

Napster  
Gnutella  
Freenet  
Publius  
FreeHaven  
SETI@Home  
MojoNation  
GridOS  
Jabber  
Aimster  
dHttp  
Groove  
Brazil  
UDDI  
SOAP  
.Net  
JXTA  
Grand Central  
WikiWikiWeb  
Blogger

# The first and most important conference on P2P

For developers, entrepreneurs, investors, CIOs, CTOs, CEOs  
and those making technology-buying decisions



**The O'Reilly Peer-to-Peer Conference**

FEBRUARY 14-16, 2001

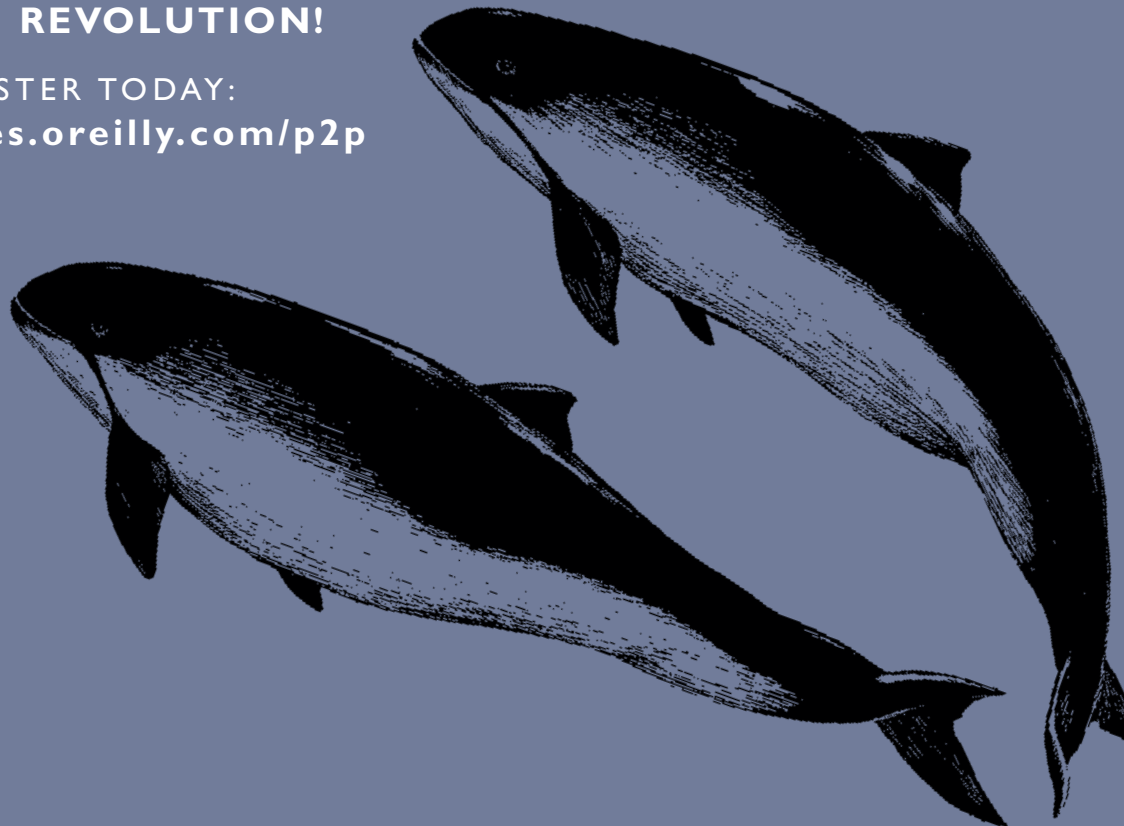
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## Stanford Law Professor Larry Lessig



Lawrence Lessig is a Professor of Law at the Stanford Law School. He was the Berkman Professor of Law at Harvard Law School. His book, *Code and Other Laws of Cyberspace*, is published by Basic Books.

Professor Lessig will discuss how the Internet promised an explosion of bottom-up social and political movements, and the potential to tap into the power of Internet communication. That has not happened yet. But P2P technologies will bring about the explosion that was expected. In a range of cases—including vote trading and music sharing—social life will be Napsterized.

## Sun Microsystems co-founder and chief scientist Bill Joy



Called by *Fortune Magazine* “The Edison of the Internet” Bill Joy, 45, chief scientist of Sun Microsystems, Inc., is a co-founder of the company and a member of the Executive Committee.

Bill Joy will discuss the evolution from Unix to Java to XML to peer-to-peer. Unix first gave us modular applications, connected by pipes; Java gave us portable applications; XML gave us portable data; and peer-to-peer gives us simple distributed computing. This talk discusses the question: can we put these benefits together?

For updates and announcements, join the P2P mailing list at <http://conferences.oreilly.com/p2p>

## AN INVITATION TO YOU FROM TIM O'REILLY



The recent furor over peer-to-peer file sharing via Napster and other music sharing programs masks a deeper revolution, with new applications that are reshaping the Internet.

We're moving from a strong client-server architecture to one in which applications connect user to user; device to device, program to program, in distributed peer networks.

Napster shows us one dimension of the revolution, internet-based file sharing, but there's more to P2P than that. Distributed computation, web services, instant messaging as an application platform, automated service discovery by wireless devices, and more, are all part of a new and rapidly evolving story. We're in one of those fertile periods of innovation that will spark new industries. How can you tell the winners from the losers and see through the hype to the underlying technical and business dynamics that generate opportunities for creating lasting value? If you're an IT manager, how do you harness the power of P2P to make better use of idle computing resources within your organization without letting the genie out of the bottle?

I've put together a new conference to explore the technical, legal, and business dimensions of peer-to-peer computing. If you want to play a role in shaping the next generation of Internet applications, this is the place to meet the people who are out in front, to hear what they've learned, and to try your own ideas on for size. The conference will be highly interactive, with many opportunities to ask questions and engage with both technical and business leaders in the peer-to-peer space.

See you there!

Tim O'Reilly  
Founder and President, O'Reilly & Associates

## ABOUT O'REILLY & ASSOCIATES

O'Reilly & Associates is the premier information source for leading-edge computer technologies. We communicate the knowledge of experts through our books, conferences, and web sites. Our books, known for animals on their covers, occupy a treasured place on the shelves of the developers building the next generation of software. Our conferences and summits bring innovators together to shape the revolutionary ideas that spark new industries. From the Internet to the Web, Linux, open source, and now peer-to-peer networking, we put technologies on the map.

### O'REILLY FIRSTS

- 1986** *Managing UUCP and Usenet* helps spread the peer-to-peer usenet
- 1992** O'Reilly publishes *The Whole Internet User's Guide and Catalog*, which helps popularize the Internet and sparks development of the Mosaic web browser
- 1993** O'Reilly's Global Network Navigator (GNN) introduces web advertising and is the first portal on the web, as well as the first web magazine
- 1995** O'Reilly's WebSite is the first web server for Windows
- 1997** First Perl Conference puts open source on the map
- 1998** O'Reilly holds first Open Source Summit
- 2001** First Conference on Peer-to-Peer Networking

**“O'Reilly has been there first more times than anyone else.”**

—Ed Kozel, former CTO, Cisco

## PROGRAM OVERVIEW

This conference explores the business and technical questions raised by the most revolutionary new Internet applications since the Web. Napster, Gnutella, Freenet, Infrasearch, SETI@Home, Popular Power, Groove, Jabber, UDDI, you name it, they'll all be there under one roof, providing a unique opportunity to meet and learn from the technology and business innovators who are shaping the next generation of pervasive technologies.

Because peer-to-peer is in that fertile period where technical innovation and evolving business models collide and spark, the O'Reilly P2P Conference features both a technical track and a business track. The technical track will focus on innovation, scalability, security, and interoperability of peer-to-peer systems. The business track will focus on application areas, business models, and intellectual property issues.

### DISCOVER HOW PEER-TO-PEER APPLICATIONS INFLUENCE THESE IMPORTANT AREAS:

#### DISTRIBUTED FILE SHARING

Napster's amazing success demonstrated that there's no need to collect digital content in one location. It can be shared directly from users' hard disks using technology that tracks who has what and whether they're willing to share. Will file sharing stay a free-for-all of copyright violation, or will we discover business models that compensate content producers enough to keep them producing?

#### DISTRIBUTED COMPUTATION

SETI@Home has demonstrated that it's possible to harness millions of idle PCs to work on large scientific problems. Now dozens of startups are pursuing new markets, from gene sequencing to distributed performance testing. What kinds of problems lend themselves to distributed computation, and where's the money in it?

#### INSTANT MESSAGING AS AN APPLICATION DEVELOPMENT PLATFORM

Groove, Jabber, AIMster, Microsoft's RVP, Invisible Worlds' IMXP, and many peer-to-peer projects have something surprising in common: they represent the extension of the Instant Messaging metaphor to provide more than just chat. What can we learn from instant messaging as it explodes beyond the consumer space?

#### P2P ON DEVICES

The promise of peer-to-peer is especially strong in the device space. How else can you have a billion devices interconnect except by having them discover and interact with each other, without central management? How will device peering change computer applications?

#### PEERED WEB SERVICES

It's become clear that we're starting to think not of "web sites" but of web services. Programs talking to other programs will provide powerful new applications, transforming data on the fly as it is passed from computer to computer. Several intriguing new peered web services platforms will be announced and demonstrated at this conference.

#### DISTRIBUTED METADATA: NAMESPACE MANAGEMENT, XML-BASED SERVICES, AND RESOURCE DISCOVERY

Many of the key opportunities in decentralized computing arise from understanding the role of directory-style services for connecting users. A core competency of most peer-to-peer systems is managing the metadata associated with files, resources, or services. How will frameworks like SOAP, UDDI, and .Net address the issue of Internet-aware programs using the services that are offered by other programs? What is XML's role in managing and routing data and services?

*"This is the next great thing for the Internet. We haven't even begun to understand or imagine the possibilities."*

Professor Lawrence Lessig, P2P Keynote Speaker

THE O'REILLY PEER-TO-PEER CONFERENCE  
[conferences.oreilly.com/p2p](http://conferences.oreilly.com/p2p)

### LEARN ABOUT THESE KEY TECHNICAL ISSUES:

- Security issues in distributed computation
- Peer to peer searching methodologies and discovery services
- Instant Messaging as a platform for practical groupware applications
- Dealing with firewalls, NATs and other blocks to peer-to-peer applications
- Scaling and other infrastructure issues
- The importance of metadata in organizing, searching, and retrieving data in decentralized networks
- Interoperability of peer-to-peer protocols and systems
- Technical descriptions of novel peer-to-peer, distributed computation, or web services applications
- Security, privacy and anonymity in peer-to-peer systems

### EXPLORE THE INTERSECTION OF P2P TECHNOLOGY AND BUSINESS OPPORTUNITY:

- Specific applications of peer-to-peer technology, focusing on the business opportunity
- Application areas for distributed computation (bioinformatics, financial modeling, network load testing, routing)
- Methods for copyright compliance/settlement systems compatible with peer-to-peer architectures
- Business models for leveraging peer-to-peer rather than fighting it
- Legal issues surrounding peer-to-peer (patents, copyright, freedom, privacy, censorship)
- Lessons from the history of peer-to-peer on the net (usenet, internet routing, email routing)
- Governance of peer-to-peer communities
- Business cases for offering web services
- Case studies of peer-to-peer in the enterprise

# WHO'S GOING TO BE THERE

Here are only a few of the speakers and panelists you'll be meeting and hearing from at the conference:

- ◆ **Ray Ozzie**, the creator of Lotus Notes and founder of Groove Networks
- ◆ Gnutella and Infrasearch developer **Gene Kan**
- ◆ Freenet and Uprizer founder **Ian Clarke**
- ◆ **David Anderson**, CTO of United Devices and developer of SETI@Home
- ◆ **Dan Werthimer** of the UC Berkeley Space Sciences Lab, project director of SETI@Home
- ◆ Novell CEO **Eric Schmidt**
- ◆ **Rob 'CmdrTaco' Malda** and **Jeff 'Hemos' Bates** of slashdot.org
- ◆ **Lucas Gonze** of WorldOS
- ◆ **Jim McCoy** of MojoNation
- ◆ **Steve Burbeck** of IBM
- ◆ **Bob Knighten**, Intel's chief peer-to-peer evangelist
- ◆ **Cory Doctorow**, Chief evangelist and founder of OpenCOLA
- ◆ **Rael Dornfest** of Meerkat and RSS 1.0
- ◆ **Marc Hedlund** and **Nelson Minar** of Popular Power
- ◆ **Andre Durand** of jabber.com and **Jeremie Miller** of jabber.org

Executives and technical visionaries from all of the major peer-to-peer projects and startups are expected to be on the program.

## THOUGHT-PROVOKING INVITED TALKS

We've invited some of the early leaders in peer-to-peer networking and key business commentators to give their real-world perspective, warts and all. For example:

### LESSONS FROM NAPSTER

Business 2.0 columnist, pundit, and venture capitalist Clay Shirky provides a detailed analysis of the driving forces behind Napster's rapid adoption: "If the Internet has taught us anything, it's that you must never underestimate the power of rough consensus and running code over ideological perfection."

### P2P IN EXISTING INTERNET INFRASTRUCTURE

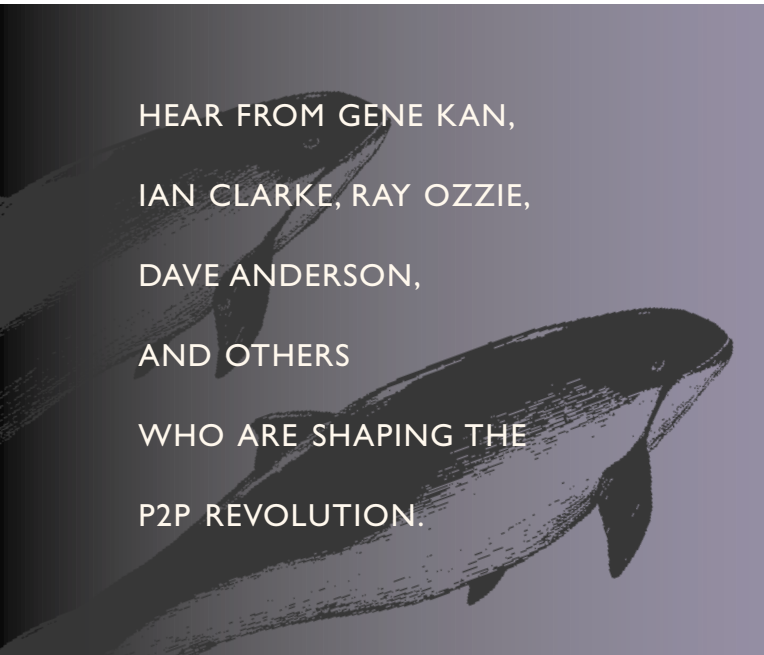
Conference organizer Tim O'Reilly explores the history of peer-to-peer in areas such as Internet routing, email routing, usenet, and the World Wide Web. What can we learn from the mix of peer-to-peer and centralized elements in existing technologies? Who were the winners and losers, and who found the hidden pathway to success? What do the stories of UUNet, Yahoo!, and Network Solutions tell us about the business opportunities in peer-to-peer?

### LESSONS FROM SETI@HOME

SETI@Home's architect David Anderson and project director and chief scientist Dan Werthimer talk about what they've learned after two years of operation: managing the load, ensuring reliability of data that's submitted, and encouraging participation.

### THE CORNUCOPIA OF THE COMMONS: HOW TO GET VOLUNTEER LABOR

Dan Bricklin, inventor of the electronic spreadsheet and now CEO of the Trellix platform for collaborative web publishing, talks about how a well-designed peer-to-peer system can lead to a reversal of Garrett Hardin's fabled "tragedy of the commons"—the cornucopia of the commons.



HEAR FROM GENE KAN,  
IAN CLARKE, RAY OZZIE,  
DAVE ANDERSON,  
AND OTHERS  
WHO ARE SHAPING THE  
P2P REVOLUTION.

Because the technology is evolving so fast, we're leaving a lot of space in the conference program for companies and projects that are still in "stealth mode." Keep abreast of peer-to-peer conference program updates

by joining the P2P mail list at:

[conferences.oreilly.com/p2p/](http://conferences.oreilly.com/p2p/)

# HARD-HITTING PANEL DISCUSSIONS

Our in-depth panels will feature technical experts being grilled by users, system administrators, and business executives, and head-to-head debates by competitors about the issues that differentiate them. Expect controversy and thought-provoking discussion as people with strong opinions and experience to back them up share why they think the way they do.

## EXAMPLES OF PLANNED PANEL DISCUSSIONS

### PEER-TO-PEER IN THE ENTERPRISE

Peer-to-peer will reduce costs as companies are able to more efficiently tap the power of their own idle computing resources, but it also raises the specter of those resources being put to use inappropriately. How do you administer peer-to-peer networks and manage security? What kinds of applications is peer-to-peer good for—and what is it not good for?

### PEERED WEB SERVICES ARCHITECTURES

SOAP provides a lowest common denominator, but the infrastructure that will support a robust web services platform is still being developed. Microsoft's .Net, UDDI, and several yet-to-be announced platforms provide overlapping functionality. Key developers from each project go head to head, with hard-nosed questions about business models and vendor choke points on the agenda.

### BUSINESS MODELS AND APPLICATION AREAS FOR DISTRIBUTED COMPUTATION

Despite the huge success of the SETI@Home project in attracting contributors and doing valuable scientific research, everyone wants to know about the business model. Leaders from distributed computation companies such as Popular Power, United Devices, and Parabon talk about where the opportunities are.

### THE IMPACT OF NAPSTER

Despite all the hype, it's not clear what the impact has really been. University network administrators, music publishers and retailers, and performing artists share their experiences.

### P2P: WHERE ARE THE STANDARDS?

In the current peer-to-peer discussion, one question that comes up again and again is: "What, if anything, to standardize?" Intel's Peer-to-Peer Working Group has proposed an industry consortium model for standards making, but de-facto standards are also emerging. This panel will discuss the question of what, if anything, needs to be standardized, and what's the best way to go about doing it.

### NATs, FIREWALLS, AND P2P ROUTING

One of the central issues of P2P is how to connect arbitrary endpoints efficiently, in the presence of firewalls/NATs. If the demand becomes huge, it could end up changing how NATs, or TCP, or both, work. And arguably, demand already is huge. Representatives of various projects discuss how they've dealt with NATs and firewalls, whether their workarounds are sufficient, and whether more fundamental architectural changes are needed.

### COPYRIGHT, ANONYMITY, AND UNTRACEABILITY

What is the role of systems that guarantee anonymity and untraceability? Are systems like Freenet, FreeHaven and Publius just copyright spoilers, or might they play an important role in preserving civil liberties? Will the free-for-all be replaced by paid "content dialtone" or anonymous underground file distribution? How will the Napsterization of intellectual property play out?

### LOCATION-BASED COMPUTING AND WEB SERVICES

The availability of location-based computing on handheld devices will transform our technology infrastructure and economy. Who will provide the database backends and application frameworks that will be the key control points in this space?

*"If we treat peer-to-peer as a literal definition for what is happening, then we have a phrase that describes email but not Napster."*

Clay Shirky

## LIGHTNING TALKS

We've adapted this popular feature from YAPC (Yet Another Perl Conference) to give you a whirlwind tour of the companies in the peer-to-peer space. Each Lightning Talk session gives a dozen companies and projects pursuing related markets an opportunity to give a 5-minute elevator pitch. Lightning Talks will appear in both the technical and business tracks. Presentations will be followed by questions and evaluations by a panel of experts.

- Lightning Talks in the business track give you a quick way to evaluate possible investments, the depth of competition in a given area, and the quality of the key company executives.
- Lightning Talks in the technical track help you to evaluate competing or complementary approaches to the same problem.

Lightning Talk presenters will also be available at specified times for more detailed follow up.

**O'REILLY  
PEER-TO-PEER  
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EXHIBITION**

See live demonstrations and learn about the most up-to-date services and products developed by some of the most cutting-edge peer-to-peer companies in the world today. The exhibition will be held in the Italian Foyer outside the Grand Ballroom. Open 10 AM–6 PM

## REGISTRATION & LOGISTICS

The O'Reilly Peer-to-Peer Conference, San Francisco, California, February 14–16, 2001

### FOUR WAYS TO REGISTER:

- 1 Phone** Toll Free: 800-713-3408  
Local: 925-287-5122 (Registration Phone Hours: 9:00 AM–5:00 PM PST)
- 2 Fax** 925-287-5300 \*
- 3 Web** [conferences.oreilly.com/p2p](http://conferences.oreilly.com/p2p)
- 4 Mail** O'Reilly P2P Conference  
C/O McGettigan MeetingsPlus  
1777 Botelho Drive, Suite 100  
Walnut Creek, CA 94596

Registration questions or comments? email: [p2pspring@meetingsplus.com](mailto:p2pspring@meetingsplus.com)

### REGISTRATION FEES FOR 3-DAY CONFERENCE

(Fees include all conference materials, continental breakfast, and lunch)

**\$1295.00 Early Bird (thru January 18, 2001)** ♦ **\$1495.00 Standard (after January 18, 2001)** ♦ **\$1595.00 Walk-in**  
**\$600.00 Academic** ♦ **\$300.00 Student**

Check [conferences.oreilly.com/p2p](http://conferences.oreilly.com/p2p) for details on Academic and Student registration policy

### OPENING NIGHT GALA

6:00–9:00 PM

in the California Ballroom

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### SCHEDULE

**Breakfast**

**8:00–9:00 am**

**Lunch and AM/PM Breaks**

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**Microsoft**

**XDegrees**

**Sessions**

9:00 AM–5:00 PM

To help us best allocate space for each conference track, please indicate which reflects your primary interest at the conference:

Technical  Business

### SAME COMPANY TEAM DISCOUNTS

If you register three or more people from the same company at the same time, you save an additional \$50.00 per person on the conference registration fees. Please fax in your registrations for all the attendees from your company to 925-287-5300. Be sure to include a registration form for each person.

**TOTAL FEES** \$ \_\_\_\_\_

### CONTACT INFORMATION (\*=Required Field)

\*First Name: \_\_\_\_\_ \*Last Name: \_\_\_\_\_

(as you would like them to appear on your badge)

Title \_\_\_\_\_

Company \_\_\_\_\_

\*Address \_\_\_\_\_

\*City \_\_\_\_\_ \*State/Province \_\_\_\_\_

\*Zip/Postal Code \_\_\_\_\_ \*Country \_\_\_\_\_

\*Daytime Phone \_\_\_\_\_ \*Fax \_\_\_\_\_

\*Email Address \_\_\_\_\_

## T-SHIRT—FREE WITH EARLY REGISTRATION!

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KEY CODE (located on back cover of peer-to-peer brochure)

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## SPECIAL NEEDS

- Wheelchair Access  
 Hearing-impaired  
 Sight-impaired

## SPECIAL DIETARY REQUEST

- Vegetarian/Vegan  
 Kosher

## PAYMENT INFORMATION

Payment in U.S. funds must accompany your registration. We accept the following types of payment: Check drawn on U.S. bank, purchase order, Visa, American Express, MasterCard, Diners Club.

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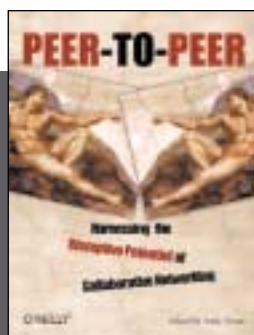
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Register a friend and receive a free copy of O'Reilly's *Peer-to-Peer: Harnessing the Disruptive Potential of Collaborative Networking*. Register online for more details!

## HOTEL RATES AND RESERVATIONS

We have been able to secure greatly discounted rates at one of the world's finest hotels, the Westin St. Francis.

Official P2P Hotel:  
Westin St. Francis  
335 Powell Street  
San Francisco, CA 94102



For reservations, call 415-397-7000 and ask for reservations, or 800-937-8461 (800-WESTIN1). You must identify yourself as attending the "Peer-to-Peer" conference to be eligible for the group rate. All rates are subject to availability at time of reservation and room categories are booked on a first-come first-served basis. Once a category is sold out, the remaining categories will be booked. All rates are subject to any state and city tax in effect at the time of the conference.

Main Building  
Traditional: \$265.00, single or double occupancy  
Deluxe: \$295.00, single or double occupancy

Tower Building  
Traditional: \$265.00 single or double occupancy  
Deluxe \$295.00 single or double occupancy

## RENTAL CAR

O'Reilly has arranged special discounts for those attendees needing rental cars at the Peer-to-Peer Conference. To reserve a car with your special rate, call Hertz in the U.S. at 1-800-654-2240; in Canada call 1-800-263-0600; outside of these areas call 1-405-749-4434, or your nearest Hertz reservation center, your corporate travel department or your travel agent. You must give the agent the **Hertz CV#: 01XY0008**.



## AIRLINE TICKETS

O'Reilly & Associates is pleased to announce that it has been able to secure a special discount agreement with United Airlines unavailable to the general public. If you or your travel agent calls United's toll-free number (1-800-521-4041) to book your reservations, you will receive a 5% discount off the lowest applicable discount fare, including first class, or a 10% discount off the unrestricted mid-week coach fare. United will also offer an additional 5% off of those tickets purchased at least 60 days in advance. Discounts also apply on Shuttle by United and United Express flights. You **MUST** refer to **Meeting ID Number 550QK** in order to receive the conference attendee discount.



## TRAVEL ASSISTANCE

For discounted airline tickets, car reservations, or hotels (other than the conference hotel), attendees are encouraged to call the official O'Reilly conference travel planner: Vivian Russell of Vivian Russell Travel Services, 182 Farmers Lane, Suite 102C, Santa Rosa, CA 95405, Phone: 707-525-0550, Fax: 707-525-0560, Email: vivian@metro.net



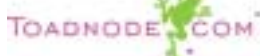
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*“In times of change, managers almost always know which direction they should go in, but usually act too late and do too little. Correct for this tendency: Advance the pace of your actions and increase their magnitude.”*

Andy Grove, Intel

*“P2P is likely to forever change the way we think about sharing digital information across networks.”*

Lee Bruno, Red Herring

SPACE IS LIMITED, SO REGISTER EARLY:  
[conferences.oreilly.com/p2p](http://conferences.oreilly.com/p2p)

*“Trying to come up with standards for something like peer-to-peer is a little like trying to decide what color you should be painting your house before you’ve decided to build it.”*

Ian Clarke, Freenet founder

*“More and more computers on the Internet are talking directly to one another, and the conversation is beginning to get interesting... Ultimately, peer-to-peer is about making the Internet smarter and more productive by squeezing more potential out of its myriad parts.”*

Thomas Weber, Wall Street Journal,  
November 13, 2000