEES 5 YOUR METHOD OF PAYMENT							
	Total Fees \$		☐ AMEX		Cardholder's Name		
	Discount (if applicable) \$		□ Visa				
	Grand Total \$				Cardhol	Cardholder's Signature	
	Granu 10tal \$				Account	Account Number	
	Discount Code		☐ Check payable to O'Reilly & Associates		Expiration	Expiration Date (mm/yy)	
				•		() ////	
6	OUR PERSONAL INFORMATION					Please tell us how you learn	ned about this
U	TOOK PERSONAL INTOK				O'Reilly Emerging Technology Conference.		
	First Name Last Name Title Company Address City				☐ Friend ☐ Work associate		
					☐ This brochure was mailed to me Code on address label begins with C2ET ☐ Other EARLY BIRD SPECIALS!		
	tate/Province Zip/Postal Code Country						
	Daytime Phone	aytime Phone Fax			Register by March 22, 2002 and receive a FREE O'Reilly book and a conference T-shirt!		
	Email Address (required)	nail Address (required)				Select one book: Select a T-shirt size:	
	☐ I would like to receive the conference newsletter via email.					☐ Web Services Essentials	□ L □ XL
□ NET Framework Essentials						By Ethan Cerami NFT Framework Essentials	□ No thanks
	Special needs—please let us know:	☐ Vegetarian/Vegan	\square Hearing-impaired	☐ Sight-impa	ired	By Thuan Thai & Hoang Lam	

ONLINE conferences.oreilly.com/etcon

FAX 707-823-9746

PHONE 707-827-7000 or 800-998-9938

Registration phone hours 6:00AM-5:00PM PST

MAIL O'Reilly & Associates, Inc.

Emerging Technology Conference 2002

1005 Gravenstein Hwy. North, Sebastopol, CA 95472

The O'Reilly Emerging Technology Conference registration includes a one-year complimentary subscription to *Dr. Dobb's Journal* (\$34.95 value). Current subscribers will have an additional year added to their subscription at no cost. This offer is limited to U.S. registrants only.

CANCELLATION POLICY: If you need to cancel your registration for any reason, email **Iholder@oreilly.com** before *April 12, 2002*. You will be refunded your full registration less a \$100 processing charge. No refunds are available after this date.

FOUR WAYS
TO REGISTER

☐ Wheelchair Access Other _



O'REILLY & ASSOCIATES, INC. 1005 GRAVENSTEIN HWY. NORTH SEBASTOPOL, CA 95472 PRSRT-STD US POSTAGE PAID PERMIT #10 SANTA ROSA, CA

Building the Internet Operating System

MAY 13-16, 2002 SANTA CLARA, CALIFORNIA





MAY 13-16, 2002 · SANTA CLARA, CA

EARLY BIRD REGISTRATION ENDS MARCH 22, 2002 REGISTER TODAY—SAVE UP TO \$695!

conferences.oreilly.com/etcon

Building the Internet Operating System

"Each day at the conference I get the chance to talk with brilliant, passionate people who have done amazing work. I doubt that in the course of my life I will ever be in a place where the average IQ or level of dedication is any higher."

- JAY GREENSPAN, PRINCIPAL, TRANS-CITY PRODUCTIONS, BOOK AUTHOR, AND FORMER PRODUCER, WEBMONKEY























