The Big Picture: In Focus

From an awkward perch atop the center of the universe just a few years ago, the IT industry has moved to a position on the edge, where it has to look at a bigger picture in which it is not at the center. This year, our speakers come from a broader range of backgrounds than ever before. They hail from government and politics and law as well as engineering and business, and even – peering into the fishbowl to discover water – science and academia and countries outside the US.

Steven Johnson’s Monday talk on the brain will summarize our theme: We can see the big picture better than we can read or hear it... but to get anything done, we need to comprehend and focus on the details that make it up as well.

But there’s also an IT aspect to this theme. You need to have a big picture – in distance, scope and time – to get most big things done. But you can’t solve problems or sell products in general; you need to deal with specific applications and problem domains. You need to understand a particular customer’s needs. Call it “personalization” of the solution, whether corporate or personal. One size does not fit all. One infrastructure does not support all. And one accounting application does not fit all businesses. There are limits to generality.

The rewards go to those clever people who figure out how to abstract specific problems into a generality that can be easily customized for the particular. These are people who can focus on the pattern rather than the detail. In this Forum documentation, we attempt to tease out some of the patterns you can discern over the next few days.
As usual, there is much interplay among the different topics, and many speakers – as well as many attendees – could easily tackle the topics of several of the sessions. In particular, search and attention management overlap, and the industry leaders of the Big Three panel are all looking at these areas closely. The notion of defaults, articulated by Eric Johnson, turns up again and again, in discussions of everything from consumer privacy to online business models, personalization and online security.

The issues of security and the accountable Net affect virtually every online endeavor these days, as does the impact of globalization. Politics affects us all, both at work and in our non-IT lives. It’s exciting that the Net gives each of us a chance to participate more fully in politics than in the past, while the state of the country and the world give us more reason to.

Finally, on Tuesday evening, Pierre Omidyar and Stewart Brand will remind us that the big picture is also a long picture. The world we’re designing now will unfold over time in unpredictable ways, but there are some clear and focused things we can do now to make it better in the long run.

The Forum is organized into a series of panels and interviews in the mornings, and showcases and demonstrations in the afternoons, over three days. Below, we provide an introduction to all the companies and people who will be part of this year’s event. Most sessions are moderated by Esther Dyson, with exceptions noted (Tim O’Reilly for Politics and Civics Online, and Hank Barry for Content: How Users Make it Their Own).
SUNDAY, MARCH 21

PANEL – Globalization: Three Focuses

During the last century, it was a truism that the Internet makes distance irrelevant. Many people were excited by the Internet, with dreams of social progress and community as well as of bubble-fueled wealth. But we have come to realize (or remember) that geography matters – as do language, time zones, education and culture.

Now another surprise has caught up with us: The Net, while not unlimited in its ability to spread wealth, also has a real (though limited) tendency to spread poverty – or at least to level the peaks of wealth previously enjoyed by many US workers, particularly those in the IT industry. Suddenly, people all around the world with special skills are able to compete for those high-paying IT jobs that had seemed reserved for American programmers in the past. Location is no longer a sufficient barrier to competition. The implications affect businesses – both those that move work offshore, and those that do not but still must compete with those that do.

The impact of globalization turns many truisms on their heads. People who often take the workers’ side now take the side of some workers...against other workers. People who normally consider only “business” issues raise questions about privacy and security of customers’ data. Is a fly-by-night Indian supplier any more risky than a fly-by-night local one? The current backlash against offshoring can be vicious and racist, but it also raises some real questions: How can we work well at a distance when teamwork and proximity to the customer are increasingly key differentiators?

The panelists bring a variety of perspectives to these issues. Narayana Murthy runs one of India’s top-three outsourcers, a public company with transparency and process equal to that of the best software houses worldwide. Lou Rosenthal of ABN AMRO offshore, but to an Indian operation that is wholly owned by ABN AMRO. Diana Farrell of McKinsey Global Institute has studied the practice from outside; she both shares the pain and has some recommendations.

Beyond the specific issue of offshoring, the world’s economy as a whole is becoming more integrated; developing economies are markets as well as sources of products and services. One question to ask is how US companies can help build markets, much as Henry Ford helped kickstart the US middle class by doubling the salaries of his workers so they could buy the cars they were building. What can we do now to raise the world’s standard of living? What are the benefits and the deficiencies of US culture? Of “Internet culture”?
Diana Farrell, McKinsey Global Institute: Cross-cultural

Diana Farrell, director of the McKinsey Global Institute, McKinsey’s economics think tank, is typical McKinsey in many ways – Harvard Business School-trained, intellectual, strategic, analytical – but she applies her talents to a different set of problems. “I’ve been in and out of economic-development issues all my life,” she says. She grew up in Colombia and Venezuela; in the nationalities of the day, her father was GE and her mother was Colombian.

That mix of parentage reflects the Institute’s approach: “We want to look at issues in a global context, not just at the national level, as governments do, or by company, as most of our clients do.” She also sees a gap between academic economists’ view of the world, which often ignores how things really work, and the all-business approach that can slight analysis and perspective. The most recent example of bridging that gap is the Institute’s study, “Offshoring: Is It a Win-Win Game?” Many people in the US thought it was lose-lose. The study points out the economic benefits of offshoring to the US and says that it is inevitable, part of a global economic restructuring.

The Institute is analogous to a law firm’s pro bono practice; operated independently of the consulting arm, it doesn’t have to answer to McKinsey’s clients for conclusions that clients may not like. “It’s ironic,” says Farrell. “If you think about the core of a company’s strategy, as we do at McKinsey, it’s to get itself into a position where it doesn’t have to compete, where it has some unique advantage that protects it from the market. Yet most of our findings show the benefits of open competition for society as a whole. It’s even good for companies: It forces them to invest and get better at what they do.”

Says Farrell: “The process we’re seeing now is the integration of the large economies into global market sectors. Multinational companies are making decisions about which markets to sell into and which ones to produce within. We did a report last year on economic development in Brazil, Mexico, India and China across five industries – automotive, retail banking, food retail, consumer electronics, and IT/business-process offshoring [“New Horizons: Multinational Company Investments in Developing Economies”].

“There’s a widely held belief that multinational company activity has had a negative impact on developing countries’ economies, but we found the reverse. There’s huge wealth creation, which can mitigate some of the issues around wealth distribution. It goes beyond taking advantage of low-cost resources to the comparative advantage of pools of talent.
“The integration of India into the global economy has clearly been positive for India, but what about the developed world? In the offshoring report, which was an offshoot of the previous one, we look more at that. We conclude that offshoring is a global wealth-creation story, but with it comes the price of dealing with change. Rather than stop it, leaders should focus on increasing participation in the wealth creation and on helping workers who are disproportionately hit, with stronger rights to health care and pensions and greater access to retraining. For just 4 to 5 percent of the savings from offshoring, for example, firms could provide unemployment insurance for affected workers.”

The Institute’s findings can be annoying to governments as well as to companies or displaced workers. For example, says Farrell, governments frequently over-subsidize foreign investment. She adds, “It’s an open question whether India needed to subsidize IT services to the extent that it did. Many companies were able to negotiate substantial benefits, but they would have invested in India anyway. And India is still throwing money in the wrong direction. Even the companies investing there agree: They would prefer a better infrastructure to operate in, an electric power system that did not go down every day, better education for workers. The big companies can compensate for these deficiencies, but it’s really harmful for the smaller ones and for overall economic development.”

**Narayana Murthy, Infosys Technologies: Globalization, round two**

Narayana Murthy founded Infosys in 1981 with six other software professionals, in Bangalore, 100 km from his native town of Mysore, India. He served as chairman and CEO for 20 years. The company is now publicly traded and had revenues of $753 million last year, generated by 21,000 employees around the world. It is one of India’s three leading consulting and software providers.

Murthy recalls from back in 1981: “IBM was just losing its hold on the software business because the US government had required it to unbundle software from hardware, and PCs were just coming onto the market. We asked, ‘Is there some way we can use this opportunity?’ Unfortunately, at that time, the market for customized software did not exist in India. Moreover, Indian rules and regulations in the 1980s were far too bureaucratic. For instance, it took a year to get a telephone line in 1983. Further, it required 10 to 15 visits to the Department of Electronics and more than a year to secure permission to import a computer. Consequently, from 1981 through 1989, the growth was sluggish.”
“Our growth really started in 1991, after the first round of economic reforms in India. The reforms reduced the friction around conducting business in India and improved the velocity of decision-making in organizations. It changed the Indian business context to a free, open market for high-tech companies.”

We have gotten to know him (and his company) through the Wharton-Infosys Business Transformation Awards, for which we are a judge. Reflecting Murthy’s beliefs, the Awards’ thesis is that IT innovation is not the province only of edgy startups; it can also transform large companies and even their markets, as competing companies follow a leader’s innovation.

That’s what Murthy has done in his own business – and what he and his competitors have done to transform India itself. He says, “Every morning, I open my LG refrigerator from Korea. We have an excellent Indian white-goods maker. But competition from companies like GE and LG have hurt its sales. I drink Pepsi or Coke. We had a domestic soft-drink maker, but it got wiped out. I drive my Opel Astra car to my office. As a result, in India, companies have been shut down and we have had job losses. However, there have been lots of benefits for consumers. Costs are down and consumer service is better. Clearly, the multinational companies have enhanced the competitiveness in our market.

“Now,” he says, “people outside India are concerned with offshoring. For the first time in history, we in India have a certain advantage in the global market. This is being resisted. Just as businesses in India have adapted, US businesses will have to get serious about retraining people and moving them to core and customer-facing jobs.”

He adds, “I should also point out that India and other developing countries are good markets. For example, GE produces and sells refrigerators and a number of other products in India. The majority of the aircrafts I fly on are from Boeing, and the computers and the software products we use at Infosys are American.”

“The people [in the US] who have been affected by the job losses are articulate and well connected with the media. I can understand: Someone losing a job is painful. People should have created a plan upfront before offshoring. Right now, there’s so much pain that it’s hard for some people to see the next step.”
Louis Rosenthal, ABN AMRO: Worldwide reach, local color

Louis Rosenthal, executive VP and CIO of ABN AMRO Services, started his career as a banker, not as an IT guy. He joined European American Bank in 1985 after seven years at Bank of New York. And EAB joined ABN AMRO by being acquired in 1991. Now in more than 60 countries, ABN AMRO illustrates the truth that globalization didn’t begin yesterday. Its history goes back to 1824, when it played a key role in financing the push of the Netherlands’ leading-edge merchants around the world.

As a newly appointed Assistant Treasurer at the Bank of New York, Rosenthal learned the trade on the floor rather than in a B-school, working on Wall Street and managing a daily tide of securities transactions. There he did his first high-level business-process re-engineering work. “At 21,” he says, “I wasn’t focused on business processes, but I could tell that what we were doing every day didn’t make sense. Every night we took delivery of bags full of paper securities being pledged as collateral to secure overnight loans. We would count and record them all...and the next morning when the loan was repaid, we would release the collateral and send all the securities back. You didn’t need to be a genius or even a systems analyst to see it was crazy. So with a partner, we developed an automated system for broker-borrowers to electronically pledge securities as collateral, and for the bank to electronically release the collateral when the loan was repaid. This is commonplace today, but back in the ’70s, taking so much manual effort out of this process was almost revolutionary.”

Now he’s responsible for a slightly more complex IT infrastructure for ABN AMRO, with the North American share of a $2-billion budget. His major challenge, he says, is to apply the same kind of common sense and standardization of process on a global scale and with more of a business context: “Ideally, we would standardize everything, but because of regulations and local business practices, a checking account in Chicago is not the same as a checking account in Amsterdam or India. We just had a meeting of our global CIO Committee in London to discuss what processes we all have in common. In IT, we’re gradually moving up the value chain from infrastructure networking and the like to commodity applications such as ATMs, but while we may never be able to do everything the same way everywhere, we are committed to sharing common infrastructure and leveraging our own internal best practices throughout our global organization.”

On the production side, ABN AMRO has a business-process operation of its own in India and has also used third-party BPO and software-development contractors in that country. “But you need to consider the security risks as well as the cost savings of outsourcing,” says Rosenthal. “It adds in a whole new set of concerns with respect to
backup and business continuity, privacy, customer data, communications, geopolitical issues and the like. Remember those old banks with their vaults visible? They were sending a subtle message that your money was safe. All you had to do as a banker was guarantee security and occasionally come out with a new financial product. Of course, you could argue that if you do work in-house you have even less control. If you outsource, at least you have the security of a formal contract. It all boils down to really knowing who is doing the work for you, whatever country they are in.”

PANEL – Politics and Civics Online

BY TIM O’REILLY

2003 was the year the Internet changed American politics.

Despite Howard Dean’s failure to win the Democratic nomination, his campaign made history, raising more money from more small donors than any prior Democratic candidate had. But even more unprecedented than the funds raised was the bottom-up nature of the campaign: Volunteers weren’t just foot soldiers carrying out orders, but co-creators of the campaign, much as participants in open-source software projects help shape the software they use. Social software tools such as Meetup, blogging and a homegrown open-source framework called DeanSpace allowed a fundamental reversal of the usual model of “broadcast politics.” Joe Trippi, Dean’s tech-savvy campaign manager (an alumnus of Linux vendor Progeny Systems), at one point referred to the campaign as “open-source democracy.” At its heart, it was an attempt to define a politics divorced from special interests, responsive instead to an Internet-connected electorate. . .or are they a special interest, too?

Meanwhile, MoveOn.org, the Internet-based activist organization started by retired tech entrepreneurs Wes Boyd and Joan Blades, is now one of the largest interest groups in the country, with more than 2 million members who respond to almost daily calls for action. Like the Dean campaign, MoveOn sees itself as a bottom-up organization whose agenda is set by its members. “ActionForums” let members suggest programs, which are then voted on by other members until the most popular float to the top. Members actually help build the programs as well: MoveOn has spent millions running homegrown television ads developed by individuals and selected by vote of the membership.
But these high-profile avatars of the new democracy are only the most visible exemplars of a technological change that has already run much further and much faster than anyone expected. Innovators “scratching their own itch” show the way; entrepreneurs follow, making those innovations available to everyone. And so we see organizations such as Bob Epstein’s GetActive, a kind of MoveOn-for-hire, providing Internet-enabled CRM for activist organizations. Meanwhile, Jonah Seiger has launched a Washington consulting firm to help clients use the Internet effectively for public affairs. And Scott Heiferman’s Meetup.com has already become an essential tool for campaign organizing at all levels of government and all degrees of “official-ness.” In the Forum gallery, Public Mind shows how opinions can be aggregated and made visible.

These entrepreneurs will share insights into what comes next, as the new methodologies are integrated into the routine toolbox of politics. As with direct mail, which was introduced into politics by George McGovern in the 1972 presidential election, the benefits don’t necessarily accrue to the innovators but to those who best understand and rigorously apply the lessons of the new medium. . .and in the end, to those whose message appeals to the people it reaches.

Tim O’Reilly, O’Reilly & Associates (moderator): Open-source politics

Tim O’Reilly was never active in politics, he thought: “But when you talk about the Internet as an interest group, that for me is the point of attachment.” In 1995, concerned about “Netscape’s attempts to emulate Microsoft and dominate the Net,” he gave a talk at Stanford saying, in effect, “We need a Sierra Club for the Net.” He briefly sat on the boards of the Electronic Frontier Foundation and the Internet Society in the mid-90s, but couldn’t – he says – get either of them to commit to building the large membership base essential to having a real impact in Washington.

“From the beginning of my activism about open source in 1997, I emphasized that collaboration, not licenses, are the foundation of open source,” he recalls. This was also the basis of his interest in peer-to-peer networking, which led him to launch O’Reilly’s P2P conference (now the annual Emerging Technology Conference).

“Decentralization and peer-to-peer give us the ability to break the increasing lock people in power put on things. I was still focusing on it from a tech point of view, but this past year I saw what was happening politically. People were taking these ideas out of the tech community, and it was happening in the real world.”

“My interest in this area has largely been driven by watching the alpha geeks,” he continues. As founder and CEO of O’Reilly & Associates, “My business is to watch
innovators, to see what they do and write down and transmit the take-aways. What is repeatable? It gets interesting when our industry builds tools that make these powers accessible to other people. In aftermath of the Dean implosion, Britt Blaser [a tech consultant to the late Dean campaign] is figuring out how to spread the technology, with a campaign-in-a-box that could be used by anyone. We can take the work of pioneering geniuses so that collectively we become smarter."

If this is all about empowerment of individuals, decentralization, no central authority, we ask, where are the Republicans? He replies: “The answer is simple. In the words of William Gibson, ‘The future is here. It just isn’t evenly distributed yet.’ So far, this technology has taken deeper root at the progressive and libertarian ends of the spectrum, but over time, I have little doubt that it will be adopted by people at both ends of the political spectrum.”

“Are we seeing the formation of a third party?” he asks rhetorically. “It has ‘almost happened’ before, but that’s certainly the vision of many of the people involved. Their hope is that both of the major parties are representing a constituency that leaves a lot of people out. A lot of it is whether there’s a way to reach people in a way that avoids the parties. Wes Boyd [of MoveOn] says he’s speaking for a large centrist group” – though many would disagree.

Regardless, O’Reilly is excited about more than national party politics. “My town, Sebastopol [California], actually has a Green majority and a Green mayor. Scott [Heiferman] is right that it’s not just ‘official,’ national politics. A group of people in Sebastopol got together over the Net to organize a local park for skateboarders. The city government had banned them from the sidewalks, and the parents took up [virtual] arms. My wife wrote, ‘You guys are talking as if these were hoodlums. They are our kids.’ Her voice was heard in a way it would not have been before."

**Bob Epstein, Environmental Entrepreneurs and Get Active:**

*From active data to active people*

We met Bob Epstein in 1986 when he had left database-machine developer Britton-Lee to co-found Sybase. The idea was not just to beat Oracle with a faster database designed around a network, but to add a variety of programming tools and clever capabilities such as stored procedures and triggers – an object-oriented approach. Databases should be more than dumb filing cabinets, he contended at the time; their applications should be able to make decisions independently based on changes to their data. Although it wasn’t quite peer-to-peer, Sybase and its stored procedures got
the concept of distributed control that Oracle had missed. Now, Epstein gets the concept of distributed control that many political organizers still miss.

Epstein helped recruit a new management team at Sybase and left the board and the company in 1999. He says, “I got involved in environmental issues, and consequently politics, because I wanted to do something beyond just software after Sybase. Specifically, I was looking for ways to help companies make money by polluting less. That was my starting point. How do I get my views into the political process? How do I get more entrepreneurs involved? I was trying to find techniques to allow businesspeople with very little time to weigh in. I could go in to meet some politician face-to-face and give that meeting more weight; if the politician said that a certain initiative was just going to increase costs, I could say, ‘Here are the phone numbers and e-mail addresses of 120 businesspeople who disagree with you.’”

Epstein is a co-founder of both Environmental Entrepreneurs (E2) and GetActive Software. “E2 is a nonprofit focused on organizing hundreds of businesspeople to weigh in on environmental issues,” he says. “GetActive is a company focused on engaging millions of people to build community online.”

The business model for GetActive is basically customer relationship management, including e-mail communications, political activism, fund-raising and community-building for nonprofits and outreach organizations; such organizations spend about $70 billion a year in the US on direct mail. Says Epstein, “At least some of that should move online, to be more effective – and cheaper,” with some of the financial benefit accruing to GetActive. “The overall goal and real power is to leverage the viral effect of online communication. It’s not just the central organization sending out mail, but empowering members to raise awareness and money. The individuals get their own pages. As an organization, you’re trusting that people can do it and represent you well.” In short, GetActive helps organizations empower their members in becoming the modern-day equivalent of ward captains or the political equivalent of viral marketers. Customers include the AFL-CIO and the affiliated labor unions, the Society of Human Resource Managers, the American Red Cross, PBS, NPR, the University of California at Berkeley and the US Chamber of Commerce.

“Are people getting more active? The thing that makes the most difference is the e-mails people send to other people they know, not those that come from the [organization],” says Epstein. “They are part of an education process that’s making people more aware – education through people that they trust on an issue. The senders feel empowered themselves, and overall we’ve seen significant growth among the couple
of hundred clients we have. Each message has to be well-reasoned, short, simple and focused. You never want to ask someone to do two things in the same message. And we have to make sure that none of our customers become spammers. That’s the biggest risk anyone faces, but we haven’t seen that backfire at all [so far].”

Scott Heiferman, Meetup.com: Let’s get together
9/11 gave Scott Heiferman the impetus to found Meetup.com, a website designed to help users “meet up” in groups around common interests, face-to-face, in neighborhoods around the world. “For me, living in New York, 9/11 was a wake-up call about the importance of local community,” says Heiferman. “So I read ’Bowling Alone’ by Robert Putnam — a book about the decline of community in America, how people are disengaged and how society and people are healthier when people are a part of local groups, communities and meetings. At the same time, there was all this talk about how geography doesn’t matter in the age of the Internet. Meetup.com was thumbing our nose at the notion that local didn’t mean anything.”

The business model came from his background in the online advertising business, first at Sony and then as founder of i-Traffic, an online ad agency sold to Agency.com (now part of Omnicom) in 1999. But also, he adds, “My dad ran a paint store his whole life, and I learned that retailers always want to get people in the door.” So Heiferman started Meetup.com to earn revenue from the meeting venues, who pay Meetup for the store traffic generated.

“But you don’t know how the business model will twist and turn in a startup,” he says. “Now Meetup has been grazing profitability by charging fees to three distinct entities interested in the Meetups: the venues, the organizations that benefit from having their people meet up and the individuals themselves.”

Political Meetups, which have garnered the company so much press, were a surprise. Half the people in political Meetups say that they had never been involved in politics before. “It’s not just Howard Dean; it’s all kinds of politics,” says Heiferman. “Our fastest-growing topic is the conservative Heritage Foundation Meetups, from zero to 300 cities in three months. They go to Meetups not just to be supporters, but to learn. They’re interested. They want to hear why their neighbors support this or that. It’s better than TV. Meetups are not just fan clubs, but town squares.

“Although the press was all about the Dean campaign and Meetup’s role in politics, political Meetups account for only a third of the million-odd people signed up for
Meetups. The rest include Meetups for single moms, people who want to speak French, war buffs, entrepreneurs, chihuahua owners and people involved with thousands of other topics suggested by the users.

“Now we’ve learned that people want more control, some sense of belonging to something bigger than their local group, not just a glorified flash mob. So we have figured out a business model that will make that possible. The Meetups are turning into chapters and organizations, persisting over time and across geographies. There was a lot of hype about the Net and the stock market bubble. But when the bubble was over the Net was still there. The elections could be like the bubble for Meetup. When they’re over, we’ll still be here.”

*(DISCLOSURE: ESTHER DYSON IS AN INVESTOR AND DIRECTOR.)*

**Jonah Seiger, Connections Media: Man about Washington**

When Jonah Seiger talks about launching his new company, Connections Media, “in town,” he means Washington. Connections Media is a new species for the Washington political market: a cross-media planning and placement agency. “Unlike in the commercial world, political and public-affairs advertising strategies have not yet adapted to the shifting media consumption habits of Americans,” says Seiger. “The Internet is not yet in the mix. We intend to change that.” The idea is to help politicians and companies seeking to influence public opinion to deliver their messages effectively across the entire media mix.

But like any good media-buying agency, Connections Media will get its edge not just by negotiating contracts, but by understanding the media and using them effectively. At that, Seiger is an old hand. He grew up in Palo Alto, just as it was becoming Silicon Valley in the ’70s and ’80s. “I was at Nixon Elementary School on the Stanford campus,” he recalls, “and we had dial-up access to one of the Stanford computers on Arpanet. When it rained, we would stay inside at recess and play lemonade [an online trading simulation] with people across town. I was writing in BASIC and was a computer hacker at 10.” He proceeded to study psychology and religion at the University of Michigan, with time out to be a Grateful Deadhead.

After graduating he followed a then-girlfriend to Washington, where he became an intern for Massachusetts Congressman Ed Markey, a speaker at the 1993 PC Forum, chairman of the House telecom subcommittee and a proponent of the Telecom Reform Act. Recalls Seiger, “The Internet was just bubbling up, and I was the only
one who knew anything about it. So instead of answering phones and pushing paper, I got to get involved in policy.”

He joined the Electronic Frontier Foundation in May 1994, which was when we first met him. By the end of that year, the EFF spun out the Center for Democracy and Technology (in a somewhat bitter split), and Seiger went with the new group while the “old EFF” moved to San Francisco.

At CDT, he became communications director, talking mostly to the traditional press. One of its causes was a coalition to stop the Communications Decency Act, which had been positioned as protecting kids from porn. “Most companies were against censorship, but they had other fish to fry on the telecom bill,” he recalls. “We put up the first online petition in spring 1995, and got 115,000 people to sign it – really huge for those days. We printed it all out and took the five-foot-high stack of paper over to [Senator] Leahy, who held it up on floor of the Senate.” Seiger still has a photo of that moment, taken from the C-SPAN coverage and signed by Leahy.

It was all to no avail, though it did make the point. When Clinton signed the bill in February 1996, Seiger pulled another stunt: the black-page protest. “The image of the issue in the national media was Pamela Anderson with a black box over her chest. We wanted to change that. So we got 5000 sites to make their backgrounds black, with a button saying ‘why is this page black?’ and linking back to an explanation at the CDT site. We got Yahoo! and Netscape to join, so we had about 90 percent of the popular Internet. There were two top headlines that day: ‘Clinton signs bill. . .’ and ‘Thousands of websites go dark’.”

Soon after, Seiger went on to found Mindshare Internet Campaigns, developing Internet strategies for major corporations, trade associations and nonprofit organizations. Early this year he sold his interest in Mindshare to his partners and founded Connections Media, which will continue his focus on strategy while Mindshare focuses on software.
MONDAY, MARCH 22

PANEL – From Player to Platform:
The Context Makes the Connection

The big portals, once positioned as content services for mostly passive consumers, are facing fiercer competition from one another and also from a host of new services ranging from Friendster and Orkut to Amazon and eBay. Even as Google, Yahoo! and AOL compete for transaction revenues, online retailers compete back, not just for transaction revenues but also for users’ time and attention. Each company strives to offer a broader range of services to its users – and to find a last bastion of differentiated value that it can charge for. But just at the time that one company decides to charge for, say, mail, another player will use enhanced mail services as a loss-leader to get into some other market. Jon Miller of AOL stresses the importance of tying the various functions together in a way that makes them easy to use and sticky – though not so sticky as to be annoying.

And there’s more “convergence” coming. If the services can’t differentiate themselves through what they do, then they can hope to increase their value on the basis of relationships with their customers. This starts with personalization – doing a better job of knowing who each customer is, but not to an extent that feels like an invasion of privacy or cheap stereotyping: “You bought ‘The Forgiving Self,’ so you must want to read ‘Becoming Attached.’” Or, “You like William Safire, so you must like George Bush.” Or even, “You’re a man, so you must need Viagra.”

The three companies represented on our panel are making the next step, to “You like Juan, so you’ll be sure to like Alice.” Social networking is on the way: Dan Rosensweig of Yahoo! is most audibly enthusiastic, while Google’s Eric Schmidt claims that Orkut is still just a Darwinian trial or error. AOL already supports the largest social network of all, its AIM service, and has just announced ICQ Universe, which adds social-network functionality. And Microsoft, though not on the panel, is represented with its Wallop personal-sharing tools in the Forum Gallery (PAGE 61).

These companies are all looking at the kinds of new tools and services we discuss on Tuesday, for user content creation, attention management and search (PAGES 38 TO 56). They are also united in their scorn for spam, though they haven’t yet united in how to deal with it. Yahoo! has recently announced a digital stamp concept and is also talking with Goodmail about Goodmail’s version of a stamp. AOL and Yahoo! are part of an industry coalition using a combination of measures including legal action and technical measures to fight spam. AOL is promoting the use of SPF (for “sender permitted from”
or “sender policy framework”) to block spam and deter spoofing. With luck, market forces will pressure all these players to settle on open, interoperable standards, even as each of them tries to improve its own filtering technology and develop white-list tools (including challenge-and-response) that are easier to use than the current crop. We’ll discuss this further in the session on the accountable Net (PAGE 20).

**INTERVIEW – Eric Schmidt, Google: Darwinian management**

Google needs no introduction. The company is now paying the price of success, attracting business proposals, envy, competition and even fear-mongering over privacy and power issues from all corners. Its rumored but not yet officially announced IPO even gets credit for improving high-tech’s image on Wall Street. But though it excels at finding information anywhere, it remains resolutely tight-lipped about its own plans.

“Google is a late-binding culture,” says CEO Eric Schmidt. “Early binding is a failure of many corporate strategies. You think you know where you’re going, and you end up stuck in the wrong place.” (Could he be thinking of Novell, where he spent four years as CEO after leaving the CTO role at Sun Microsystems in 1997) He joined Google in 2001 as chairman, forming a troika with Google co-founders Sergey Brin and Larry Page.

One great example of late binding, with dynamic, real-time choices, is the free market itself, notes Schmidt. He’s trying to keep that culture and its Darwinian processes paramount within Google. “The key to creating the culture,” he says, “is in the hiring. Then you just let the strategy evolve internally, albeit in interaction with the marketplace outside. The way Google interviews people essentially guarantees that the people are both clever and creative in ways suitable to their roles. With salespeople, we make them do a sales pitch; marketing people do a marketing pitch. Engineers answer questions. . . . We watch them, more for how they tackle the problems than for their answers.”

Once hired, the engineers get to spend 20 percent of their time on things that interest them. “It’s fairly unmanaged,” says Schmidt. “It’s designed to allow strong-minded individuals to get a service out to users and then face the music. We let them put it on Google Labs and see if anyone wants to use it. The winnowing is run by people in product management.”
One example is Orkut, the new Friendster-like service that has more than 130,000 users as of early March. “Orkut [Buyukkokten] wanted to do this . . . and now it’s there,” says Schmidt. “The 20 percent has become 100 percent. Orkut is working 24 hours a day on the product named after him.”

But what does Orkut have to do with Google’s overall strategy? Answers Schmidt: “We like to say that Google is all the world’s information – which is in a lot of different forms. On the assumption that Orkut survives and evolves, it will be integrated in some way. Search is in its early stages; it’s a very very large space, much larger than people think it is. There are many approaches; Google won’t do all of them. But it will do more than it does now. Making the same old search work better is not sufficient. Eventually the differentiation decreases and you need to push forward to something else. That’s the story of technology. The product differentiations in the computer industry were vast 20 years ago [when Schmidt started at Sun in 1983, coming from Xerox PARC], but now they are gone. Whatever market you’re in, you have to organize a culture that will let you change over time. Alternatively you can have an acquisition strategy that will let you do that over time, but you need some kind of strategy on how to evolve, if not where to evolve.”

**Jon Miller, America Online: Leveraging the legacy**

Jon Miller had just joined America Online when he spoke at PC Forum last year. This year, he is a veteran. Over the past year, aside from wrestling with sins of the past, he has started rebuilding AOL for the future. Part of the task was simply to examine the service from top to bottom with a fresh, cold eye. What worked? What didn’t? What could work better with just a tweak or two?

The result – or rather, the current phase of a continuing process – is a much better-integrated service, pulling together a hodge-podge of products and services accreted over the years. Although membership numbers are down, usage – hours per person – is up, to 90 minutes a day vs. about 80 minutes a day a year ago. “We have moved the needle,” says Miller. “There’s no question people value the service more. We have begun to learn how the audience works, based on thousands of hours of qualitative research including psychographic studies in people’s homes.”

There have been a variety of announcements, including ICQ Universe, but most of the change has been “to give people content in a way that’s relevant to them,” Miller continues. “We use programming to drive habitual use of the functionality of the
service. For example, when you read a news story, we make chat available, so we drive chat via the news.”

He echoes one of this year’s big consumer themes – photos: “We redid ‘You’ve got pictures’ and tied that into various points of programming, and the usage skyrocketed without any promotion. We also tied it into e-mail and AOL Journals [blogs]. It stands up to many competitive products everywhere. It’s a natural extension. You can easily post pictures and video, and others can share and IM them.”

In search, the company has also made better use of existing capability. Says Miller, “When I started, people didn’t value AOL’s search. The number of searches was low [less than 30 percent of users’ searches from within the AOL client] but we have meaningfully improved it in partnership with Google [to 70 percent]. We put search into more relevant places, such as our news, which is now the number-one news destination on the Internet. And we put more relevant things around search itself; where Google, for example, puts AdWords results, AOL uses similar context-sensing technology to place AOL-specific content in what it calls Smartbox. If you put in a search term of ‘trains,’ you will get links to Amtrak schedules, ticket information and tickets, as well as toy trains and so on, all within the browser before you get to a Google jump page.”

“I can’t bring myself to use the word convergence, but I can say connected,” he continues. “People are connecting the PC to the phone and vice versa. And it’s not just devices, but information and identity. It’s still early days, but the growth in PC-to-SMS messaging is a hockey stick, just like PC-to-PC messaging in the last few years. Meanwhile, instant messaging is coming into its own. Last year, it went from a one-trick pony to its own medium, supporting other applications. We didn’t get any revenues off it in the old mode, but now we do, from IM personals and the like.

“The tighter together all these things are, the more usage we get,” he concludes. That in turn leads to stickiness and more ad revenues. Indeed, ad sales (excluding the impact of previous questionable deals that are being unwound) are up 30 percent, he says. And in Europe, the company has moved to profitability in 2003 after a $600-million loss in 2001, despite competing primarily with “entrenched privatized national telcos.”
Dan Rosensweig, Yahoo!: Friendster envy

Dan Rosensweig of Yahoo! is a true believer in the power of social networks. “One way to view the world is that authority is being transferred from the traditional ‘authorities,’” he says. “Power and information have been transferred to individuals. With better information, individuals can negotiate a better price for their car; with stock quotes, they can follow the markets for themselves.”

“The next phase is transferring influence to people of shared belief systems, who collectively know more than you do though you may not know them. It’s the same as how people will come to your conference; they’ll hear Eric [Schmidt] and without knowing him they’ll follow his lead.”

We wouldn’t be surprised to see Yahoo! offer a social networking service: It already has the customers and could instantiate many links – with permission – from their mail accounts. And its Overture search group is working with Eurekster, a search tool demoing in the Forum gallery (page 61) that ranks search results by what a particular user’s social network – or defined commercial community – finds interesting.

But Rosensweig sees social networks as an aspect of personalization rather than a discrete offering. “The phenomenon is going to be about more than just dating,” he says, “or even how to get a date without saying you’re trying to get a date. Take the evolution: Personals are not about transferring power to anyone else. Social networking takes the next step: The community has real influence over the decisions that I make, the friends – and dates – I choose. Now you see social networking popping up in career sites” – such as Yahoo! HotJobs, we expect.

“This trend of community influence is countering another trend – too much spam, too much of everything. How can an affinity group help me narrow down everything there is? Because I can’t deal with everything there is. Online services give me everything and flood me with it. There’s no weighting, just raw data. Who’s the authority to help you cull down that data? It’s people who have the same beliefs as you.”

“If you’re Yahoo!” he continues, “that puts you in a fabulous position, since we have the tools to help potential members of natural affinity groups find each other.”

Beyond that, Yahoo! has introduced the idea of stopping spam not through payment or individual challenge-and-response, but via an authentication process that puts the burden on the owner of the sender’s domain and the ISPs that forwarded the mail in the first place. The idea is to insert a key within each message that can then
be authenticated by the receiving system. Of course, part of the problem is that some domains are spoofed: How do you make sure the burden of rejecting false messages is placed where it belongs rather than on innocent domain owners or individuals whose addresses are spoofed? Explains Rosensweig: “Our proposal aims to solve some problems around identity – spoofing, phishing – at the system level vs. the user level. The DomainKeys use public/private-key cryptography to generate a signature for outgoing e-mail. The receiving e-mail system retrieves the public key from the sender’s [stated] domain server and matches it with the signature in the e-mail.”

That may sound complicated, but it’s the germ of a good idea. Yahoo! wants suggestions for improvement rather than license fees, Rosensweig says, because in this case at least Yahoo!’s interests are aligned with those of its competitors.

**PANEL – The Accountable Net: Security and Risk**

_How can we ensure safety and security on the Net? In the real world, good behavior is fostered by a combination of government at the top, and community pressure locally._

_But the Internet is no longer the community it once was. It has become too large for people to know one another. The solution is not necessarily more government and more regulation, but rather more visibility of the kind we used to have: People need to know one another, and they need to be able to decide whom they want to know. (The new social networking tools are one manifestation of this desire, but we also need to communicate safely with people we may not consider friends or business partners but whom we wouldn’t shy away from on the street.) Within organizations, people need to feel loyalty not just to a mission but also to each other, as Major General Kenneth Hess points out._

_The default anonymity of the Internet makes it easy for individuals to do bad things – send spam, collect people’s data and send it around the Net, launch viruses and collude to commit crimes. That same anonymity makes it hard to enforce laws against those actions, even as it preserves our freedom. But the Internet’s technology also makes it easier for individuals to protect themselves: If they pay attention and have the proper tools, they can filter things for themselves – using firewalls, spam blockers and deciding whom to give private information to. Moreover, it’s fairly easy for Internet users to move to another virtual community if they don’t like the rules of the one they’re in._
The idea of the “accountable Net” (courtesy of the Aspen Institute) is simple: People on the Internet should be accountable to each other, and they are free to decide whom to interact with. The goal is not a free-for-all, anarchic Net, but one where good behavior is fostered effectively – and locally.

Sounds great, but how would it really work? The idea is not every person for herself in a rule-free society, but one in which rules come from the bottom up: generally enforced by peers, although with governments in the background. Nor is this a world of individuals only: Internet service providers, for example, who collect money from their customers, can then vouch for their behavior and deal with the more technical aspects of Internet security. ISPs can filter spam, or they can refuse to accept mail from ISPs that are notorious for not controlling outgoing spam. Software vendors also play a role. They need to make their products more secure, with defaults that include virus-checking, firewalls and spam-filtering tools. User corporations play a big role, too, in safeguarding customers’ and partners’ data. Bruce Schneier of Counterpane Internet Security represents the private sector, but with his own particular point of view!

And finally, we need government at the back end, ready to prosecute serious cases of misrepresentation (as well as fraud, identity theft, antitrust and other “traditional” offline crimes). Government, as represented by Robert Liscouski, also sees the Net as a key tool for itself – and for would-be terrorists.

The basic rule, as David Johnson of New York Law School points out, is transparency: You need to know whom you are dealing with, or know that you don’t know them so that you can take proper measures to protect yourself. The accountable Net is a complex system of interacting parts, where people and organizations get reputations and are accountable for their actions not just to some central authority but to their counterparts.

**PRESENTATION – Major General Kenneth Hess, US Air Force:**

**It’s the people, stupid!**

Although Ken Hess is the Air Force’s chief safety officer, he doesn’t have any special “safety” background. He explains: “The Air Force’s approach to safety is that all the commanders in the field are charged with being safety officers.” So when he was asked to head up the Air Force Safety Center, it was with the mission to make the program relevant to everyone rather than run a separate division.

Although aviation safety is complex and dominates the Air Force’s safety agenda, an equal effort goes into maintaining OSHA standards, and also space, weapons and
missile safety programs. Hess adds, “Losing our airmen on the highways is actually the biggest safety problem we have.”

Last year he spent eight months with the Columbia Shuttle Accident Investigation Board. “Columbia was the largest, most complex accident I’ve ever been associated with. Columbia has really shaped my thinking about safety. The cultural aspects are key.” Ultimately, he says, “I was not surprised by what we found. Huge complex organizations with tight resource constraints will short themselves in areas they don’t see as delivering to the bottom line. At NASA, the absence of a vision, or an unclear vision of what they wanted to do, translated into a lack of resources. Huge blind spots got created because of schedule pressure. Safety was ripe for the picking.”

There were other organizational factors, too, he says. NASA was too compartmentalized and had outsourced key engineering and safety tasks in order to control overhead and be more “efficient.” “This created seams in the organization that became barriers to communication,” Hess says. “As resources became scarce and the shuttle’s future uncertain, it became exceedingly difficult to properly assess risks being taken every day just to get the mission flown. Very capable engineers became managers who were charged to make it work...and no one wanted to hear any doubts.”

What are the lessons beyond the Air Force and NASA, both for companies and for the country? Answers Hess: “Business leaders need to be very sure of their vision and direction, and then commit to execute appropriately over time. You have to appreciate the cost of a safety disaster not only on the bottom line but on corporate reputation and public trust as well. The consequences of losing trust can cost a company dearly. You have to evaluate the possibility of a catastrophic failure, like Union Carbide and Bhopal. It started them down a path where they no longer exist; they’re no longer part of the Fortune 500. It’s a fundamental truth: Safe people produce better products. Over time, good safety practices lead to consistency and better results.”

This all makes sense, but it made sense in 1986, the year of the Challenger accident. Why didn’t NASA learn from that? A similar investigation resulted in a remarkably similar report. “There’s an unlearning curve,” says Hess. “It comes from turnover, policies such as outsourcing, organizational silos. Over time, things don’t stay fixed.”

At least, not in all organizations. As it happens, says Hess, “In our report we mentioned that the Navy’s submarine safety program is a good model. But the report was so unsettling to the Navy’s leaders that they decided to go back and see if they were really as good as they thought. That’s the kind of reaction people should have.”
David Johnson, New York Law School: Law and borders

David Johnson first learned about the computer business from his father, who opened the IBM Research Lab in San Jose that developed the hard disk. Johnson senior, originally a school teacher in Michigan, got into the business as an inventor. As a child in Michigan, he and his two brothers had figured out how to short-circuit the Model T Fords of their six older sisters’ dates by using lead pencils to “draw” extra circuits around their spark plugs. Years later, recalling that experience as he toiled marking students’ multiple-choice tests, he figured out how to make an electronic test-reader, which he sold to ETS. That ingenuity eventually won him a research job at IBM.

Johnson junior, now retired from Washington law firm Wilmer Cutler Pickering and teaching at New York Law School, left the computer field for a while to become a corporate lawyer, but computers caught up with him again in the mid-80s. “I got a call from the Source [the earliest commercial online service], which had been threatened by a respectable LA firm for ‘defamation of fictitious character’ for canceling the account of a customer who had criticized the management. It was way too interesting not to take the case,” he recalls, though it was quickly settled.

“I had always been interested in legal personhood and how one group gets authority to govern another,” he says. “Those kinds of ideas were built into the Yale Law School curriculum, because they certainly don’t teach plain old law! One of the principal issues all that leads to is the difference between physical and digital force. In the real world, we form governments to protect people against stronger neighboring tribes. But now, in the virtual world, we may not have to make the Hobbesian bargain of creating Leviathan if all bits are created equal.

“Once the online world took off, it produced a whole new range of interesting questions that became the center of my practice,” he continues. He spent most of his career at Wilmer Cutler, working with clients such as Prodigy, Yahoo!, IBM, Dell, Network Solutions/VeriSign and AOL. He also helped Common Cause translate offline election laws for the online world. When asked whether he is pleased with the results, he laughs: “I think we still have a lot to learn on many fronts.”

He also looked at how lawyers themselves could use computers. In 1993, he recalls, “I gave a speech calling for creation of an online guildhall for lawyers. To my surprise, Steve Brill [founder and owner of American Lawyer Media and now in the news as founder of a would-be trusted-traveler identity service] showed up one day and
called my bluff. He funded Counsel Connect, an online system for lawyers that eventually had 40,000 members."

That was a fulltime job for a few years. In 1998 Johnson started the Internet Policy Project for the Aspen Institute before returning later that year to Wilmer Cutler. He remains a member of the Aspen Project and was a key contributor at the Aspen Institute meeting last December that dreamed up the “accountable Net” meme.

Johnson is continuing to work on software tools for lawyers and others trying to work in groups, most recently CollabraGraph. CollabraGraph allows a group of people to build a shared diagram, asynchronously, so that the “state of mind of the group” – on, say, a risk/opportunity radar screen – is visible over time. Adds Johnson, “As the other Johnson [Steven; page 32] points out, we can often remember and understand things better as images than as text. I’m thinking about how law will change when it comes more oriented to visual media. Imagine when a trial becomes the showing of two competing movies rather than lots of written motions and people on the stand. Or a statute becomes a clickable diagram so you can see what conclusions follow when specific facts are turned on or off.”

In June 1996, Johnson co-authored (with David Post) one of the best Release 1.0 issues ever, on governance of cyberspace.


As Assistant Secretary, Infrastructure Protection, Bob Liscouski runs one of the offices in the Information Analysis and Infrastructure Protection Directorate, one of five directorates that make up the Department of Homeland Security. Of course, his turf intersects with other parts of DHS (including emergency preparedness and information analysis), which is one reason they are all together in a single department. In the same way, his office comprises four divisions, including the Protective Security Division (the traditional physical security effort), the National Communications System and the Infrastructure Coordination Division, as well as the National Cyber Security division run by Amit Yoran, formerly with Symantec.

This collection of disparate parts joined into one mirrors the challenge facing him: dealing with the complexities and interdependencies of security and threats. “You have to look at everything together,” he says. “Our structure is geared at blending the cyber and the physical. I have a five-step philosophy: Step 1 – know the threat. Step 2 – know what’s threatened (identify the assets). Step 3 – identify, analyze, nor-
malize and prioritize the vulnerabilities (in the context of consequence of loss).

Step 4 – implement programs to remediate vulnerabilities and identify gaps. And step 5 – use metrics to determine if the programs are working and how well. This approach puts threats in context in a dynamic environment: Is the threat valid and relevant? Are we doing things to mitigate the threat and are they working? And it helps us understand the investments required to achieve sustainable, consistent, effective and measurable actions either in the physical or logical world. But we have to remember that we can’t guarantee total security; we have to take a risk-management approach.”

He continues, “I’ve had a kind of accidental career, but it all fits in: My background as a homicide detective [for five years in Bergen County, NJ] gave me a good feel for the difference between cause-and-effect and pure chance. Sometimes things just happen, but in the end, it’s the linkages between events that produce some outcome.”

His background also includes time in the private sector; he founded one startup, PoliTech Research, and spent five years at Coca-Cola (two of them as Director of Information Assurance). His current job includes oversight for private security efforts, even though his office has no regulatory or legislative powers. On the other hand, he can certainly get a hearing. “A lot of folks want to collapse everything into a regulatory mindset and make people do specific things just because they are measurable. But that’s not necessarily the best approach to security. I see regulations as an option – insufficient in some respects, and diversionary in others. Are there things people should be doing – or not doing – that you simply can’t specify in regulations? We look at all alternatives across the board: What’s the right blend of programs?”

He continues: “The chemical industry is a good example. The big guys are already doing a lot of the right things, even without legislation. And they support legislation, because they’re already doing more than is required, and they’d like to see their competitors doing that – and bearing the costs – as well. Bigger companies will spend the money because they’re concerned not just about security but also their reputations and trademarks, but the smaller guys think they can’t afford to unless it’s required. Still, we try to lead them collectively with best practices and standards. The threat of regulation might give them impetus to take action.”

On IT specifically, he thinks that “the industry needs more prodding. Some companies would even benefit from legislation, because it would help them sell more [security] products. But overall, IT needs to do more around software quality assurance. Software still ships with bugs in it.” But he acknowledges the challenges: “Just having standards by which people can be trained and certified with letters after their
names doesn’t always work. We need a multi-layer defense, with software and hardware, with the programmers and with the users. Customers as well as vendors need to take a conscious approach to reducing vulnerabilities.”

Bruce Schneier, Counterpane Internet Security: Rational security

Bruce Schneier is a longtime security geek. He has written six books on the topic, ranging from “Applied Cryptography” (1996) to “Secrets & Lies: Digital Security in a Networked World” (2000). He also publishes Crypto-Gram, a free monthly newsletter with about 100,000 readers, that has become more policy- and less technology-oriented over time. In his day job, he is founder and CTO of Counterpane Internet Security, a managed-security monitoring service.

Despite that background, he has come to the realization that IT security is only part of a solution. “These days I do psychology and economics,” he says. Those are the subjects of his latest book, “Beyond Fear,” which encourages readers (including politicians) to think clearly before they start trying to reduce risks. What are the risks? Will the proposed solutions deal with them, and are they worth the trade-offs?”

He approaches security from an economic perspective: “people making individual decisions, understanding trade-offs and taking the consequences into account.”

What has surprised him? “The long-term gullibility of people,” he answers promptly. “I have some respect for ‘security theater,’ though. It does have a place. As a technologist, I’ll pooh-pooh things that don’t do any good. . .but making people feel more secure is a form of good. Because people exaggerate the threats, they need fake measures to feel secure again. There’s a seductiveness to technology as a security measure.

“I wish politicians and companies and the press would rationally discuss the trade-offs. The reporters do this to me: They ask ‘Will fingerprinting foreigners make you safer?’ It’s the wrong question. You also have to ask what the costs are, in time and money and annoyance to the very people we need as our friends.”

He adds, “In general, people have a good sense of security. Over generations, people have ‘done’ security to stay alive, and we’ve evolved to have a good sense of security. But technology has screwed up our national -security intuitions. We can’t make those judgments intuitively anymore.”
“Our instincts are wrong: If a child is in trouble, it’s actually safer for her to talk to a stranger; most kids are killed by people they know. Domestic violence kills more people than terrorism. We tend to fear the unknown, but we’re usually wrong to do so.”

Overall, he thinks a rational approach would lead to “far less spending [in the US] on broad surveillance, and more on intelligence and investigation. We’d focus more on human factors. We wouldn’t be arresting people without charges. We’d have more freedom and a more open government. And we wouldn’t be arming air pilots.”

But, he catches himself, “As you soon as you say the word ‘gun,’ half the audience stops listening and the other half blindly agrees with you.”

**PANEL – The Secret Life of the CIO:**

**What Do Enterprise Customers Really Want?**

*This is the “IT doesn’t matter” panel. Of course, we know that IT really does matter, but it’s not everything. The notion that vendors can deliver a solution is a dream. Vendors can deliver only tools that customers can use to solve their own problems. Those problems include CEOs and boards who don’t “get” IT (according to a recent Burson-Marsteller study revealing a paucity of CIO talent on corporate boards); trade-offs among security, cost, time-to-market and convenience; and demands for short-term financial benefits as well as long-term strategic value.*

*The problem with IT, of course, is that it’s hard to sell innovation at first. Then it’s hard to implement, because human factors often interfere. People may be reluctant to use new systems and change their habits, or they may not know how. And once a new system is in place, it may actually retard progress by codifying and solidifying the practices in place when the system was first dreamed up. And if after all that the system is successful, then it’s hard to keep competitors from copying it – while avoiding the mistakes made by the pioneers. As SAP’s Shai Agassi notes, the best source of competitive advantage now may be process-model innovation.*

*Current hot CIO issues include security and sales effectiveness. They also include new monitoring requirements to comply with Sarbanes-Oxley and increasing anxiety among employees threatened by (fear of) outsourcing. The CIO needs to protect the privacy of customers even as marketing keeps asking for more information. There are challenges of dealing with complexity, mergers and demergers, notes Rafael Sanchez of*
Burger King. CIOs and IT managers often don’t have a good handle on what’s already running in their shops, especially since many of them are new in the job. Even old hands such as Schwab’s Dawn Lepore find it a challenge to manage the sheer volume of conflicting requirements.

Meanwhile, globalization doesn’t just mean offshoring or not; it means far-flung operations, users with different languages and habits, and different legal regimes. Different countries’ laws may not specify .Net vs. J2EE, but they do cover such things as the kinds of data a website can collect, the kinds of financial instruments a bank can offer and a whole range of tax calculations (all of them implemented in software), as well as terms and conditions of employment in each branch operation. The gulf between IT and, say, sales or marketing is big; that distance is squared when you have marketers from St. Petersburg, Florida, and engineers from St. Petersburg, Russia.

Nonetheless, though IT may not “matter” anymore, how you use it does. What are the real challenges facing customers, and what can vendors do to help? How can enterprises build systems that support change rather than ones that cast current practices in stone? How can they motivate people to do the right thing, in situations ranging from following security practices to sharing data with coworkers and partners? How can IT-everywhere companies such as Orbitz differentiate themselves from competitors who can in essence buy the same technology?

Shai Agassi, SAP: They liked the man so much, they bought the company

Shai Agassi’s job is – in part – to understand the CIOs and CEOs SAP sells to. He feels for them: “The CIO is being asked by the CEO for process improvement, but it takes 24 months to implement a process that’s required in less than six months,” he says.

“The CIO says, ‘I’ve got this collection of history, from best-of-breed companies, or ones that disappeared.’ But the cost of integration is now getting higher than the cost of acquisition. It’s 60 percent of the budget...and I don’t see any raise in their budgets. Either they cheapen the cost of integration, or they offload the costs of integration to the application’s vendor and have him solve it – but not at their expense!”

He sees that trend as a key one, and beneficial to SAP, which can amortize the cost of development and integration over a large customer base. It’s why he was ready in 2001 to sell TopTier, a best-of-breed enterprise portal company, to SAP, which for its part evidently liked the man as much as the company. He is now one of the seven-member executive management board at SAP.
In short, says Agassi, “We’re moving from the ERP days where we recorded transac-
tional history, into fast, reliable real-time event resolution that can drive team deci-
sions. These days, companies need to manage change and relationships, not history
and resources.”

He believes that industrial customers have gone through three waves in recent years.
First, there was cost-cutting and efficiency. They speeded up time-to-transaction
closure, but now everyone can post and close transactions in seconds, he says; there’s
no advantage. Next, he says, “The CEO was focused on growth. Companies relied on
product differentiation to win in the marketplace. But now most innovations can be
copied so quickly that they confer no lasting advantage. They’re all based on stan-
dard shared components.”

So now we’re in the third wave, he believes: “Most companies are starting to find the
last bastion of advantage in process innovation. That gives them 18 to 24 months of
lead time. You can’t do that with outsourcing, which doesn’t increase flexibility – or
even cut costs,” he asserts. “In order to get that flexibility and make it accessible not
just to programmers but to businesspeople, we need to move from code to exe-
cutable process models.

“We are currently decoding [metaphorically] the genome of the software we have, so
that we can modify it by manipulating the model rather than the code. We’ve done
payroll; you can manipulate boxes to change the model. Others will come.”

He illustrates: “At the end of 2002, I got a call from one of the largest consumer- elec-
tronics manufacturers. He wanted a system to analyze daily P&L around the world.
A year later, he was calling again, because his competitor had built a reverse supply-
chain system. Instead of optimizing for production efficiencies, this company was
optimized for market pricing. Every day it would go out and grab current prices off
the Net for components from its suppliers, and it would figure out the best virtual
product mix for the next week. Then it would auction off the planned production
and, based on orders received, it would order the components and reset the produc-
tion lines to produce the desired mix. That company now has 20 percent of what
used to be the bigger company’s market, with 1 percent of its employees. Now the
big guy wants to do the same. He needs to respond by rearranging the existing [soft-
ware] engines in sourcing, producing and selling. That requires flexibility at the
process model level, not new engines.”
Dawn Lepore, Charles Schwab: Trade-offs at a trading company

Dawn Lepore’s career in IT started by the book: After graduating from Smith College with a BA in music, she took an aptitude test sponsored by Cincinnati Bell for people with music or math backgrounds. She worked there for four years before moving to California and taking a job in consulting with Informatics, vendor of Mark IV, one of the early database productivity tools. There she met her husband, also a consultant, whose clients included Schwab. “He kept coming home and talking about this great company, could he take my resume in, and so forth. I didn’t know anything about Wall Street, but I talked to them and I was impressed, including with how many women they had in senior positions even then.” She joined in 1983, when the company still had fewer than 1000 people. It now has about 16,000, down from a peak of 26,000 in 2000.

Lepore is now vice chairman of Schwab’s Active Trader unit, technology, operations, administration, and business strategy (and de facto CIO). “One of the biggest issues CIOs have,” she says, “is credibility within their companies. There’s this balancing act of moving things forward for the long term vs. showing quick hits and providing real bottom-line benefits. It’s such a risky position, but in order to make a difference you need to be in place for five years – and you have to take risks along the way. Yet so many companies want to swap their CIO if they don’t see results in a year.”

It’s a little easier now, she continues, because demand for talent is less fierce: “There are some extra IT people on the market, but good ones are still in high demand.” Acknowledging the sensitivity of the issue, she continues, “We offshore, but we try hard not to lay people off. Only one employee was affected, and that was a unique situation. We retrain people if we have to. I can’t tell you that people aren’t nervous, but we stress that we will always need some contingent employees because our business is so cyclical. The goal is not to eliminate people but to improve customer service and turnaround time. I don’t want to be naïve or callous, but in the long run, competition is good for us even though it’s painful. We don’t need Benedict Arnold stories; we need to keep our business competitive. If we do, we’ll create more jobs in the end.”

On the more techy side, Lepore’s dream is for the equivalent of a spreadsheet model for programming: “The innovations we provide are around business processes, not programming. But our programmers spend way too much time figuring out where things are going to run and where the data is. And even if you can find the data, it’s still a challenge to find the right data for the right person. For example, when a trader asks for a balance, we send him 30 balances. It’s expensive to do that, in processing time and bandwidth, but it’s also expensive to figure out just which two balances to
compute. . . We may have 50,000 clients or even 200,000 on a busy day asking for balances. So we have to overprovision, because it’s too expensive to get the right, surgical granularity and provide just what the clients need.”

**Rafael Sanchez, Burger King: The burger without the bun**

Rafael Sanchez’s challenge is different from that of most CIOs: Rather than integrate acquisitions, he has to deal with the aftermath of a buyout and separate Burger King’s IT operations from its previous owner, holding company Diageo. “That required a significant effort both in terms of setting up stand-alone processes, as well as ensuring all the company’s IT assets were under our ownership structure and control,” says Sanchez. “Many companies don’t think about separation when they acquire a company, and so they’re not prepared later when things change. The goal of the acquisition is to create synergies and to benefit from the leverage the holding company can provide. So when you spin off a division, you can’t just take a piece and go away.”

Just as with a prenuptial agreement – or rather, without one – lots of issues become more complex because they were not anticipated in the original merger. Sanchez says, “Our biggest difficulty was that our holding company was selling two of its divisions (Pillsbury and Diageo), and typically, software agreements allow for only one transfer. We also spent significant time transitioning our global data centers, which previously were hosted at Diageo-leveraged data centers. We spent a lot of the last 18 months working on these issues. We had to renegotiate a lot of contracts, but fortunately our vendors gave us some credit for what Diageo had spent before.”

Overall, Sanchez is responsible for supporting the IT operations of three main communities: the company itself, including financials and employees at company-owned restaurants; its 1700 franchisees and other partners; and consumers who visit the company’s public website.

The basic environment is SAP – which should make for some interesting discussions between Sanchez and fellow panelist Shai Agassi. Identity management comes from Oblix, whose CEO, Gordon Eubanks, will also be attending the Forum. Unlike some companies that bought (putative) best of breed, Burger King decided to base its portal strategy on SAP. Sanchez says, “We made a commitment to SAP to avoid a lot of integration issues that come from mixing vendors, but we had some challenges in terms of using the portal for applications outside of SAP. Our implementation was not entirely smooth sailing.”
“Part of the issue was having more people with skill sets to support the portal. But it is now working: We currently support all our company employees in applications including HR self-service, our company intranet and other productivity applications. In addition, we have more than 5000 end-users from our franchise community that use the portal to exchange information with us. Extending the portal to the franchisee community was a big win, given the distributed nature of our business. We now interact with our franchisees in areas including operations excellence and guest service, as well as in managing our key restaurant indicators. A big component of our portal strategy is our identity management framework, which manages our various communities and their access to applications.”

He adds, “One of the biggest things that we focus on is improving operations at the restaurant level. We look at simplification of the products and the processes, the speed of service. What’s the best labor mix to manage ups and downs in the restaurants’ daily and weekly business cycles? I spent a good number of years with PepsiCo, which is one of the best in consumer businesses, like GE in industry. I’m a big fan of standardized business processes. We need to process payments and collect royalties the same way in London as in Iowa. Only once we’ve figured all these things out from a business point of view do we look at the information technology to support them.”

**PRESENTATION - Steven Johnson: Mind Wide Open**

Steven Johnson, author of February’s Release 1.0 on “Software on the Brain,” says he “wanted to be a garbageman for the requisite three to four years. But in third grade [in Washington, DC], I started writing, and by the time I was a teenager I wanted to be a writer. I mostly wrote plays and poems. Then in college I caught the critical theory bug. I was a semiotics major at Brown, and then I went to grad school at Columbia. I thought I’d be a critic; I was on track to write my thesis on Dickens and cities and the Industrial Revolution. But all through this I was interested in my Mac, and I got on ECHO and the WELL. I began to wonder if there was a way to write about the technology world in a cultural way. All the writing back then was product reviews, focused on usefulness: ‘I give it four mice!!’ ”

By the time Wired magazine came out and the Web started spreading, he recalls, “I got thoroughly distracted and never finished my dissertation. “Stefanie Syman [then a Wall Street Journal technology writer] and I put together FEED,” one of the first Web-only magazines. A couple of years later they added Plastic, a less-edited offering
that used a Slashdot-like bubble-up user-rating system. Johnson’s first book, “Interface Culture” (1997), was a fusion of FEED and his work at Columbia.

Meanwhile, he continues, “FEED began to have an interest in science. I looked at my shelf and realized that the last 35 books I had read were science, whether brain science or complexity.” He wrote “Emergence: The Connected Lives of Ants, Brains, Cities, and Software” in 2002. He recalls, “But there was this thing that was weirdly missing in the brain books. They were mostly abstract: How does everyone’s brain work? I wanted to know how my brain works. Was there some self-knowledge I could get out of it?” That led to his latest book, “Mind Wide Open.”

Now that he has the self-knowledge, we asked, how does it affect him? Or his perceptions of his two boys, an infant and a toddler?

“My wife has this joke,” he replies gravely. “‘No experiments on the children!’ But I’m much more aware of things. We spent a huge amount of time rough-housing and tickling the first one when he was one. . . . You step back and ask, ‘Why is this so important and so much fun?’ You’re more aware. It feels a bit more universal and less personal. The book made me more hypersensitive to these developmental stages.

“In lots of little ways, you see lots of patterns you didn’t see before. For example, there are two seasonal phases to the writer’s life, with different reward structures. When you’re actually writing, the reward comes from achieving 1500 words this day, or you get a negative reward for only 200 words. It’s all self-administered and there’s not a huge range of extremes. There’s very little external praise or criticism.

“But once the book is out, it all changes. Almost every day, or every hour if you watch your Amazon ratings the way I do, you get negative or positive feedback. ‘Good review!’ Then, ‘Only two people showed up for the reading!’ And then, ‘You’re top of the list!’ I can notice my dopamine system kicking in each time. I’m not trained to handle the ups and downs because I’ve spent two years off the circuit.

“You can’t undo the chemistry, but it helps to recognize it and fortify yourself when it shows up. But it doesn’t remove the feelings themselves. In a way, they are richer, more fully realized, because you know where they’re coming from. And when you hit lows, you can say, ‘It’s just like taking a drug; it won’t last; just ride it out.’

And if you read “Mind Wide Open,” maybe you too will be able to handle the highs and lows of writing code or starting a new business!
Neal Stephenson takes great pains to get things right. When he was trying to create a graphic novel back in 1989, he decided his new Mac 2 (the first color Mac) was insufficient and bought a transputer board to soup it up. Then he learned Occam, an obscure but elegant parallel-processing language, to get the best graphics possible out of the transputer. The graphic novel never made it, but some of its characters and situations were adapted into “Snow Crash,” his third published novel.

And he takes the same trouble over the writing itself. “Novels and programs are similar,” he says. “Both of them are large, complicated structures of information. They do not work at all unless they are highly structured in a hierarchical way. First the words must be spelled right. Then the sentences need to be constructed, and sequenced into paragraphs, then chapters. It’s just like statements and blocks in a program. . . It all has to fit together right or it doesn’t work. Yet the only level of granularity that you can work at is individual bytes, one letter after another.”

Without prompting, he echoes the Forum’s theme: “You have to see the big picture in your head while building it one byte at a time. It’s like building a castle by stacking individual grains of sand with a tweezer.”

He continues: “It happens at a subconscious level. A lot of it happens while you’re sleeping, taking a shower or doing things unrelated. That means actively going out and doing something else so the subconscious stuff can happen. For me, it means programming computers, working on digital circuits, building a house, building one of George [Dyson]’s baidarkas. In last couple of years, it has been geeking out on space-related topics, relevant or not to what happens at Blue Origin [Jeff Bezos’s private space company].”

How does he get his stories? In the case of the Baroque Cycle, his current trilogy, “The story was already there; the two greatest minds in the world – Isaac Newton and Gottfried Wilhelm Leibniz – had a fight with each other over the nature of reality, and one won.” The story has current resonance: Newton is the proponent of the physics that dominated science for hundreds of years, whereas Leibniz’s “monadology” is a precursor of the cellular automata and self-organizing complexity theory that are gaining attention today.

He continues, “Both believe in mechanical philosophy, that you can describe nature with laws. Both are brilliant mathematicians, devout Christians. They’re worried
because there’s the beginnings of a split between Christianity and science. They see it as their great mission to prove to their friends that there’s no contradiction.”

“Newton kicks the crap out of Leibniz in the court of public opinion. Leibniz’s stock has risen quite a bit since then, but complexity doesn’t give the same satisfying results. There’s no nice resolution to all of this, much as I’d like to be the guy that wraps it all up.”

The first book of the trilogy (“Quicksilver”) came out in October, the second (“The Confusion”) is due in April and the third (“The System of the World”) next October. But they took seven years to write, says Stephenson. “Almost all of ‘Quicksilver’ was old stuff, and had just been sitting around. I could have pushed it out earlier. But I withheld it so that I could fix things in it and make the whole thing coherent.”

And what does he want of his readers? “Eventually it all comes down to telling a good yarn,” he says. “Human brains are hooked up to process complicated ideas in terms of narratives. I hesitate to say I want people to think differently. When artists say that, they start to make bad art. As a reader, you realize that this person has an agenda, and it’s no longer entertaining or fun. I’m simply trying to take subject matter that’s complicated and interesting and tell a good story about it. People will remember it, and from there what they want to do with it is up to them.”
PRESENTATION – Eric Johnson, Columbia University:
Defaults Have Value(s)

How do people really behave, online and off? They certainly don’t do what traditional economists expect them to do. They pay more than they need to in order to shop at their favorite stores, they waste their time foolishly doing tasks that could be done cheaper by someone else, and they fail to spend extra minutes that could bring them real savings.

Eric Johnson of Columbia Business School has made a career making sense of why people don't make sense. “Most people think they make up their own minds,” he says. “They’ll say, ‘I watch TV but I’m not influenced by the ads.’ Yet if you do something as subtle as expose them to different wallpaper, you can dramatically change what they look at while they’re shopping.”

As it happens, Johnson brings a unique perspective to the intertwined issues around decision-making, pricing and influence. After he entered remission following a bout with Hodgkins’ disease, the default was not to collect “clean” stem cells from him to use in possible further treatment. It was an easy default, because the collection is an expensive, painful process. “Moreover,” says Johnson, “statistically the chances of a recurrence are low. But my doctor was cautious and suggested collecting stem cells, just in case. Three months later, I had a relapse, and I was able to have treatment, a stem-cell transplant, much more quickly.” Three years later, he is still disease-free.

One way or another, a lot of behavior is influenced by defaults. That is, do you automatically send people marketing materials, charge them for insurance, add a soft drink to their lunch order, unless they say no? Or do you ask them to choose the marketing materials, the insurance, the soft drink? (If the choice is not clearly visible, hidden by small print or extra charges tacked on later, that’s not choice; that’s outright sleaze, or perhaps consumer fraud.)

Perhaps the best-known debate over defaults right now is over consumer privacy: opt-in versus opt-out marketing. For example, says Johnson, a typical online vendor can get 90 percent permission to send follow-up mailings by “pre-checking” the opt-in box (which, confusingly, is really opt-out, because the user has to take action to avoid getting follow-up mail). If the box is unchecked and the user has to check it, the “opt-in” rate can drop to 44 percent.
“Obviously, those results differ depending on a variety of factors, but they mean something. There was more interest in this research at the FTC until the administration changed,” says Johnson. The current furor over do-not-call lists is another example of this issue. . .and it shows the depths of people’s annoyance at phone calls. Given the chance, 57 million have taken the trouble to opt out.

**Making choices easy vs. making easy choices**

But defaults aren’t only about benefits to vendors. Defaults can also have a big impact on security. Microsoft’s recent promise to offer stronger default security settings for consumer PCs could make a big difference in overall computer security. It would be much tougher for hackers, virus-writers and others to attack and take over innocent users’ machines. But the industry says it values consumer convenience, and firewalls and other security measures can make legitimate communications more difficult. Also, companies who sell security software may not want to see it become a default pre-installed on consumers’ machines – but in fact it’s a marketing opportunity to sell update subscriptions.

The next step would be defaults for sender authentication to eliminate sender-address spoofing.

And finally, defaults can even benefit consumers. “Personalization is really about setting defaults,” says Johnson. “Defaults can be set in a way that suits each individual user. It should be done in a way that does not restrict the user’s choices if we guess wrong but that makes things as convenient as possible when we do guess right.”

Take, for example, certain travel sites that default to your home city. That’s handy when you start out a session, but it can be annoying when you’re trying to redo a search for a specific trip that does not start from home; it keeps deleting the city you typed in and returning you to home base. (And then there’s the British Airways website, which does not let you book a trip starting outside your home country.)

There are many other subtleties around defaults. For example, Amazon’s resistance to competition surprises many people, but not Johnson: “What matters to people is not always the lowest price, no matter what they say. What does matter is getting in and out quickly, just like at a corner store. Amazon’s famous ‘one-click checkout’ is really a default, to use your stored payment and shipping information.”
PANEL - Content: How Users Make It Their Own

BY HANK BARRY

Early computer makers might be surprised to find that the PC has emerged as a ubiquitous means of creative self-expression. Much of this creativity is not readily capable of being appreciated by those outside our immediate families, but some is. . .

Today, digital cameras, cell-phone cameras, and midi keyboards have joined the traditional keyboard as input devices. Photo and movie editors and music sequencers have joined word processors, PowerPoint and spreadsheets as mainstream applications. And mobile blogs, blogs, RSS and sharing programs, as well as e-mail, have lowered the headaches and costs of instantaneous worldwide distribution of the works the applications are used to create. Kodak’s Ofoto and Microsoft’s Wallop (in the Forum gallery) are only two of the many platforms users now have to share their content.

As we have recently seen with the “Grey Album,” where software allowed the quick and inexpensive combination of sound recordings by Jay-Z (The Black Album) and the Beatles (The White Album), people are taking vendors’ content only as a starting point for the experiences they create for themselves and others.

The participants on this panel are involved in the implications of this change. How will these technologies and customs evolve? Music leads the way in so many contexts: business models, software design, deployment of devices, user empowerment. . . What can we learn from the music business and new phenomena such as the $3-billion ringtone business? How will the role of the record company, publisher, film studio, text publisher or news organization change as distribution mechanisms and business models change, adjusting to newer players such as RealNetworks or even HP? What new businesses will take their place? What can and should governments do about this, if anything?

Users are no longer passive consumers, but active participants, in downloading, sharing, sampling, blogging, linking to and annotating others’ works. How will users interact with content? When you put a voice-mail greeting over a piece of sampled music, have you created something? New or derivative? At what point do “facts,” generally thought of as free information, become “content” and available for commercial exploitation? Do you have a property right (or some other kind of right) in the fact of your location at a particular time?
In addition to these social and legal questions, there are technological and business issues. What amount of metadata needs to accompany a digital object for it to be useful? Who controls this metadata? To what extent will our existing numbering schemes (such as UPC) be applicable in this new environment? In the “cestial jukebox,” whoever knows the identity of song B-59 has a lot of power. What are the implications for existing businesses? If everyone is an author, is everyone also a channel? Should eBay allow the sale of digital objects? If the typical user makes “bad” content, how do you find the good? One way might be through recommendations of one’s social network.

Hank Barry, Hummer Winblad (moderator): Investing to his own drummer

Now a VC, Hank Barry is pretty sure he was the first non-convict to take advantage of the University of Michigan’s “Educational Opportunities for Nontraditional Students” program, in 1977. He had earlier flunked out of college, run a clothing store, and spent years drumming six nights a week, five sets a night, in Detroit bars.

Second time around he did much better, and ended up graduating from the U of M and then from Stanford Law School in 1983, where he was managing editor of the Stanford Law Review. After law school he practiced in the entertainment department at Paul Weiss in New York, returning to the Bay Area and Cooley Godward in 1987. In 1994 he joined Wilson Sonsini. While there he built a corporate law practice, was on the executive committee and was co-head of the firm’s Interactive New Media practice. He joined client VC firm Hummer Winblad as a partner in 1999, just as the fun was beginning. He worked on Liquid Audio, NetDynamics, Pets.com, Looksmart, Viant and a variety of other startups, and is currently a director of Sensoria, a wireless sensor network company, and Muse Research, which makes a virtual instrument platform for performance and recording.

His best-known affiliation, however, was Napster. “The company was looking for financing,” he recalls. “John Fanning (a board member and uncle of founder Shawn Fanning) said to me, ‘You can’t get into this deal because all the good VCs want in.’ But eventually we made the investment, and I became interim CEO for ‘a couple weeks.’ It ended up being 16 months.”

What did he learn? “Well, on the serious side, I learned that we have real challenges in our economy due to our over-reliance on intellectual property,” he says. “IP protection is a good thing, but over the last 40 to 50 years we have steadily broadened the scope of patents, copyrights and trademarks. The results are that we are all paying a tax equal to all the litigation costs, and all the litigation is scaring innovators and their
investors. More importantly, we have affected the direction of investment decisions towards IP-intensive industries (pharmaceuticals, media and IT) and away from lower-margin areas such as basic manufacturing, transportation and agriculture."

“There are international implications to this,” he continues. “The natural tide of things is for price to equal marginal cost. But because the developed countries have so much at stake in IP protection, we require the rest of the world to go along with our rules. But poor countries are asking, ‘Why should we pay $30 for a pill we can make for a buck?’ Historically the poorer countries have eventually gotten on board, but it’s not clear whether that will happen this time. If they do not, how are we going to enforce those rules worldwide?”

And less seriously? “Well, I got to spend time with an amazing group of young and dedicated people. I heard a ton of non-mainstream, non-’hit’ music and it changed my views about what is ‘good’ and how we get exposed to media.”

Lisa Gansky, Eastman Kodak: Extreme sharing
Lisa Gansky co-founded Ofoto in 1999 and sold it to Eastman Kodak in May 2001. Still at Kodak, she is now general manager of Kodak’s Worldwide Digital Imaging Services division, which comprises Ofoto, the newly launched Mobile Service and a variety of other online services. Together, these units currently account for about 1 percent of Kodak’s total $13 billion in annual revenues...but 70 percent of the $3 billion it plans to spend on investments and acquisitions over the next three years.

After dropping out of Temple University, Gansky moved to Dallas to pursue her interest in genetics and immunology as a researcher at Southwestern Medical School. She also started a little computer retailer called Third-Coast Computing. “We noticed this company in Austin that we thought would be good to partner with,” she recalls. “We called them up and ended up hiring one of the partners, Randy Womack. Unfortunately, we didn’t get the other partner – whose name was Michael Dell.”

Eventually, Gansky moved to California and worked with startups including Action Technologies, an early groupware company (see RELEASE 1.0, OCTOBER 1986 AND FEBRUARY 1987). “I’m bilingual between marketing and early-stage tech stuff,” she says.

In 1994 she left Action to join O’Reilly & Associates and run a new division to implement some of the ideas the publishing side of the firm was writing about. With co-
founder Dale Dougherty, she started Global Network Navigator (sold to AOL) and
Internet-in-a-Box (sold to Spry and then to CompuServe). “I went over to AOL as
part of the hostage program for about 18 months,” she jokes. Then she left to cycle
around, co-founded Dos Margaritas, a Latin America-focused environmental foun-
dation for “conservation-based capitalism,” and worked with another string of star-
tups, including Critical Path, StarMedia and iVillage.

Then she started Ofoto. “I’m a photo junkie. I have lots of photos from almost every-
thing I’ve done, things friends have done and things that I’ve just heard about. I had
all these photos of Machu Picchu, Africa and all my friends’ kids that I hadn’t sent to
my family; I was afraid they would hunt me down and wrest them from my hands. I
wanted people in my life to have full access, but I was too busy.”

Now, with Kodak’s backing, the Ofoto service has 12 million members and stores
more than a billion uploaded photos. “We meet you wherever you are,” says Gansky.
“At a kiosk, at home, and on whatever device you want to use. Digital sensors – oth-
otherwise known as cameras – are everywhere. From a Kodak perspective, digital cap-
ture is moving to infinity, and the cost of it is approaching zero. You can record
everything. We see an opportunity for marketplaces for professionals, and for people
to share their photos with inner circles and outer circles of people they know.
Photography is disruptive emotionally; it stimulates the nervous system in a good
way [cf. Steve Johnson and dopamine, page 32]. We want to figure out how to share
photos without friction. Call it extreme sharing.”

**Rob Glaser, RealNetworks: Man of reality**

Rob Glaser, chairman and CEO of RealNetworks, worked at Microsoft for 10 years,
and ended up as VP of multimedia and consumer systems before leaving in 1994. At
the time, he was on the board of the Electronic Frontier Foundation. “I had a general
sense from [fellow board members] Mitch [Kapor] and [Dave] Farber that IP net-
works were going to be massively transformative,” he recalls now. “You get such a
transformation once in a generation. I was interested in how people deliver and
experience media. My idea in founding Real was to set out the technology and then
let millions of people use it. The focus will then shift from the technology to the con-
tent and the services.”

And so it has come to pass. Ten years since its incorporation in February 1994, Real
has more than 350 million unique registered users worldwide and more than 1.3
million paying subscribers to its various services. And it has moved from offering audio alone to include video.

But, notes Glaser, there’s a difference between images and [time-based] media such as music or videos. “The success of Ofoto, for example, is sharing from one to few. Forty-eight hours after an event such as a party or a wedding or just an evening out, three attendees have sent out pictures or posted them. Music doesn’t have the tools that let you do the equivalent. Music requires more intentional artistic creation; there’s no snapshot in music” …other than a ringtone, perhaps.

“One of the things we want to do is encourage bands to make their concerts available to the audience afterward. Pearl Jam and Phish are doing that, but lots of the smaller, less-known progressive bands performing in clubs could be doing it, too. Those musicians don’t use such tools, but they should. We’ve had conversations with bands about this. So far, the impact of the Net on user-generated content in music is sharing tastes and picks in music, rather than creating and sharing user-made music.”

Glaser adds, “The Net is a relationship, not a transaction. We let people register with us, so that when there was finally an opportunity to deliver value-added services instead of just infrastructure, we would be there with relationships. When the content and the rights were sorted out, we wanted to be a in a leading position.”

“Other than the bubble and the bursting of the bubble, it has pretty much gone according to plan,” he says. “At the beginning, it was just audio. Video was a science experiment. Then once we got the technology right, it took several years for the rights holders to make content available on terms consumers would be willing to pay for. Finally music is now available. The first services were like Soviet stores, with nothing on the shelves. But now Rhapsody has over 500,000 songs – no Beatles or Led Zeppelin yet, but 90 percent of what people want. Next is video. . . .”

**Shane Robison, Hewlett-Packard: It’s the channel, stupid!**

As chief strategy and technology officer of HP, Shane Robison has an enjoyable job. “The merger is behind us,” he says. “Now we get to figure out how to leverage our new position of power and influence.” The company wants to rededicate itself to the proposition that technology and invention matter. Robison has had a long technical career, starting with graphics systems at Evans & Sutherland and then AI research at Schlumberger Research. Later, he worked at Apple’s Advanced Technology Group for seven years, overlapping with the Newton among other leading-edge products. He
followed Apple’s Dave Nagel to AT&T Labs, where he was president of Internet technology and development, where he managed 2000 people and where he first met Carly Fiorina. However, he joined HP by being CTO at Compaq at the time of the merger. He was one of the principal architects of the merger, and now he helps shape HP’s business and technology strategy while focusing on such cross-company growth areas as mobility, security, rich media and management software. Robison also oversees HP’s intellectual property strategy and its key alliances with partners such as Microsoft, Cisco, Intel and most recently his old employer Apple.

“You have to sell 25 million PCs a year to be taken seriously in this business,” he says, “and now we do. The merger with Compaq gave us scale and breadth of platform; we have the flexibility of a new entrant combined with the heft of an industry leader.”

As a longtime strategist at the leading edge of graphics and rich media, he is excited about the new capabilities HP can sell to consumers, leveraged by an environment of broadband Internet everywhere. He is taking HP rapidly into consumer markets. In addition to working with Apple, he is deep in discussions with Hollywood and LA: “We’re trying to understand and address their concerns about intellectual property without neglecting the needs and demands of consumers” – and the marketplace realities, we might add.

Right now, the discussion with content creators in both the music and movie businesses is revolving around how these two industries can leverage digital technologies in their business to open up opportunities, create new business models and reach consumers in new ways. In addition, the entertainment industry is talking to HP about how it can leverage HP’s channel and installed base as a marketing and distribution channel. Imagine an HP consumer PC that came with, say, 1000 songs and 20 movies pre-loaded. Alone among tech companies, HP sponsored this year’s Sundance film festival.

Robison says, ”We’d certainly be happy to pre-load content that would appeal to our consumers. It would provide a legitimate outlet for some of the independent producers, who could use us to gain access to a large market they can’t easily reach in other ways.” As usual, it’s not a channel that would appeal to the established players who can already reach their markets effectively. However, if some new entrants pave the way, and the choice becomes not whether to create a new channel but whether to be left out of one that already exists, the defaults could change.
PANEL - On Beyond POEM (plain old e-mail):

Attention Management

E-mail, how do we use thee? Let us count the ways... We use it to communicate; we use it to manage tasks. Some of us use it as a file system; others use its many add-ins to manage contacts and calendars. As more and more of people's work involves communication with others, mail becomes more and more of an environment — or, as Xerox PARC puts it, a "habitat." From being integrated into other tasks, it has become an integrator. In a sense, e-mail is the most compelling application because it's the one we have traditionally used to share our work, and most work requires collaboration to happen in the first place.

As IBM's Irene Greif explains, the challenge is not just to manage our mail but to manage attention to tasks, to filter things and to find things. Mail's very nature — as a store-and-forward mechanism — is anachronistic in a world of instant messaging and Voice over IP (VoIP) and cell phones. Yet store and forward can be useful in stanching and managing the flow of interruptions.

Now mail is bringing in some more capabilities. Raymie Stata's Bloomba e-mail client has extensive search capabilities, and a newer version allows triage among spam, "real mail" and subscriptions, with a variety of clever, customizable subscription-content management tools. (Imagine something akin to client-side parsing of an RSS feed.) Soon, mail and other communications will be a background function. Click on an annotation in a spreadsheet, for example, and you can see who made it. More than that, you can communicate with that person — by IM or voice if you have permission and the person is present; otherwise, by mail (or some other form of deferred communication). If you want to meet with several people, you may have the kind of As Soon As Present functionality being demoed by Convoq on Monday afternoon (Page 65). All these tools will help make collaboration easier for the individuals involved by managing what Greif calls "activity threads" and Raymie Stata calls "personal workflow." [Which term will win? Vote on them at the Forum website.]

Tools such as wikis (from Socialtext, in the Forum gallery), allow seamless amalgamation of content by users themselves, with a mostly permissive approach to cross-editing. Meanwhile, the infrastructure will be more reliable, courtesy of companies such as company presenter Scalix (Page 76), and transparent, as illustrated by Organic Network, which is managing the Forum's transparent WiFi network with its visible user list.
Another problem with mail in practice is spam. That ranges from “real” spam, solicitations from commercial interests directed at no one in particular and subscription “newsletters” crammed with advertisements, to CC:s from behind-covering colleagues and jokes from over-eager friends. And now we have solicitations from would-be friends to join their social networks, requests for introductions from erstwhile cold-callers, and more. If we turn to the Web, we’re assailed by pop-up ads, animations and annoying creatures crawling over our pages. In that environment Dotomi hopes to win, by filling what used to be Web banner space with personal – not personalized – messages.

Irene Greif, IBM: Activity threads

Irene Greif studied computer science at MIT, earning her PhD in 1975. After a two-year interlude at the University of Washington in Seattle, she returned to MIT as faculty and started the formal field of “computer-supported cooperative work,” with a workshop and the first in a continuing series of annual conferences in 1986. In 1987, she joined Lotus. “Ray [Ozzie] and his team were working on Notes; they were just putting the first marketing person on it when I showed up. They brought me there assuming it would be useful to have someone to keep them in touch with the research. And for me, it was exciting because there weren’t any real collaboration systems out there to study, and this was a chance to see real people using the tools.”

“But,” she continues, “networking was just taking off, and it was still a challenge just to use a printer across the network. I got some advice from some commercially aware friends not to talk about the group aspects. I think I gained some credibility by focusing on ‘network-awareness’ before ‘group-awareness’.”

Over the years, Greif followed the roll-out of Notes and its use in the field. Her group’s version manager for 1-2-3, called Chronicle (see RELEASE 1.0, NOVEMBER 1991), was the first mass-market personal productivity tool to include “group” functionality of the kind that is now standard. And, she adds, “We were the ones [at Lotus] that figured out the Internet. While the business side was trying to import HTML files into Notes, we figured out how to publish Notes content in HTML and make it accessible through a browser.”

About three years ago, Greif started working on a project to “reinvent e-mail” for IBM (which acquired Lotus in 1995). Some of that work will be part of IBM’s Workplace product suite coming out later this spring; some will come in later releases and will underlie the client side of both Lotus Workplace and Notes 8.0. (Also of
note, IBM Research is starting to work more closely with IBM’s consulting groups, in an effort to add value and differentiation to those services.)

Says Greif, “We began to see how people were overwhelmed by the sheer quantity of e-mail. Everything was getting cluttered, but you could rely on people looking in their inbox, so you’d put stuff there. It’s not just mail anymore; it’s alerts, links to forms to fill in, URLs for background information, instant messages, things you may want to check with someone else first before forwarding them. It’s making people crazy. It’s even more than the quantity. People are in their mail looking around and happening to notice things and work on this one or that one. But every time you switch context, it imposes extra overhead.”

“So we’re learning how to put information in the periphery that they need to pay attention to. What they need is a notification system rather than just e-mail. We’re developing the concept of activity threads as opposed to message threads.”

Scott Kurnit, Dotomi and Goodmail Systems:
Enough about me, let’s talk about me
Scott Kurnit is representing two companies with approaches to attention management at the Forum – Dotomi on the Web and Goodmail Systems for e-mail. He comes to the area with a long history. After graduating from Hampshire College in 1976 and a short stint at public television, he joined Qube, the earliest large-scale but still experimental roll-out of interactive television. “Even 25 years later, the interactivity was greater than anything we see on TV today. TV still hasn’t got it. It was very simple, five buttons and a message light. It’s amazing how much you could increase people’s attention simply by listening – promising them some attention back, giving ‘viewers’ the power to change the course of a debate or a game.”

From there he went to Prodigy (owned by Sears and IBM) and put the first Web browser into an online service, and then to MCI – which immediately merged online operations with Murdoch, who had just bought Delphi. “It was fascinating watching these completely different cultures trying to work together,” he recalls, but ultimately unsatisfying. In 1996 he left and founded About.com (née The Mining Company) and keyword ad system Sprinks, selling both to Primedia in 2001. (Good timing, Scott!) And Primedia has just sold Sprinks to Google. (Good move, Primedia!)
Now Kurnit has his own “attention problem” as an active board member and advisor for six startups, including Dotomi and Goodmail. Both address the problem of “the stuff that comes in or at you, versus the stuff you seek,” he says.

Goodmail was founded last year by Richard Gingras (whose track record includes Apple and @Home). It works on the principle of paid digital stamps for bulk mail – not purporting to “solve” the entire spam problem, but operating as an overlay on existing anti-spam measures. In Kurnit’s terminology, Goodmail is designed to increase the reliability and speed of “bulk mail” that might otherwise get filtered by creating a branded “trusted class of e-mail” whose attributes include recipient permission, verified identity, a trusted unsubscribe and a per-message fee that shifts the financial burden of e-mail from ISPs (and consumers) to volume senders. “The answer to the [Dave] Farber question – about modest-volume non-commercial sending – is a very low price: one that respects his needs as well as the impact on the e-mail infrastructure. Maybe that’s a hundredth of a penny per message, or just $3 to send to his 30,000-reader IP list.” Or perhaps Farber’s mail would go through without stamps, because filtering will improve.

Kurnit adds, “The need is to create an island of good volume-mail behavior in an ocean of spam and dysfunctional spam-prevention methods. Legitimate volume mailers will support this new ecosystem. The Gap would be happy to pay $10 a thousand (1 cent per e-mail) to reach their customers in a reliable, trusted fashion. Ticketmaster will be pleased to spend a penny to make sure order confirmations get through. And AOL and Yahoo! will just give free stamps to you and me based on our normal sending behavior.”

By contrast, Dotomi (see RELEASE 1.0, JULY 2002) operates a closed system for users who have given their permission to be reached by vendors such as American Express, Tower Records, Holiday Inn and Blockbuster. But instead of getting those messages through the mail, where they add to the clutter, they get them at their favorite portals, such as the New York Times, Lycos and About.com. Instead of adding to the clutter, Dotomi’s personal messages replace it, by filling space that would otherwise carry generic or loosely targeted ads. The underlying technology combines CRM messages with presence management, and comes from the Israeli team that gave the world the first big instant-messaging platform, ICQ.
Raymie Stata, Stata Labs: Personal workflow

Raymie Stata is not an overnight sensation. After ten years at MIT, where he earned a PhD in computer science, he moved west in 1996 to work for Digital Equipment’s Systems Research Center in Palo Alto. Stata spent six years there, worked on Alta Vista among other things and developed an interest in text and search. During that period, he took some time off to work as VP engineering for his sister’s company, Deploy, which sold a recruiting tool to match resumes and job requirements, also a search task. He took another six months off to work at the Internet Archive with Brewster Kahle.

In 2001 the family entrepreneurial gene kicked in (his father Ray founded Analog Devices), and he founded Stata Labs with family funding. His father is chairman, he is CTO, and Ron Brown, formerly with eFax, is CEO. He adds, “The family maintains an active portfolio of investments; we have always started at the seed stage. Stata Labs is in part an attempt to move even further back in the value-creation timeline, with products that might not have the profile a VC would require but that are worth doing anyway.”

The first product idea was search-based e-mail, for sale to end-users rather than enterprises. “When we started, we positioned Bloomba as an alternative for users of Netscape and Eudora. We thought it’d be foolish to take on Outlook,” he says. But in fact, Stata says, Eudora users (us included!) are reluctant to switch, whereas many Outlook users were looking for something else. His sig file reads: “Bloomba – Change your Outlook.”

“Over time, I see our software managing your past, present and future,” he says. “The past is your mail archives; searching is the appropriate tool there.” Bloomba offers about the best search in mail around; it can easily search across folders and into attachments, with rich Boolean expressions and all the usual embellishments. That’s the basis on which the product has differentiated itself so far.

“The present is just handling all the stuff that comes in. It’s plain triage: delete, answer, save for later... That roughly translates into spam, real mail from real people, and subscriptions. We can’t answer your real mail, but we can detect spam. And we do a lot with subscriptions – mailing lists, RSS feeds, newsletters. You can have a default and change it for any particular subscription: For each item, keep it in the inbox for two days, and then file it in such and such a folder, or trash it. We are looking at ways to ‘flatten’ a subscription: Suppose you’re on a mailing list with many mails that quote one another. We can detect most of that and just send you a sum-
mary of the messages with the redundant quotes removed.” Of course, that’s what
the mailing list or RSS feed provider should be doing itself, but rarely does...

And finally, says Stata, there’s the future – all the e-mails from real people that involve
projects, commitments, requests, deliverables... “How do you manage your projects,
your to-do lists, all the tasks? We don’t want to have a to-do list or a traditional task
manager,” he says. “If the software imposes a rigid system on the user, a small group
will really love it but most will hate it. But if you just have an extremely flexible data-
base, like Lotus Agenda from the late ‘80s, most users find it takes too much work.
The trick is to find something with a default that works but that users can easily cus-
tomize. The database is easy; it’s the interface that’s hard.” The idea is for the tool –
whatever it ends up being called – to be lightweight; the center of gravity will be in
the tasks and tools and data it links to. Call it a personal workflow manager.

**PRESENTATION – Jack Dangermond, ESRI:**
**Location and Mobility: The Meaning of Maps**

Jack Dangermond founded ESRI back in 1969 (see *Release 1.0, January 2003*). “By
about 1997, we had a lot of products and success,” he recalls. “But our products were
proprietary and not integrated. So we rewrote everything using components, Web
services and so on. It took us more than five years and $320 million. We’re just about
ready to release the fourth iteration, ArcGIS 9. The technology operates on desktops,
in embeddable engines, and in server products. This means that GIS [geographical
information systems] functionality can be developed anywhere on a network and is
open and available to both the .Net and J2EE worlds.” Dangermond still owns ESRI,
which had revenues of more than $500 million last year and leads its field.

“We have abstracted financial systems and HR into tables,” he continues. “SAP and
those big enterprise systems do that all the time. What we don’t have yet on a broad
scale is geographical information systems, with new technologies such as Web ser-
dives. We want to get people thinking that GIS is not a sideshow that you do in the
drafting department. The IT people haven’t had the technology for it in the past, but
now they do. People are waking up to geography.” For example, take a look at Map
Bureau in the Forum gallery, page 61.

Dangermond continues, “It has been a systematic, slow evolution from GIS for pro-
jects, to departmental systems, to enterprise systems. Now we’re seeing geography on
the Web becoming more accessible, open and interoperable. And people are paying
more attention. On the US Labor Department’s website they talk about three emerg-
ing technologies – biotech, nanotech and geotech.

“One of the keys to GIS is integration. It provides a common key for integrating data
sets. We have something called map overlay, layers over the same geography repre-
senting different feature sets such as roads, weather, demographics – whatever’s of
interest.” The integration works much like a relational join, using a geographical key
instead the “primary key” field that a SQL database uses to link two tables.

But, says Dangermond, “GIS is not SQL. It offers tools and operators that go far
beyond SQL. You cannot extend SQL to do GIS, though you can store GIS data in
there.” Although there are many industrial uses, ranging from logistics to site loca-
tion, the most visible application for GIS so far has been location-based services.
Says Dangermond, “The narrow definition is services that are available through the
phone that make you aware of where you’re at but also overlays that on other infor-
mation – such as the closest Burger King, or friend-finders.”

He continues: “The location-aware device is a kind of terminal, and also a data col-
lector that sends location data to a server. In turn, this data can be overlaid on other
geographic data to create information that gets sent back to a user. It’s both using
and contributing to the system. We’d call that ‘dynamic geography.’ The weather is
geography, and it changes every 15 seconds. It can be checked in relation to where
you are, the same as traffic can.

Over time, we’ll have a distributed virtual GIS system, the intelligent globe. All the
local systems will be like little postage stamps stuck on the globe. To me, [road] acci-
dents are just transactions on a GIS.”

PANEL - On Beyond Search: Beyond Google

What kinds of search lie beyond “plain old search”? It looks so simple, but behind the
scenes are increasingly complex algorithms and data structures ...and increasingly com-
plex business models and legal structures. New kinds of search are using everything from
deep and detailed knowledge of geography, to links between people as well as links
between sites. Now these tools are exploring business models: Is the value proposition
finding something for a human, or is it enabling some kind of a transaction? Is context-
tual advertising the goal, or a way station toward e-commerce?
Google’s edge – among others – is that it covers the world. (See page 16.) It sees the entire forest, and then helps you find a tree. But in order to see the tree itself clearly – in focus – you need to understand what it is. Think of those cameras that recognize people’s eyes in order to focus automatically on their faces.

Until recently, Google mostly eschewed anything that smacked of domain bias, personalization or any specific knowledge other than clean, abstract algorithms. But it is doing more and more tweaking of the algorithms for specific cases such as proper names, airline flights and FedEx tracking numbers, and its Froogle service attempts to distinguish prices and products from other kinds of content.

But if anything is to become the “next Google,” it will have to take a different tack rather than try to beat Google at its own game.

The new tacks include a variety of techniques and data sets. First, there’s personalization, understanding the user’s needs and demographics. Some of this comes from knowing the user’s data, some from the context. What kind of person is this? What has she done in the past? What is the current context and the user’s intention – shopping, research, news, investment decisions? This kind of information can set specific defaults that make a search engine feel amazingly attuned to a user’s needs.

Beyond that, a search engine can leverage the user’s community, perhaps by mining the behavior of the user’s social network, as Eurekster will demo in the Forum gallery, or by creating a community of travelers online, as TripAdvisor does. Or imagine using Friendster as a tool to arrange seating in an airplane or football stadium.

Paid search services such as Overture and contextual advertising are also legitimate extensions of search (as long as their biases are disclosed). Advertisers’ willingness to pay certainly reflects the likely value and relevance of a search result to the searcher as well as to the advertiser, though more transparency in this area would make the results even more useful. Keep hoping!

Search will also take more note of geography and presence. The digital village may be global, but most of the things in it are local. Google has a new “search-by-location” feature, which works best for sites or content that list addresses, though it often makes amusing or infuriating mistakes. Company presenter MetaCarta (page 71) can figure out geography from references within the text of, say, a news article, and pinpoint whether the events described happened in Paris, France, or Paris, Texas. Map Bureau
(in the Forum gallery, page 61) also uses geography as an index, but focuses more on user annotations than on published materials.

NeuStar is building a business based on registries of phone and other numbers that will enable people to find one another in real-time and potentially in “real-space” in order to communicate by IM, VoIP or other means. The data in NeuStar’s registry mostly point to people (represented by their personal phone numbers), but they can also be proxies, just like e-mail addresses for, say, sales@thingmagic.com. Imagine combining NeuStar registry data with presence information from Organic Network, for example. Company presenter Technorati (Page 77) is also adding another dimension—close-to-real-time—and another content set by focusing on blogs. And of course, there’s the kind of conceptual search Steve Johnson discusses in his work on the brain (Page 32 and Release 1.0, February 2003).

Finally, search services will get better at selecting and displaying results in a way meaningful and relevant to the user’s specific needs. TripAdvisor is a model of this second approach. That specificity is inherent in many of the new search services: In order to be more useful, they must also become more specific and contain more specific knowledge rather than just brilliant abstract searching techniques.

Jeff Ganek, NeuStar: Identity portability

NeuStar started life managing the North American Numbering Plan and more recently the Number Portability registry (See Release 1.0, September 2003). Now it’s allocating more and more of its resources to IP-based registries such as domain names and even newer registries for VoIP and IM identifiers. It runs .biz, .us and the Internet registry gateway for .cn (China). Other new areas include online credit-card authentication and a variety of digital identity services. One key emerging market for NeuStar is ENUM, a DNS-like registry for VoIP “phone numbers,” instant-messaging handles and the like.

“We like the Internet space because registries do for the Net what number portability does for telephones,” says chairman and CEO Jeffrey Ganek. He helped start the company as a division of Lockheed-Martin in 1996. Earlier he had worked at AT&T for eight years, at MCI for seven years and at Global Telesystems for four years.

“Telecom was booming but it looked very competitive,” he recalls. “I saw a change in the structure of the industry. It was clear that control over network elements would be critical; digital IDs, whether phone numbers or URLs, would be key. The more I
got into it, the more it made sense. We had a small autonomous unit, hooked up with [NeuStar CTO] Mark Foster, the inventor of number portability, and won some important franchises.” But then Lockheed bought ComSat, in essence breaking the unit’s commitment that it would be a neutral player in the telecom business. Lockheed had to choose: Maintain neutrality and keep NeuStar, or divest NeuStar.

Recalls Ganek: “We told Lockheed management, ‘The future of communications will be determined by directory-registry services. We are the leader. This is an important business opportunity.’ Nonetheless, Lockheed chose Comsat, and NeuStar spun out as an independent company. Registries have only grown in importance since then.”

“When Mark Foster and I started up our ENUM efforts three to four years ago, the primary focus was VoIP. We have established relations with large IP operators who want a number-translation service akin to ENUM, but private and proprietary. The service is up and operating. It’s still embryonic, but growing quickly.”

“Wireless data, not VoIP, is the fastest-growing number of messages over Internet protocol,” he notes. “You need something at the back end for directory services, for cell-to-cell photos and MMS [multi-media message service].” For those who care, SMS can use regular cell-phone numbers, but MMS can’t – which explains the mystery of why it’s still so difficult to send those cell-phone photos to your friends.

How does all this fit in with search? Basically, ENUM and its proprietary – but we hope interoperable – counterparts are likely to form the presence-management network of the future, which will be vital for searching for people in real-time – and for those being searched for to control when and by whom they can be found or tracked. One can only imagine the possibilities – both for fun and useful services, and for privacy invasion.

Jeff Katz, Orbitz: Making margins without mystery
As CEO of Orbitz since its founding in July 2000, Jeff Katz is rewriting all the travel -distribution rules he learned in 17 years in a variety of roles at American Airlines, Sabre Group and a three-year stint as CEO of Swissair (too late to fix the damage). Orbitz has shaken up the world of online travel, bringing more transparency (and less bias) to its search results. Although other factors contributed, airline prices have mostly continued their slide, despite recent improving overall traffic figures.
Orbitz is undergoing its own sea change as it makes the transition to public ownership and the regime of Sarbanes-Oxley. Says Katz, “The IPO was a fundamental move – not just in providing capital, but in a public and private shift of focus. All the rules changed, starting with the board. That has resonated through the organization, and we have a sharper focus on hotels and vacation packaging as well as air.”

That shift reflects not just a change in the board – with the addition of Netscape founder Marc Andreessen and of Scott Miller, former president of Hyatt Hotels, to the five representatives from Orbitz’s five airline-industry owners – but also financial and strategic issues. “Hotels are very interesting because of the multi-dimensionality of issues that matter to consumers,” says Katz. “It starts with whether a room is available, which is more complicated because of check-in and check-out, the kind of room... And there’s all the contextual stuff: What’s it near? Does it have a view?” (When does the pool open?)

“And the underlying technology available is crude. In air, at least you can interface to a consistent [technology] infrastructure. It may be 50 years old and we think we can replace some of it, but it has good data. In hotels, the data is not really that good. There’s more of it, but it’s less accurate.” The margins are higher, but that’s a function of the messiness and non-fungibility of the data. Orbitz can add value by giving the hotel space the same clarity and transparency its matrix displays have brought to the airline business, but that will inevitably mean lower margins over the long run. Most likely, personalization will be key to maintain margins and to avoid overwhelming any one user with irrelevant data while focusing on what is meaningful to that user – either over time or in the context of a particular vacation trip, business conference or customer visit.

From focusing entirely on consumers, Orbitz is looking deeper into its markets. “We want to leverage the very flexible architecture that we began on three years ago. We have been using Web services internally and we are beginning to expose them outside, first to partners such as Northwest and American, and ultimately more broadly. We want to encourage third-party developers to use us as an engine. We see a really big opportunity for travel agents using applications hooked to Orbitz, particularly for corporate travel. We could also imagine, for example, having popular third-party applications integrate an Orbitz travel button. And long run, we want to be so good at search algorithms and updating that travel agents will be at a disadvantage if they use traditional CRSees while their customers are checking Orbitz.”

(DISCLOSURE: ESTHER DYSON IS A MEMBER OF ORBITZ’S CONSUMER ADVISORY BOARD.)
Tim Koogle, Friendster and Plaxo: Just here to help!

Before making his mark in Silicon Valley as CEO of Yahoo!, Tim Koogle ran a variety of businesses, including one with real inventories, factories and forklifts (Intermec). Since leaving Yahoo! in 2001, he has become an active investor in Friendster, Plaxo and four other startups.

At Yahoo!, he says, “We started with a directory, but we explicitly thought about the two tools of directory and search as like the table of contents and the index of a book. We knew that the core value we were delivering to users was [guided] navigation, and that because of the constantly changing nature of both the Web and the users’ interests, navigation would always be essential” . . . to advertisers as well as to users, we might add. “Consider all the search tools and the companies known for it right now, including Google. They all operate indexes and use various prioritization schemes. Google was the first to do a link analysis, which was, I think, a great idea.”

“But there’s a lot of data that’s not in the form of a Web page and therefore not included in either the search indexes or the search results as they are currently operated by the search engine companies. Some is metadata, and it has to be derived, which gives an advantage to the player with the most traffic. It can be reputations, as measured by users’ reviews or individuals’ consumption habits or their to-do lists or hot-lists . . . or things that are not in a simple Web page that are probably of huge value in the context of users’ searches.”

He continues: “You can pretty easily imagine creating filters – new ways of generating and presenting search results that take the personal data into account but don’t show it to others. There are a bunch of different affinity-group or consumption-related data that could be relevant. Amazon has already shown a whole rich area of innovation there.”

Of course, he notes, using such data “carries a lot of responsibility from a privacy standpoint. You have to put a frame around the data – or give the user the tools to do so according to his own preferences.”

Clearly, Friendster abounds in that kind of data, while Plaxo will probably eventually be able to mine all kinds of information about individuals’ mail (and eventually IMs and VoIP calls) to one another. (See release 1.0, december 2003.) Will Friendster in particular continue to grow? And how accurate is its data? In some sense, it doesn’t matter since it will be used only to improve search results; only a subset of the data will be visible to most people. It will be interesting to watch the evolution of
Friendster and its myriad competitors: How much is it a transaction engine, with people adding their friends and then moving on, perhaps aided by identity portability, the next thing after cell-phone number portability? Or will Friendster or another of the services become uniquely sticky? How well can a service such as Friendster navigate the shoals between general-purpose and niches?

Langley Steinert, TripAdvisor: Where do you want to go today?

TripAdvisor is a combination of different search services that produce an integrated, rich collection of information for (would-be) travelers: It searches the Web for information about travel and tourist destinations, focusing on hotels and tourist attractions. Its software is tuned to recognize that content; the techniques for doing so automatically are TripAdvisor’s black magic. Into that mix it adds hotel reviews culled by human editors from a variety of publications. And finally, it solicits and organizes user feedback on travel-related services and attractions. All this content is presented in a way relevant to the traveler. The whole business model is funded primarily by advertising from online travel marketers such as Expedia, Orbitz, Travelocity and Six Continents.

TripAdvisor’s edge lies in its effective allocation of labor between man and machine. It has only about 30 employees. About 70 percent of its content is selected and presented without human intervention, though humans play a part here, too. Human editors have selected a broad range of sites and other sources for travel information; the programmers have built custom crawlers for each of them, which can do site-specific tasks such as recognizing prices, ratings and other semi-structured or structurable data. Other software presents the results in an organized, formatted way. And finally, TripAdvisor’s programmers have also written custom interfaces for each of its vendor partners: For example, if you click on the button placed by Hotels.com for Inn of the Governors in Santa Fe, the link goes to a booking page for that particular hotel, rather than to a front page or generic booking form. All the user has to do is fill in her own dates and preferences. Only about 30 percent of the content is hand-edited, from major publications such as The New York Times or USA Today.

And finally, TripAdvisor benefits from a third labor input: enthusiastic visitors who post their own reviews. “We have been a bit surprised by this; we get about 700 new reviews from visitors a day. And we don’t pay these people anything!” says Steinert. “They come to our site and write these informed, passionate reviews to help other consumers make decisions. People aren’t shy; they will pan a hotel if they had a bad experience.” He notes that the company plans to add more features to elicit and pre-
sent user content, including bulletin boards where users can post questions and answers, blogs and photos. “We want users to be able to talk about their trips, post photos and list itineraries for other users to search through,” says Steinert.

TripAdvisor already provides a “popularity index” based on statistical and textual analysis of the ratio of good to bad reviews of any particular property or destination. The company is also working on a recommendation engine that will look at people’s behavior and make recommendations: “People who like the Stanford Park in Palo Alto also like the Landmark in London.” (It’s the palm trees!) The challenge is not to provide only a deal or a whole bunch of information or the “best” something, but to find the one that’s right for each individual user.

The result is a rapidly growing business: from revenues of “$20-plus” million in 2003 to an anticipated “$60-plus” million this year. Steinert won’t discuss profits, but with only 30 employees to pay, the margins must be something even Google could envy.

The Long Picture: In Focus

We like to imagine a chart that shows time and value on the horizontal axis and self versus society on the vertical. A day trader is at the lower left. Someone who gives money to a beggar may fancy himself on the upper left, but chances are that he makes himself feel good without actually doing much for the beggar. By contrast, a venture capitalist is over on the lower right, while a long-term, active philanthropist is at the upper right. But in fact, it’s a pitiful philanthropist who doesn’t get some pleasure from his efforts, and many VCs build companies that do good for their customers and their society, so we can move some of them up a little on the right. And even the day-trader may claim that his work contributes to market liquidity and thereby benefits society. At least it keeps him off the streets. (The arrows show the direction from perception to reality.)

Many of the world’s problems require a long-term focus, but they also require entrepreneurial zeal and creativity. How can we bring strategy and discipline to long-term thinking so that idealism doesn’t founder on the shoals of well-meaning generosity? What are governance issues for nonprofits?
Stewart Brand, The Long Now Foundation: Think long, do specific!

Stewart Brand was thinking about the long term long before he reached his current middle age of 65. A master of the extreme middle, he served for two years as an infantry officer and then worked as an artist for most of the ‘60s. Best known for founding the Whole Earth Catalogue in the year the Long Now website calls “01968,” he also founded the WELL (for “Whole Earth ‘Lectronic Link”) in 01984. He was also a founding board member of the Electronic Frontier Foundation (01990). For his day job, in 1987 he co-founded the Global Business Network, a scenario-planning consultancy sold to the Monitor Group in 2000. He still works there quarter-time.

Meanwhile, in 1996, his friend Danny Hillis (founder of Thinking Machines and more recently of Applied Minds) pointed him to a study of human emotions from the perspective of time: “It turns out that when people take care of long-term business they feel good,” says Brand. “It compared competitive, short-term behavior such as playing sports, selling hot dogs or winning a business deal, against long-term activities such as parenting, gardening, and the like. In short-term battle, you feel fearful: Andy [Grove] is right that only the paranoid survive.

“But in the long term, we’re talking about things like patriotism of the best sort – being proud to belong to something bigger than you. There’s pleasure in seeing your kids grow up and knowing they’ll be there beyond you. Church reminds you not just of religion but of your kid’s baptism, your grandparent’s funeral. Little else that’s not physical feels quite so good.”

Brand decided the world around him – for-profit or not-for-profit – was too short-term-oriented, and together with Hillis co-founded The Long Now Foundation. “In part,” he says, “we were dealing with the real Y2k problem. The year 2000 was a wall through which people would not plan. We wanted to pop through that wall and everything like it. For a teenager, Sunday morning is beyond prediction. For most of us, it’s the next quarter.”

He continues: “There’s a big unspoken debate between optimism and pessimism. If you’re really pessimistic, best thing to do is steal, whether it’s elections or money. Grab what you can. But if you’re optimistic, you don’t eat your seeds; you put them into the ground. Philanthropy is part of that dynamic; you’re happy to get a return for other people and for future generations because you believe in that future.”

The Long Now’s first major project was its 10,000-year Clock, designed by Danny Hillis and now in its third iteration. A mountain in eastern Nevada is being carefully
explored as the site for the ultimate clock. Board member Brian Eno recently released a CD of “bell studies” in honor of the clock. The Long Now is also active in the preservation of digital content (which contrary to public perception does need preservation) and languages (the Rosetta Project). And finally, it runs longbets.org, a website for making predictions accountable (launched at PC Forum two years ago), which helps us think about the future – and remember what we predicted in the past.

(DISCLOSURE: ESTHER DYSON SITS ON THE BOARD OF THE LONG NOW FOUNDATION.)

Pierre Omidyar, The Omidyar Foundation: The long we

Pierre Omidyar founded eBay in 1995, and now he and his wife Pam want to be innovative all over again. Omidyar asks: “What can we do to make the world a better place with all the resources we now have? I look to eBay and what I have learned in terms of thinking about the social sector. At eBay, people developed connections over shared interests that were powerful and empowering. How can we bring that experience to more and more people?”

The Omidyar Foundation has evolved since its founding in 1998, he says. “We’re still figuring out what works the same across the for-profit and not-for-profit sectors, and what works differently.” The Foundation has funded a variety of community-oriented projects, with an eye toward everyday people discovering their own power to make good things happen.

“We went into the social sector thinking we would work holistically,” says Omidyar. “That meant investing in initiatives and teams rather than programs, and supporting capacity-building and infrastructure. This kind of work is hard to fund the traditional way, because many donors like to invest in programs with visible benefits: lives saved, diseases cured, workers trained, and so on.” (As in any sector, it’s a challenge to sell the value of infrastructure and long-term investments.)

In December, says Omidyar, “We paused to take a fresh look at our mission and we’re pleased with the progress we’re making. Our next step will be to put this learning and refocusing into practice.

“Foundations need to be accountable to their boards and show that the money is being used properly – each year, not just at the end of a decade. Unfortunately, not-for-profit executive directors spend the bulk of their time fundraising rather than executing. Meanwhile, there’s pressure to impress people with innovation when results may not be immediately visible [just as for CIOs, page 27]. I realize it’s hard
to make a board excited about a program that may take 10 to 20 years to produce really effective results. And, still, the program may be similar to another effective program somewhere else. Where’s the excitement?"

But Omidyar suggests a shift in thinking. For example, he says, one way to add excitement to effectiveness is to develop better metrics and evaluation techniques for not-for-profits. That’s the mission of InnoNet, to which the Omidyar Foundation has given more than $1.5 million (and whose executive director, Allison Fine, will participate in Tuesday afternoon’s metrics for goodness roundtable, page 81). The for-profit market and its culture of competition, disclosure and benchmarking improves corporate performance; why can’t the not-for-profit sector get some of the same benefits, even though the actual rewards are different and go to different people?

Indeed, Omidyar concludes, “Operating solely through a traditional foundation is not the only way to do things. That’s why I’m also passionate about Meetup, eBay, and the whole social sector. If you look at eBay’s success through a social-value lens rather than just an economic one, you can say 95 million people around the world have learned that they can trust a complete stranger. Look at Meetup and Scott [Heiferman]’s mission to help Americans know a few more of their neighbors. That’s exciting to me.”
As we’ve discussed throughout this issue, a useful way to bring things into focus is to look at them through a different lens. All the companies in this year’s gallery provide some sort of new lens through which to view and manipulate content online.

Eurekster and Public Mind let users help determine and then discover what’s popular – either within a network of people they already know or among strangers with similar affinities. We’ve had one-to-many media and even many-to-many (P2P). Eurekster and Public Mind are many-to-one-to-many: from many users to the service and back to those or other users.

Map Bureau and Onfolio help users annotate content with context – either with geography or with links among documents in a set. Organic Network provides a platform to discover people who are around you physically and online, while Socialtext and Microsoft’s Wallop supply tools for people to collaborate and to share everything from production schedules to photos taken at last night’s party.

**Eurekster: The online watercooler**

We first wrote about Eurekster when we covered one of its parents, the job-search-focused social network RealContacts (see **RELEASE 1.0, NOVEMBER 2003**). Eurekster blends the technology from RealContacts and search provider SLI Systems – both of which were founded by Eurekster CEO Grant Ryan – to create a unique search product. It’s the kind of contextual search the likes of AOL, Yahoo! and Google might want to integrate (**PAGE 15**); the company already has a partnership with Overture, which provides Yahoo!’s search capability, to provide its core search results. “People filter data through their contacts all the time,” he says. “Eurekster is the first company to work out a way to apply that to search.” He continues: “When you do a search on Eurekster, it’s like an online watercooler: You see what other people in your network are looking for and finding useful.” Recorded searches are not personally identifiable, but aggregated among all searches by everyone in the user’s self-defined network. “Interesting, unexpected things start to happen. For example, when I first turned this feature on, I thought, ‘It’s not working right. Why are so many people worrying about a hotel in France?’” he recounts. “Paris Hilton is not big down here [in New Zealand, where the company was founded]….” The
company is talking to social networking companies, who Ryan says have been receptive. “They’re trying to build a suite of services. We’re not a search company: We don’t index the Web. We’re not a social-networking company: We don’t have dating. We do offer an easily integrated service [and its corresponding revenue stream] that we can get up and working quickly.”

**Map Bureau: Location annotation**

ESRI CEO Jack Dangermond says the IT industry is finally waking up to geography and geographic information systems (page 49; see Release 1.0, January 2004). Chris Goad, founder of Map Bureau, is helping that process along. “Traditional GIS means experts producing maps for a passive public,” he says. “The new model is that Web content has geoinfo associated with it. Mapping is no longer a specialized arena. Instead it’s a matter of having tools that derive or input GIS data into everything else, so it becomes an integrated part of the Web.” The technology to annotate Web content with geodata is not new. What is new is that blogging software has made it easier for regular individuals to publish rich personal websites or blogs (see Release 1.0, July 2003). And “personal” often means local – or at least associated with a particular place. Map Bureau offers tools for bloggers, webmasters and Web developers to associate pages, photos, blog posts and the like with points on a map (also embedded on the customer’s site with Map Bureau tools), essentially “marking up” the real world. End-users navigate through the content either by clicking on links or by clicking on a point on the map in a different pane. The tools are free for non-commercial use.

**Onfolio: Saving and sharing your search**

Onfolio was founded by three veterans of Allaire (acquired by Macromedia in 2001): CEO J.J. Allaire, president Adam Berrey and VP of engineering Charles Teague. The company has developed what Berrey calls a “search information manager” that allows users to save, annotate, share and re-find information or files from the Web or from their own hard drives. “The advent of Google made it easy to find information on the Web,” he explains. Perhaps too easy: “People are making collections of found documents, but they don’t have the tools to manage that information.” From within the convenience of their regular browser, Onfolio users can capture links, offline copies of Web pages, Microsoft Office documents and the like and organize them into collections to share via e-mail or FTP. Alternatively, users can turn collections into a multi-format HTML (MHT) file, which Berrey describes as “a website in a file.” MHT files, which comprise all the documents in the collection and display annotations and links among the documents, can be e-mailed or published straight to a Web server. Onfolio also automatically creates an RSS feed of each collection, facilitating the sharing of updates. What also distinguishes the product from similar-
sounding competitors is its ease of use; it is integrated nicely into the browser but adds its own flexible file system. The self-funded company launched the product March 15 and will sell it online.

**Public Mind: Finding the bandwagon**

Jonah Seiger’s company, Connections Media, is helping politicians and companies use new media to influence public opinion (Page 13). Harry Max, founder of Public Mind, is doing just the opposite. The website aggregates people’s opinions — or demands — to help them influence companies, politicians or anyone else with the power to respond and act. “It’s Yahoo! Groups meets Informative [page 67],” says Max. While the business so far has come mostly from public-interest groups and the company has a low budget and a staff of one to match, there is a business model. Customers such as VoIP provider Skype use Public Mind to interact with a group of people. A company can use Public Mind to discover and assess demand for a specific product or feature, and then use the private messaging system to pre-notify the demanders of its release. Public Mind also features an “offer engine” for companies to give special discounts to an interested group. The system is similar to an online coupon service, but with identity, which gives companies the ability to track the effectiveness of a particular offer for a subset of its target audience — and change it dynamically. Public Mind could be used in politics, says Max, but the company is focusing on the private sector: “How do you connect customers with businesses — not just about products but about policies?” But aren’t privacy policies, acceptable use policies, terms of service and the like political? After all, the founders of Meetup (Page 12) never meant it as a political tool, either.

**Socialtext and Organic Network: Connect and collaborate**

We first covered Socialtext when CEO Ross Mayfield participated in a PC Forum showcase panel on social software (see *Release 1.0, March 2003*). Socialtext provides Web-native collaborative software that combines elements of weblogs, e-mail and wikis. We invited Mayfield back this year to provide the Forum wiki (www.socialtext.com/pcfforum), to demonstrate Socialtext’s new features (such as the integration of RSS feeds) and to share what he has learned from his customers. “Users reject having to do everything in a structured domain. That’s why 90 percent of collaboration happens in e-mail,” Mayfield says. “Socialtext gives users tools to create their own information architecture designed for many-to-many communication, as opposed to e-mail, which is one-to-one or one-to-a-few.” (See also two of Tuesday’s panels, User-generated content and Beyond plain old e-mail.) Users can post Web links, edit documents, link to other pages within the Socialtext space and more. “A link structure emerges, which we can use to let the most prominent ideas bubble up
Mayfield says. “This makes search work better and gives social context to all the information in the space.” The company has 40 paying enterprise customers, five of which are Fortune 500 companies. They range from specialty manufacturers to software development shops to a professional-services company. One software developer uses it both for internal purposes and to communicate with offshore partners. “There are no artificial barriers to contribution,” he says. “There is nothing to download and a short learning curve. And when you’ve got enough eyes on a document or project, the quality of the end result is better.”

Socialtext will share its physical space in the Forum gallery with Organic Network, which is providing the Forum WiFi. Organic, founded by Nikolaj Nyholm, helps those sharing a WiFi hotspot to discover one another’s presence. . .and perhaps to interact both online and offline. (SEE RELEASE 1.0, DECEMBER 2003.) It shows how transparency can foster community. Together, Organic and Socialtext form the foundation for the online facet of this year’s Forum: Organic for connectivity and presence detection, and Socialtext as the center of gravity for online discussion, collaboration, sharing. . .and anything else you come up with!

Wallop: Your personal network

(A EXCERPTED FROM RELEASE 1.0, DECEMBER 2003)

A project of Microsoft Research’s Social Computing Group, Wallop is an environment for users to make content their own, as Hank Barry’s panel on user-generated content will discuss (SEE PAGE 38). It supports communications among tight circles of friends who mostly already know (and know how to reach) one another. It has very little in the way of privacy protection: A Wallop circle, which surrounds each individual, is by definition a fairly private zone. That circle is not necessarily user-specified; the system derives it from watching a user’s communication patterns and behavior. “It’s a burden for me to always be updating the list of people I want to share with,” says Lili Cheng, manager of Microsoft’s social computing group and a former (building) architect. “We try to make that happen automatically. For example, if people start engaging in a dialogue or are in photos together, that’s enough of an implicit connection for the software to connect them.” Wallop’s main features include a lightweight blogging tool and shared, annotated photographs. Technically, the system is a rich database of user-generated content – messages, postings, photos and the like – with a set of client-side viewers. The group’s plan is to try the service out with some students, rather than “a bunch of Microsoft employees or reporters,” says Cheng. “We’re trying to test it and understand people’s concerns regarding privacy. How will it influence the way they interact with other people? If you put something out there, it’s public.”
Company Presenters

By Christina Koukkos

The emergent theme among this year’s company presenters is discovery: of what people say, of what they really mean and of what data can tell us.

What people say

**Convog** helps the right people meet at the right time...and gives them the tools to communicate.

**Language Weaver** takes the logical (and clever) next step in machine translation with software that “learns” to translate from already-translated documents. It’s not smart, but it knows a lot.

**Scalix** provides enterprise-class e-mail, messaging and calendaring capability on Linux and supports it from the server.

What people mean

**Informative** helps companies listen to their customers using interactive, dynamic polling software.

**Intelligent Results** mines unstructured data from customer communications to help financial institutions and others predict customer behavior – such as whether they’ll pay.

**Mindfabric** uses linguistic analysis to figure out what sort of information a customer is looking for.

What data means

**Metacarta** offers a search engine that can identify the geographical context of a piece of text even though it may not express it explicitly, and it can tell the difference (almost always!) between Paris, France, and Paris, Texas.

**N8 Systems** solves one of the world’s toughest translation challenges: It creates visualizations of natural-language process descriptions to help businesspeople communicate with developers.

**Technorati** tracks conversations on the Web by analyzing what bloggers are blogging about, and with whom.
**Convoq: We know when you’re there!**
The inspiration for Convoq came from – of all things – the release of Windows XP in October 2001. Co-founder and CEO Chuck Digate says he was “hit between the eyes” when he read that Windows Messenger had been integrated into XP. “I realized it would be a big deal in the office place, not just in seats of IM but in terms of applications built on top of a real-time communication platform.”

Underlying this inspiration, presumably, was Digate’s long history in messaging and collaboration: After spending four years with Lotus, he left in 1989 to found Beyond Incorporated, developers of BeyondMail. He sold it to Banyan Systems in 1994. Convoq CTO Chris Herot, also a Lotus alumnus, has spent 20 years working on video conferencing and other multimedia communication initiatives. Herot left Lotus in 1999 to start MessageMachines, a developer of wired and wireless message-routing software. He hooked up with Digate in the spring of 2002.

Digate and Herot saw a number of elements converging to encourage multimedia collaboration online: ubiquitous IM networks, more pervasive broadband, faster processors, cheaper cameras, and the fact that Flash, which supports fast and lightweight audio-visual functionality, is installed on 97 percent of all computers.

Where the Flash-based Convoq software, called ASAP (for “as soon as present”), differs from the functionality of traditional IM and Web conferencing applications is in its rich options for the *convocation* of meetings. When the software is installed, it automatically detects and imports IM contact information onto the Convoq identity server. The user can also add e-mail contacts. Once his contact list is set up, the user can request to meet with one or more people. If one of the contacts is unavailable, ASAP will initiate the meeting as soon as all invitees are *present*, i.e. available. Users also can assign stand-ins for themselves in particular contexts. For instance, a busy CEO can assign her CFO as a stand-in if an investor wants to meet or make the head of corporate communications the stand-in if a reporter calls.

A similar ASAP feature, lifelines, allows users to set up alternate contacts for a particular *function* rather than a particular *person*. For example, a company could set up one lifeline for regular customer support and another for top-tier customers. The lifeline chooses at random (or in a predefined order) the first available contact in the lifeline and sets up a meeting with the requestor.
Convoq employs 29 people and is using its $10-million second round of funding, closed in November 2003, to ramp up sales and marketing after its launch in late February. Annual subscriptions, which allow unlimited meetings among up to 25 people at a time, cost $100 per year. Unlimited meetings for up to 5 people (which we find much more reasonable!) costs $50 per year.

Informat...
To illustrate the point, Justus recounts a number of stories from his LEGO days. Using Informative, customers would suggest new products, some of which LEGO brought to market. “Almost without exception, all were hugely successful and profitable,” he says. For example, customers were asking for LEGO sets with more pieces than what was available. Against the instincts of the product development department, LEGO released a Star Wars Imperial Destroyer set with over 3000 bricks, which retailed for about $300. “We produced enough for what we thought would be a year. The product sold out in five weeks,” recalls Justus.

Furthermore, customers saw that they had some tangible influence on the company and became more loyal. “They would almost be our marketing department. They did LEGO shows. They formed clubs. I learned that the best marketing is the engaged consumer,” Justus says. And the least expensive as well: Customer-suggested products yielded the best ROI for the company in terms of marketing dollars.

The result is what Justus calls “peer-to-peer marketing.” Instead of buying expensive (and increasingly ineffective) broadcast-media spots to reach all potential customers, the goal is to solicit the opinion of those whom Malcolm Gladwell calls “influencers” in his celebrated book, “The Tipping Point.” Those influencers – the domain experts others go to for advice in making buying decisions – serve as the trusted middlemen.

Of course, the big challenge is to find and engage the influencers in the first place. Tellingly, most of Informative’s 25 active clients are in consumer-goods companies, particularly those that sell “high-involvement” products such as cars, consumer electronics or products for pets and young children. It’s unlikely that Informative would be as effective for, say, a bottled-water company.

The company is nearly cash-flow positive and recently wrapped up an $8-million funding round from Levensohn Venture Partners, NEA, Walden, Crystal Ventures, Nokia Venture Partners and Apex Ventures.

**Intelligent Results: We know what you’ll do**

“Actions speak louder than words.” So goes the conventional wisdom. But Intelligent Results is using people’s *words* in order to predict their *actions*.

The company was founded by engineers from an Amazon.com data-mining group that was charged with predicting the behavior of the company’s 25 million customers. “We did a couple of experiments that combined unstructured and structured
data sources in marketing campaigns,” recalls Kelly Pennock, co-founder and CEO of Intelligent Results. “We got great results. We realized it had more general applicability, so we left [Amazon] to start a company” in May 2001. The company raised $14 million in funding from Ignition Partners, OVP and Menlo Ventures.

At least initially, Intelligent Results is focusing on the financial-services market – specifically, on delinquent consumer loans. Financial institutions want to be able to predict the actions of an individual borrower – and whether to spend money trying to collect the debt. While banks already predict credit risk using scoring models based on structured data – customer balance, number of days late, past payment patterns – they ignore data from unstructured sources – customer e-mails, collections representatives’ notes about customer calls and so on.

Intelligent Results helps banks improve their scoring mechanisms by finding useful predictive patterns in this unstructured data. Perhaps the customer says she is out of work, or promises to pay in 10 days, or has a work-related injury. “Before us, these notes were thrown away in terms of analytics,” says Pennock. “We realized they captured information useful to the collections process. There are groups of words and concepts, such as ‘divorce’ or ‘long-term disability’, that imply good or bad behavior.”

The secret to any risk-scoring mechanism, explains Pennock, is in choosing the right “transform” – a set of procedures to normalize data before looking for a pattern – to run on the data. The IR Analytics software can test the predictive value of textual transforms by noting if, for instance, saying the entire phrase (“I’ll pay as soon as possible”) versus using an acronym (“I’ll pay ASAP”) makes a difference in a person’s behavior. The software tests transforms on historical data, and if the predictions prove accurate, the transform is applied universally.

To choose the right transform, the software must have a specific, measurable outcome to predict: default, bankruptcy, recovery, churn, etc. For example, the software can balance the risk of default against the risk of churn: “You don’t want to bug people who will pay, but late – and with interest and late charges,” says Pennock. “These folks may be your highest-value customers.”

The approach seems to be working. One Intelligent Results customer making settlement offers (asking debtors for 60 to 80 cents on the dollar) found that its scoring is 32 percent more accurate, which it expects will boost 2004 revenues by $4 million.
Intelligent Results sells subscriptions to its software and services, with prices varying by volume. In the 13 months since its launch, the company has collected 12 customers, including four of the top 10 banks in the US – mostly big credit-card issuers. Other potential customers include wireless-communication service providers, utilities, insurance companies and retailers.

**Language Weaver: We know what you mean**

While the language for much international business-to-business communication is English, companies also need to be able to communicate with customers and employees in their local languages. Language Weaver provides a platform for that communication with a software system that applies statistical analysis to translation.

Language Weaver takes a novel approach to machine translation, but one with some background in the research community, says CEO C. Bryce Benjamin: “People try to teach [translation] software grammatical rules and dictionary definitions. Conceptually, that sounds easy. But when you think of how words are used in different contexts and parts of speech, it gets more complicated.” Thus the bizarre and sometimes hilarious results from rules-based translators.

Founders Kevin Knight and Daniel Marcu, researchers at the University of Southern California, decided to forget the rules. Instead, they built a system that learns to translate by example rather than by rules. The system runs a statistical analysis on large collections of the customer’s already-translated documents – translated archives, standard glossaries, etc. – and establishes a large set of probable word and word-phrase correlations across the two languages. It runs another analysis on documents in the target language in order to determine how words are usually strung together and to produce natural-sounding translations.

The resulting translation mappings are used by Language Weaver to translate new documents for that customer. And because the mappings are specific to the documents of that customer, they mimic style and idiom. “As it turns out, you end up with a higher quality of output,” says Benjamin. In one test case from Arabic to English, LW translations were two to three times higher in quality versus competitors (measured in terms of Bleu score, a statistical measurement that compares the accuracy of a machine translation with the human transla-
tion of the same document). In a test from French to English, the quality was 50 percent higher.

Of course, we suggest, the customer would need to have a large enough set of translations. “You’re right,” says Benjamin. “It only works if the system has the right terminology in the first place. But most [multinational] corporations already have large stockpiles of already-translated documents.”

Target customers include corporate communications departments, facilitators of cross-market e-mail and chat, translation companies and any organization that wants all or part of a worldwide news feed – to assess competitors, gauge political risk and understand a foreign customer base. Language Weaver’s current customers are “mostly in the government sector,” i.e. the intelligence community. The company is running pilots with a number of corporate clients, including high-tech and translation-services companies.

Pricing for server licenses depends on the language pair. A perpetual license for a Latin-based European language to English costs $18,000 per CPU for one-way (e.g. French to English) and $25,000 for two-way capability. Lower-density or more difficult languages, such as Chinese, cost about $50,000 one-way/$75,000 two-way for a 3-year subscription. LW “teaches” the software the customer’s custom terminology, with semiannual “retraining.” It plans to build a feedback loop that will allow customers to retrain their software on their own.

Current supported languages include two-way French to Arabic, and one-way (to English) from Chinese, Hindi and Somali. The company plans to have English-to-Chinese and bidirectional Spanish capability by the end of the second quarter. But, says Benjamin, as long as the customer has enough data (and a budget), LW can create a translation system for any two languages within a month or two.

**MetaCarta: We know where you are**

MetaCarta CEO John Frank was working on his PhD in physics at MIT when he ran into the problem that resulted in this company: “I was interested in how jungles interact with microclimate weather, but keyword searches for names of places generated too many wrong hits.” So he and fellow student Eric Rauch built a prototype that indexed documents by noticing geographic references in the text, such as names of cities or buildings. Then they created a software client that let them filter search results to include only documents that refer to a particular location by clicking that location on a map.
By summer 2000, their prototype system worked on Web documents. But once the software let them index a large number of documents, says Frank, “We discovered that traditional database indices are slow at this type of searching. We had to invent our own indexing algorithm to make it fast enough.” Named “CartaTrees,” this patent-pending algorithm performs fast-sorted joins between keywords and a region. (MetaCarta provides toolkits so that its capabilities can be linked to existing text-search and document-management systems, everything from Google to an internal custom system at, say, a cryptic government agency.)

The second problem is that the same name can apply to many locations. To help solve this, the company hired Andras Kornai, former chief scientist at Northern Light, a search engine distinguished by its ability to cluster results by topic. MetaCarta uses natural-language processing to examine the context and determine the probability that a document is referring, for example, to Paris, France, rather than Paris, Texas. The displayed search results are plotted on the user’s map.

Finally, the company needed to address the gazetteer problem. A gazetteer is a list of location names, with information about the coordinates (and other attributes) of each. A gazetteer might be limited to a specific region or to the parameters of a particular business application. For example, an oil company operating in north Africa may need a set of multilingual place names in that region only. Building a universal gazetteer is, Frank says, “a ‘forever job’ that should never be considered done.”

After Frank, Rauch, and Doug Brenhouse, a Babson MBA whom they met through the MIT $50,000 Entrepreneurship Contest, incorporated the company, they focused on one industry at a time, starting with the intelligence community and the petroleum industry. “We expect to be quite busy with these two industries for a while,” Frank says. Intelligence agencies like the ability to filter simultaneously for geographic and non-geographic references, as in “Find all the documents that talk about nuclear materials and locations within 50 miles of this North Korean town.” Oil companies like to see the full picture extracted from a variety of documents, from environmental surveys to political reports, while planning or operating their expensive oil fields.

(DISCLOSURE: ESTHER DYSON IS AN INVESTOR.)

(RELEASE 1.0 CONTRIBUTING WRITER DAVID WEINBERGER CONTRIBUTED TO THIS PROFILE.)
Mindfabric: We know what you want

Aptly named Mindfabric wants “to connect what’s in the mind of your customers with the fabric of the information you’ve collected over the years, but can’t present well,” says CEO Dan Gregerson. Mindfabric was formed around a set of 375 linguistic-processing patent claims. When Gregerson joined in August 2001, he quickly restructured it into a software company, using $14 million in private funding (including his own). Earlier, Gregerson had founded Intelligent Technologies, which made technology to facilitate communication between PCs and IBM mainframes. In 1986 he moved on to found PeerLogic, “the first company to deliver an entirely peer-to-peer distributed commercial computing environment,” he says. After selling PeerLogic to Critical Path for $416 million in September of 2000, he joined Mindfabric.

The Mindfabric software “listens” to what customers are saying – in their searches on websites, in their e-mail inquiries and so on – in an attempt to automatically understand the question and give the right answer. It then closes the communication loop, telling businesses what’s on the minds of their customers. “Call-center representatives are driven to keep calls as short as possible,” Gregerson points out. “They have no reason to record the content and feelings and aggravations of customers.”

To find the right answer from tens of thousands of pages of documents, Mindfabric builds a knowledge base by performing linguistic analysis on any document that its client’s customers may want to gain access to. Once Mindfabric knows what the company knows, it moves on to the customer. The front-end interaction engine performs a real-time semantic analysis of a customer’s natural-language query – say, “How can I combine my DSL and cell-phone bills?” It then offers the (semantically) appropriate content, which could be the answer to the question (“Enter your DSL account number and your phone number below and your bills will be combined in your next statement”), a cross-promotion (“sign up for long-distance service!”), an upsell (“get more minutes for just $5 more per month”) or any other sort of content. And it can assess customers’ responses to the content delivered: Do the upsells work? Do people fill in their account numbers? Or do they abandon their task?

The substance of these queries and reactions is saved and used to analyze customer wants, to find holes in the content a company offers and to discover demand trends. “Mindfabric helps companies validate their product roadmap. It gathers more data than a focus group,” says Gregerson, “taking a database of millions of customer

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<tr>
<td>Founded: 2000</td>
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<tr>
<td>Employees: 24</td>
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<tr>
<td>Funding: $14 million from founder and angels</td>
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<tr>
<td>Key metric: 375 linguistic-processing patent claims</td>
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<tr>
<td>URL: <a href="http://www.mindfabric.com">www.mindfabric.com</a></td>
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interactions and categorizing them.” In addition to offering a number of standard reports, Mindfabric stores the data in a form that’s usable by popular visualization and reporting tools. The company also offers connectors to other enterprise applications as well as APIs for clients to build custom connectors.

Like many companies that depend on a foundation glossary for natural-language processing, Mindfabric is focused on building knowledge bases for vertical markets—in this case, starting with banking. Gregerson says it took about three months to populate the knowledge base with data about the banking business and the products of Mindfabric’s first customer, Ohio-based Huntington Bank. But its next two customers, AmSouth Bank and Associated Bank, were up and running in four weeks. “Our customers provide domain expertise,” says Gregerson. “We provide the knowledge-engineering expertise.” The company has just started work with the Bank of Montreal and will soon start work with a client on its next vertical: insurance.

At the moment, Mindfabric sells software licenses based on the number of website visitors and the number and complexity of corporate content. But Gregerson plans to move the company to a utility model.

In terms of the technology, the company plans to move from the basic search-query model toward “guided interaction,” where the client software asks the customer specific questions. “The final step is open dialogue,” says Gregerson, “where the computer will talk to you – at least within a specific domain. That will mark a new phase in the evolution in person-machine interfaces.”

**N8 Systems: We get what you’re saying**

“Businesspeople, who know what they’d like to have, usually express themselves in natural language,” begins David Hartford, CEO of N8 Systems. “People involved in automating things [i.e. developers] tend to think of the world in terms of objects, relationships and attributes. Then there’s the poor person in the middle,” i.e. the business analyst or product manager, who is left to translate between the two. N8 hopes to help those poor analysts by providing them with instant visual feedback of what they’re trying to communicate, so they can learn to describe what they want more effectively and in a language a developer can understand. Catching errors and gaps in description upfront can save huge amounts of time, anguish and money later in the development cycle.
N8 was founded by Keith Manson, a mathematician and consultant turned math and physics professor, and Ozan Serim, a visual artist who became interested in how technology could assist the creative process. The original plan behind the software was to create storyboards automatically from film scripts. “[The software] is still very much like that,” says Hartford, a technology venture capitalist since the early ‘80s. “Except now we’re turning business scripts – business processes – into technical storyboards – unified modeling language [UML] diagrams” that the IT department can understand and implement.

N8 does not try to derive any meaning from the analysts’ descriptions, but uses syntax to figure out what pieces of text are objects and which verbs – or actions – connect them. It then uses that set of objects and interactions to construct a graphical representation of what was described. In practical terms, a user running the N8 client types a use case or other process specification into Word and clicks “model.” The text is sent to the N8 server, which chops it up into syntactic objects and translates it into UML representations. That transformed data is sent back to the client, which uses Visio to turn it into a viewable diagram.

“The idea is to give people instant feedback, so they understand what they actually communicated and can refine iteratively what they want to communicate,” explains Hartford. This efficiency is particularly important when outsourcing, Hartford stresses: “In the software development process, there’s a very large [communication] issue when you’ve got IT in the next room. When they’re ten time zones away, the necessity for clear communication is even greater.”

Target customers include large enterprises that do custom software development, such as financial services and energy companies and the government. We spoke with one financial services beta customer who has been working with N8 since last year. “If you write a use case the way you’re supposed to write one, it works,” he says of the software. “You can catch it with certain punctuation or complex sentence structure, but they’re working on fixing that.” And he says the software continues to improve. Even with the problems, he says he already can do his work six times faster. He’s so enthusiastic that he invested in N8 in its latest round of financing. The company plans to license the software as a service for $995 per seat per year, or $150 per seat per month, with different pricing for on-site.

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Scalix: We know what you send

“E-mail historically has been called the ‘killer app,’” says Scalix founder and CEO Julie Farris. “But up to this point, there has been no expectation that it be as reliable as the phone system. That’s ridiculous.” Years ago, as a messaging architect at BellSouth, she was the first customer to use HP’s Unix-based OpenMail in a 100,000-user environment. When HP dropped it, she “saw a great technology that was going to die on the vine.”

Farris continued to work in messaging and collaboration, working on cc:Mail at Lotus and co-founding and selling three companies: unified messaging service onebox.com, enterprise portal software developer 2Bridge, and Portola Systems, an Internet-based enterprise messaging system. She then joined Mayfield as entrepreneur-in-residence, where she saw a convergence of factors creating a unique opening in the ossified e-mail market. First, Linux was becoming more widely adopted. Second, “e-mail, calendaring and messaging are more important than ever, but the underlying infrastructure is more stressed than ever. The previous generation of technology is not as scalable as we need it to be. OpenMail was designed to be enterprise-class – even ISP-class – and it has had lots of ‘bake time.’”

So she acquired the OpenMail technology, hired most of its original development team as well as a number of people from cc:Mail, and founded Scalix. “Scalix was an early bet that Linux plus Intel was going to have a profound effect on infrastructure,” Farris continues. “A lot of companies use old platforms because the cost and complexity of changing is so great. But you could run the [Scalix] platform on everything from low-end Intel hardware to a mainframe, and everything in between.” She gives the example of one client that has 5000 user accounts on one HP ProLiant server. “You can’t get anywhere near that with the leading mail products in the market today,” she says.

The Scalix back end, which uses the Unix/Linux file system, allows customers to run any desktop operating system and use any e-mail client software on client machines. Scalix also has integrated Web services that let customers tie the messaging back end to any other enterprise application or service – a directory, an anti-spam system, CRM software, and so on. “You have an inherently better starting point,” says Farris.

Are there any anti-spam measures built into Scalix? we ask. “According to some estimates, there are more than 170 anti-spam companies out there,” answers Farris. “We
decided being 171 is not a good use of our time.” But, she predicts, the market will move toward an authentication and white-list approach, and mail systems and standards will evolve to support that approach.

The company’s target customers are large enterprises that are moving applications to Linux and that want the rich messaging, integrated calendaring and other functionality of Microsoft Exchange. . .though the company won’t be competing directly with Exchange. “We are focused on the Linux market,” Farris says. “There is a growing sector of the market that wants an open solution. In that segment, Exchange is not an alternative.” The alternatives are Oracle, Sendmail or SunONE, which don’t offer functionality as advanced as Scalix’s. The company has completed four successful pilots, with several more underway. One of the two pilots has resulted in a customer commitment from the city of Bloomington, IN, for a 1000-user environment. Farris says the company also has seen pent-up demand from ISPs and ASPs, from small- and medium-size businesses and from companies in Europe and the Far East.

Technorati: We see the conversation

“I founded Technorati because I wanted to know who was talking about me,” says CEO and founder Dave Sifry, who was previously CTO and founder of Linuxcare and CTO and founder of WiFi technology provider Sputnik. “The infrastructure of the Web is changing. An increasing number of people are using new tools to create content and publish it to the Web - blogging software, camera phones - causing an explosion of user-generated content. The business opportunity is to aggregate this and provide back a mirror of what’s going on in real-time - around individuals, or companies, or competitors. . .whatever someone might want to explore or track.” In essence, Technorati takes Google’s fascination with links into the new world of the blogosphere and opens up a lot of specific information beyond just “search relevance.” It allows users to see which bloggers are linking to a particular Web page – its “cosmos” – as well as to search by keyword or URL, with results ranked either by time (the most recently published page that mentions the subject or links to the URL) or “blog authority” (the most linked-to blogs or websites that mention the subject or link to the URL).

“Try to find out anything on Google or Yahoo! that happened in the last two weeks and that’s not breaking news,” says Sifry. “You’re lucky if you pick up a PR release. But we’re built into the real-time blogging infrastructure.” Technorati has published an open API and persuaded the major blogging tool vendors to use it; blogs published with those tools automatically ping Technorati each time they are updated.
Technorati gets about 150,000 pings per day. This API is something any search engine could adopt, but Technorati has built relationships with publishers over time and now covers many more blogs than its competitors – about 2 million, with 100 million active links. For companies such as Google and Yahoo!, he contends, “adding such a capability would be an unnatural act; they are set up for a different model.”

Sifry continues, “The Googles and Inktomis do documents. We recognize that documents come from people. So we look at the social aspects: blogrolls, who quotes whom, who has influence. Because we understand time, we can watch how influence spreads and how opinion focuses, changes and moves on. We see the blogosphere as a giant threaded conversation, and we are discovering and tracking the thought leaders and early adopters.”

Once you have such basic data, you can find out lots of interesting things about the “shape” of the overall conversation or of any particular cluster: The service publishes lists such as the top 100 websites linked to by blogs, interesting newcomers, the products (mostly books) and news stories that are generating the most buzz among bloggers, and so on. Users can also set up watchlists to track commentary by keywords or URLs – a buzzmeter, basically.

One interesting fact about the blogosphere that Technorati visualizes is its long tail. In most endeavors, the top end of the market – say, blogs with 1000 inbound links – would take the majority of the market share. But in the case of blogs, because they are so cheap and easy to publish, the tail end of the market accounts for a huge amount of fragmented activity. In fact, notes Sifry, citing figures from the site: “There are only 6,905 weblogs with inbound links from 50 or more unique blogs. There are 15,872 with 25 or more and 97,854 weblogs with 5 or more. There are 1.4 million blogs with no inbound links at all.” Technorati measures the stats this way to avoid overcounting blog-link spam.

Technorati is still relatively small, operating on 24 Linux servers, but it is optimized to manage a seven-minute latency. It adds 12,000 new blogs a day (and sees about a third of the new ones wither away after three months).

Technorati’s business model is to sell such watchlist services, with various enhancements, to marketers and PR firms, Wall Street and other market analysts and others for whom real-time market information is money.

(DISCLOSURE: ESTHER DYSON IS AN INVESTOR.)
Roundtable Discussions

BY ESTHER DYSON

The roundtables are a chance for attendees to get more involved in the specifics of various issues raised in the Forum panel sessions. Each workshop-style roundtable has a couple of lead-off comments, followed by lightly moderated discussion, with the direction led bottom-up. We invite you to join in and help shape your industry.

Identity for things: Content IDs and licensing
(SEE ALSO THE PANEL SESSION ON USER-GENERATED CONTENT, PAGE 38.)

Just as we can identify and track people – for better or worse – so can we identify and track content – for better or worse. The ability to do so makes life more convenient for everyone – creators, publishers, vendors, viewers, watchers, listeners. . .and re-users. But it also throws the conflicts among them into sharper focus. Technology allows us to restrict use, but it also allows us to create and attach more complex and potentially more generous or more restrictive licensing policies to content.

The purpose of this session is not to resolve the persistent conflicts over intellectual property rights and whether the very notion of intellectual property is an insidious default. Rather, it is to think creatively and constructively about how content identifiers can be managed and moved throughout the value chain and support appropriate returns (remuneration, data, reputation) for the value-chain contributors, and fair use, privacy and good value for customers; note that “customers” may also be “contributors.” Then we can ask whether and how participants’ intentions, rights and restrictions can be represented and implemented in digital form.

Members of the roundtable will include Albhy Galuten, chairman of the Content Reference Forum; Cory Doctorow, European affairs coordinator for the Electronic Frontier Foundation and UK liaison for Creative Commons; and David Sidman, founder and CEO of Content Directions, Inc., the first commercial registration agency for the Digital Object Identifier (SEE RELEASE 1.0, SEPTEMBER 2003).

The accountable Net: How to improve the neighborhood
(SEE ALSO THE PANEL SESSION ON THE ACCOUNTABLE NET, PAGE 20.)

That’s “accountable” as opposed to “regulated.” As the Net matures and starts to mirror society, it mirrors society’s ills: pollution (spam), vandalism (viruses, DOS
attacks, etc.), fraud, larceny and general bad behavior. Calls to regulate the Net, however, are unlikely to fix the problems and will surely create others: conflicting, ineffective rules; loss of freedom; high transaction costs; lost opportunities to engage or transact. A better approach is to make providers and users of the Net accountable to one another rather than to top-down authorities.

We can start with transparency: transparency of rules as well as visibility of people and servers, aided by tools such as identity management and authentication, and user awareness of the principles of “Net hygiene.” That’s the big picture. How does it work in detail? What rules and policies are necessary for peer-to-peer accountability to work? Can server authentication and ISP charges for volume mail solve most of the spam problem? What role do private parties such as ISPs and hosted services play? Are they – should they be – akin to banks in the world of financial regulation? How can we make the transition from the regulated telecom world to the accountable Net? How should the government deal with these issues – and in particular the tensions between effective cross-agency analysis of data and the privacy of individual citizens?

Members of the roundtable will include some of Monday’s speakers on the topic, as well as Lori Fena of the Aspen Institute, where the accountable Net meme grew out of a workshop last December, and Tara Lemmey, a member of the Markle Foundation’s Task Force on National Security in the Information Age, which focuses on the government’s role in security – both what it should be doing and what it should not.

**Identity for people: Identity federation**

Identity management for individuals was hot last year, and it continues to be a useful concept. But this year, attention has broadened to include the links between individual identities, or social networks. (See **RELEASE 1.0, NOVEMBER AND DECEMBER 2003.**) We need to pay at least as much attention to the links as to the nodes: How are people linked? What kind of profile information travels across those links to third parties, and who controls that? What happens when relationships change? And what about all those links that are not two-way: Can Juan reach Alice if Alice can’t reach Juan?

A second set of questions concerns the relationships between different social networks. How can networks be linked if the kinds of links, rules and policies within the networks differ? How easy is it/should it be to uproot people and relationships from one network to another? What are the business models around all this?
Those convening to discuss standards for finding or consolidating relationships with friends will include Andre Durand, CEO of Ping Identity and co-founder of Digital ID World; Eric Norlin, VP marketing for Ping Identity Corporation and contributing editor and conference organizer for Digital ID World (see release 1.0, June 2002); and Doc Searls, editor of Linux Journal.

**Metrics for goodness: Accountable philanthropy**

(see also the closing panel on the long picture, page 57.)

Accountability and governance are a big issue in the corporate world right now. But couldn’t the social sector benefit from greater accountability, too? Just as business is discovering the “soft” values of teamwork and empowerment and social benefits, so might organizations in the social sector benefit from discovering some of the “hard” values of measurement, accountability and return on investment...so as to be more effective in carrying out their missions. Nonprofit organizations may better allocate their funds if they can measure their impact; likewise, funders can make more informed decisions about giving. This would counteract the tendency of boards and donors either to overvalue innovation or to stick to the tried-and-true, neither of which may be the best approach...but who’s to know in the absence of measurable results?

What kinds of measurements are helpful? Which benchmarks apply within sectors (such as education, housing the homeless, health care) and which can be used more generally across sectors? How can we make sure that the measurements support rather than hinder the mission (much as focus on quarterly results can harm a business)?

Roundtable members include Allison Fine, founder and executive director of Innovation Network, a national nonprofit offering a combination of measurement tools and services to tens of thousands of nonprofits and foundations, funded in part by the Omidyar Foundation; Martin Fisher, co-founder of ApproTEC, a nonprofit creating thousands of profitable new small businesses in Africa by designing and marketing low-cost MoneyMaker irrigation pumps that enable poor farmers to move from subsistence to commercial farming; and Robert Tolmach, founder of Glasses for Humanity, which will collect used eyeglasses in the United States for distribution in the developing world and will provide new eyeglasses for underprivileged American schoolchildren.

(Disclosure: Esther Dyson is on the Glasses for Humanity Advisory Board.)
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