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## Internetworking

New social-networking startups aim to mine digital connections to help people find jobs and close deals.

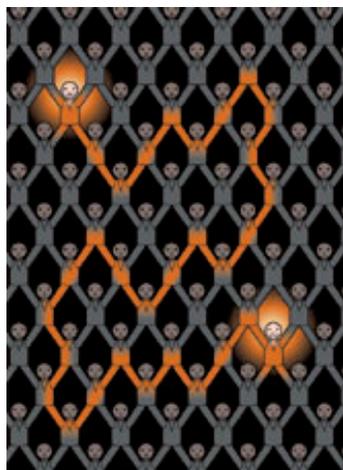


Illustration by Christoph Niemann

By Michael Fitzgerald  
April 2004

It's a grim January day here in Oakland, CA, but Justin Phelps is grinning so wide it practically shows through the phone. "It's about 80 degrees, blue skies, there's a couple of cruise ships in the water," he says. "It's perfect."



Phelps is in Grenada, but he's not on vacation. He's the new chief technology officer at Blue-Stream, a Caribbean telecom and Internet provider, and he's describing the world outside his office window. Not long ago, the 28-year-old was about to become yet another unemployed Bay Area dot-com casualty and was packing up for a six-month trek in South America. But then he logged into Tribe.net—an online social network where he'd set up a profile of himself and his interests and built a network of connections. A friend on Tribe had sent him word of the Blue-Stream job after hearing about it from another Tribe member he knew from the site's yoga interest group, which happened to include yet another member who knew a Blue-Stream director.

That's a lot of connections to follow, and Phelps's experience may be extreme; in fact, Tribe.net features his testimonial on the front page of its Web site and has directed several journalists his way. But it demonstrates what can happen when people's real-world social networks are enhanced by computer-mediated ones. Software like Tribe's helps users create, map, and exploit a web of social and professional acquaintances much broader than the ones they maintain in everyday life. And those webs are good for more than just finding jobs: businesses are starting to use them to dig up sales leads and close deals.

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The premise behind this new social-networking technology is simple: you may know a lot of people from work, college, church, or your neighborhood, but you probably don't know exactly who *their* friends are—and forget about their friends' friends. But join an online social network and invite a few acquaintances, and the software will begin to reveal previously hidden second- or third-degree connections that can lead to an interview, business meeting, or tee time with that elusive potential client or employer.

With venture capital firms lining up to invest, and more than a million subscribers already signed up, automated social-network analysis has become one of the hottest trends to hit information technology since the dot-com bubble. That's despite the fact that when the bubble burst, it took with it an earlier wave of social-networking-software companies, destroying millions in equity. Those first-generation companies, such as sixdegrees, PlanetAll, and BranchOut, had good ideas but bad timing, the new innovators and their backers believe. While the companies proved that people were interested in easier ways of connecting, whether for a job search or just to hang out, it was also clear that users had to work too hard to build those networks; for example, many users had to manually upload contact information from their paper Rolodexes or address books.

Today, "Eighty to ninety percent of [real-world] social networks have a digital component," be it an archive of e-mail correspondence or vital statistics logged into a sales force database, says Antony Brydon, president and cofounder of Visible Path, a New York firm that's developing social-networking applications for corporations. These digital trails mean that human connections can be plumbed, downloaded, and mapped automatically—so companies like Visible Path can help clients take better advantage of their employees' business relationships.

By some counts, more than 30 social-networking startups have been launched in the last three years, backed by tens of millions of dollars in venture investments, and their services go well beyond those of the now familiar dating sites like Friendster. Visible Path has raised \$3.7 million in venture capital, with investors including technology industry seer Esther Dyson and several high-tech executives. Rival social-networking firm Spoke Software, meanwhile, says it has collected a tidy \$20.9 million.

This second wave of networking companies could still crash, especially if they can't entice people or businesses to pay for their services over the long haul. But technologists and investors are adamant in their belief that things are different this time—and not just because more people have their contacts stored electronically. It's also because the new companies are being more cautious with their cash, and because consumers are more wired now than they were five years ago. If nothing else, there is a strong sense that software that maps social networks is so useful that other, larger software and Web companies will eventually add it to their own offerings. Social networks, like multimedia, will simply become a part of the online experience, says Marc Canter, founder of multimedia-software giant Macromedia and now head of Broadband Mechanics, another San Francisco social-networks developer. "It's going to be a feature, and everybody will have it."

### **Six Degrees of Preparation?**



Antony Brydon, president and cofounder, Visible Path: "Eighty to ninety percent of [real-world] social networks have a digital component."

People have always had their own social networks, of course, but these networks weren't explicitly mapped until the last century. In the 1930s, a psychiatrist named Jacob Moreno invented the sociogram, a series of dots and lines showing people's social connections. Neat idea, hard to do: a single sociogram typically represented hours of laborious interviews. Harvard University psychologist Stanley Milgram's famous 1967 finding that on average we're only six acquaintances away from anyone else on the planet was still almost 30 years ahead of the technology needed to take advantage of it.

Finally, in the mid-1990s, powerful networked computers became widespread, e-mail began to displace the telephone for many types of conversations, and the Web started to emerge as a kind of electronic reflection of communities,

businesses, individuals, and their interests. Entrepreneurs saw an opportunity to help people make more of their electronic connections. That was the concept behind sixdegrees, launched in 1997, which at its height counted more than three million members in its network. At the time, however, advertising was the main source of revenue for Web companies; when online ad revenues failed to grow, so did sixdegrees, which was purchased by YouthStream Media Networks for \$125 million in stock in 2000 but shut down a year later.

But the ideas are back, and in spades. Post-bubble trauma is finally fading; home broadband connections reach 38 percent of U.S. Internet users—almost 50 million people, up from virtually zero in 1997; and the spread of programs like Microsoft Outlook means that most home Internet users and office workers already have the names and addresses of their acquaintances compiled in electronic form. "Social networking was a good idea then, it's a good idea now, and it'll be a good idea in 2011," argues sixdegrees' founder Andrew Weinreich, who's now a Visible Path advisory-board member. "*This* is the time for it."

LinkedIn, a business-focused networking site operating from Mountain View, CA, is fairly typical. Users create a profile on the site, which can be as basic as a name and a set of business interests or as broad as an entire work history. They can then search for people they know on the site—typing names or affiliations into the LinkedIn search engine—and invite them to join their networks. Users can also send e-mail through LinkedIn and directly invite friends and colleagues not already signed up to join their networks by creating LinkedIn profiles of their own. Invitations can be created piecemeal or by uploading entire e-mail contact lists to the site. LinkedIn's software can automatically send and track invitations and issue reminders to people who are slow to join.

Once connected, users gain access to their friends' connections and can use LinkedIn's search engine to search the resulting network for, say, officers or employees of a specific company. If a search produces the name of someone they'd like to meet, they can use the network to ask for an introduction. Contact information is kept private, so requests must be sent through the chain of members linking the inquirer and the target. The bottom line: it becomes extremely easy to search, view, and contact all of your online acquaintances—and their acquaintances, out to four degrees of separation (anything more remote is generally not useful, social-networking insiders say).

It might sound a bit convoluted, but it's simple in practice—and users claim that they get tangible results. Take Marcus Colombano, a media and technology

marketing consultant in San Francisco. Colombano read about a company he thought should be a client, popped its name into LinkedIn, and found he was connected to four people with contacts at the company. He wrote up a proposal and sent it to a friend who had a contact who knew the CEO. Four hours later he got an e-mail from the CEO asking for a meeting. "I'm going to get an opportunity to sit down and do a proposal with these people," Colombano says. "It's really quite cool."



Mark Pincus, CEO and founder, Tribe.net: The veteran of two bubble-era startups says his company might "too conservative in spending money."

### You Make \$, I Make \$

Will cool—and quick—intros for clients translate into cold cash for the networking firms? That's an unanswered question, as most public networking sites are still in some form of beta testing and aren't yet charging for membership or services. LinkedIn, for instance, says it will charge an as yet undetermined amount for referrals and other types of connections. San Francisco-based Ryze, which grew out of a real-world networking club and is the oldest of this second generation of social nets (dating back to October 2001), only charges for premium services, such as access to advanced search tools that can find people by company, university, and interests. It also earns revenue from its real-world mixers and claims to be profitable.

One thing is certain: today's networking sites are growing at a more sustainable pace than their predecessors. Sixdegrees raised \$26.5 million and employed 85 people, all working in expensive Manhattan office space, before being shut down at the end of 2000. By contrast, "It's freezing in my offices," says Mark Pincus, founder and CEO of San Francisco-based Tribe.net and a veteran of two bubble-era startups. "I have to wear a coat. I think we might be going too far to the other extreme, being too conservative in spending money."

Veteran venture capitalists agree that things are different with this round of startups. Allen Morgan, a general partner at the Menlo Park, CA, venture capital firm Mayfield—which, along with Knight Ridder and the Washington Post Company, invested \$6.3 million in Tribe—points out that users generate the content of the social-networking sites and provide most of the marketing by word of mouth, so the companies can run on the cheap. He calls that "a good bet."

At the same time, other Web businesses from Yahoo! to craigslist, a classified-ad site based in San Francisco that charges \$75 to post a Bay Area job listing, have proved that people will pay for certain online services, such as personal ads. The networking sites will likely go after a chunk of that business. "Tribe will cannibalize the online-classified-ads market and a portion of eBay's [auction] market, and LinkedIn will cannibalize both online and offline recruiting," predicts Ross Mayfield (no relation), a technology blogger and CEO of Socialtext, which makes group communications software. Each of these niches generates hundreds of millions of dollars in annual revenue, though to get their share of it, the social-networking companies must still figure out how much to charge, and for what.

### Making the Sale Sooner



Tim Connors got the idea for Spoke Spokware when he saw how hard it was for technology startups to get the time of day from their target customers—corporate information technology managers.

While the social-networking sites show promise, however, they are unlikely to capture all of our connections. There will always be people who decide not to join any network. And prominent people often don't want to make themselves easier to find: you shouldn't count on running across a Warren Buffett or a Bill Clinton at LinkedIn or Friendster.

But many key connections might just show up in networks built with more sophisticated analytical tools. As businesses have moved onto the Internet and become more dependent on software for communications, they've already digitized huge amounts of contact data, in the form of e-mail archives, calendar appointments, corporate phone lists, customer databases, and Web pages. Companies like Spoke Software of Palo Alto, CA, are building applications that automatically sort through this data and then apply social-networking-

analysis techniques to weight connections and generate "corporate sociograms" showing the strongest paths to target customers. Mapping those relationships can get salespeople in the door more quickly, freeing them from low-yield activities like cold calling. In fact, the software should help close sales almost 25 percent faster, the companies claim.

Tim Connors, a venture capitalist at U.S. Venture Partners, got the idea for Spoke when he saw how hard it was for technology startups to get the time of day from their target customers—corporate information technology managers. He realized that no tool existed to help with this problem, so he started recruiting programmers to build a public networking site that infotech insiders could join. But Connors's first choice for technical whiz, Andy Rosenbaum, was concerned that the new network would run into the same revenue problems that sixdegrees had. "I was like, 'Who's going to pay for it?'" Rosenbaum says. Connors responded by adding features directly aimed at sales departments—most importantly, the ability to build a closed, proprietary network of contacts, supplemented by access to the public network. Rosenbaum, however, needed a stable job to help support impending twins and went to Yahoo! to build its personal-ads service. But within nine months, Connors had won venture funding for his project, and Rosenbaum was sufficiently wowed by Spoke's prototype to join the company as chief architect.

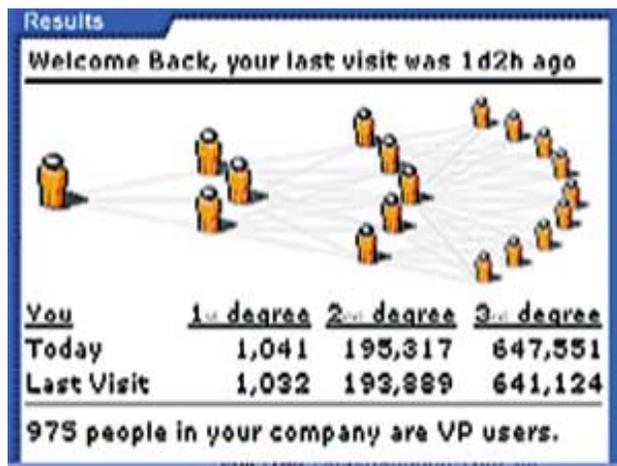
Spoke launched its software in October. Rather than charging a standard license fee, it collects a percentage of the sales revenues it enables. It was building proprietary networks for two corporate customers by the end of 2003 and had signed contracts for trial-run projects at another eight companies, typically for \$50,000 to \$75,000 each.

Spoke's closest rival is Brydon's company, Visible Path, whose development team is squirreled away in a back room with eight cubicles and a conference table in a bland office building in Manhattan's Chelsea neighborhood. Chief technology officer Jeff Patterson and platform architect Cliff Rosen worked on the company's software with Stanley Wasserman, a University of Illinois statistician who literally cowrote the book on social-network analysis—an 857-page tome that's considered the leading text in the field. Unlike other social-network products, Visible Path is only available to companies and only plots data from their internal resources. Its software runs on a network server and communicates with a small program installed on each employee's PC that works in conjunction with a standard Web browser. This plug-in monitors the employee's communications and sends data back to the server, where it's folded into social-network maps that all employees

can search. The system, which is being tested by about a dozen beta customers, gauges the strength of each relationship based on things like which e-mail messages users respond to, how long it takes them to respond, and what acquaintances they have in common.

Corporate executives say the potential for increasing revenues is obvious, and big. "It's intuitive that these relationships exist within corporations," says an executive at one mid-size company testing Visible Path. "I have a lot of contacts, and rarely does sales call me to ask who I know." He says Visible Path is beginning to change this: in his company's first three weeks using the software, he received two requests from colleagues in the sales department asking him for introductions to people the software said were close to him. In both cases these were, in fact, people he knew well enough to get the salespeople in the door.

It's too early for the executive to say whether Visible Path's software will deliver on its sales promises. But from what he's seen of its ability to correctly gauge contacts that can be parlayed into meetings, he's optimistic that some type of social-network analysis will soon help his company close lucrative deals. When that happens, he says, "There is no question we'll spend money on it."



Getting to know you: Visible Path's software shows employees how many people they can reach through colleagues or friends of colleagues. (Courtesy of Visible Path)

## Face Time

The social-networking companies' early successes will be solidified if they can figure out the answers to a few open questions. One is about cooperation. Today, if consumers or businesspeople want to tap into online social networks maintained by different companies, they must fill out new profiles and send out new connection invitations in each. But many users wish they could make their networks larger and more varied by creating connections across the boundaries of sites like LinkedIn, Ryze, and Tribe. A data standard being developed by independent programmers called "Friend of a Friend"—a way to create a short, machine-readable file that resides on the Web and provides your personal data and the names of your connections to any software that requests it—promises to make such internetwork connections easier, but it has been slow to roll out.

The biggest questions, though, are sociological as much as technical (see "Social Networking's Skeptics," sidebar). For instance, will computer-generated social-network maps ever truly reflect

## Social Networking's Skeptics

Four experts identify pitfalls that could keep consumers and businesses from warming to the new

real-world networks? Valdis Krebs, a management consultant and software developer who has nearly 20 years of experience with social-networking software, thinks corporate social networks will always miss the nuances that matter in the real world. Often, a network map won't come up with a reliable chain of connections to a potential client an employee wants to target, or "we find out that someone is difficult to work with, or they give you stuff that's not what you need," says Krebs. "A day face to face is worth a thousand e-mails."

Maybe so. But then again, if an online social network can help get you the face time you need, you might just wind up with a great gig in the Caribbean.

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Michael Fitzgerald is a freelance journalist in Oakland, CA, who writes frequently about business, technology, and the San Francisco Bay Area.

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technologies.

"Privacy is going to be a big issue. Some of the social-network services don't put users in control of their privacy. These networks are not just personal data about you; it's personal data about you and someone else. That'll be a different gray area for most users, who are in some cases submitting data about their friends without their knowledge. All it takes is one horror story." -Ross Mayfield, technology blogger; CEO, Socialtext

"If anybody six degrees from you could get your attention, you'd be time-spliced to death." -Clay Shirky, Internet consultant; adjunct professor, Interactive Telecommunications Program, New York University

"If you mess with how people naturally network, you're going to turn a lot of people off, and you're not going to get them to board your boat. If the people [I] add don't respond, they're not in the network. I can put in my 50 best contacts, but if only 20 respond, then my network doesn't exist. And most people will not choose to put their best 50 contacts in. So the networks are not realistic." -Valdis Krebs, management consultant; software developer; principal, orgnet.com

"Social-networking-analysis software is all about the digital world, not the real world. Eighty percent of what's important in our interaction is physical, so all the good stuff isn't in [these networks]." -Alex "Sandy" Pentland, director, Human Design group, MIT Media Laboratory