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Locating pals at MIT, privately

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Program lets users share information about where they are with friends -- but not with Big Brother

By Carolyn Y. Johnson, Globe Staff | December 13, 2006

CAMBRIDGE -- A new friend-spotting software program will debut on the MIT campus today, allowing people to enjoy the social benefits of sharing their location without showing up on Big Brother's radar screen.

The iFIND project turns every laptop into something like a precise Global Positioning System unit that can spot users -- down to the room they're sitting in -- and then share that location with friends and colleagues, without uploading their personal information onto a central network.

"Nobody is looking at this approach," said Carlo Ratti, director of the SENSEable City Laboratory at the Massachusetts Institute of Technology. "The present trend in the industry is toward collecting data. This gives control back to the individual. . . . It's you who are calculating your location, and it's you deciding when to make it public and to whom."

Cellphone buddy finders already use GPS technology to allow people to "find" themselves on a map and broadcast that location, if they choose, to friends. But in order to share that information with friends, it has to be sent to a server. Cities across the country are starting to roll out municipal Wi Fi systems that will blanket large swaths of major urban areas. Privacy advocates have voiced concern that unless strict rules are put in place, the cellphone companies and the companies that build municipal Wi Fi systems may use their networks to harvest data about users for marketing purposes.

iFIND offers a solution before the privacy advocates' fears become reality. A laptop calculates a person's location using Wi Fi access points, and then shares that information with the selected friends and colleagues on a peer-to-peer basis. People can chat, and eventually will be able to create profiles, but the network will never receive personal information.

"Anything that gives me, the individual, greater control over how information is used and under what circumstances will make the world a better place," said Shiv Bakhshi, director of mobility research at IDC. "It's an opt-in, rather than an opt-out. . . . That's a much more civilized way of doing things. That should be the default."

On a recent afternoon at the Steam Cafe on campus, the iFIND team signed in to the program. Seconds later, the laptop had "found" itself using the dense network of 3,000 WiFi access points on campus.

A little yellow rectangle proclaiming "Hey, that's me!" appeared on a map, at the corner of building seven, in a room on the fourth floor. A constellation of circles, stars, and triangles representing other friends was scattered over other buildings on campus. To send the location information to others without leaving a trace on the network, the program uses the same technology used in online banking. The data is encrypted on a user's laptop and can only be decoded by designated friends. Even if the message is intercepted, there is no way to recover the data, according to Francois Proulx, a member of the iFIND team.

Marc Rotenberg, executive director of the Electronic Privacy Information Center, said that the MIT project sounded like an interesting approach to privacy issues. "It really has to be tested a bit," he said, but user control "is really the magic word in the privacy world. . . . If it turns out they've solved this problem, I'll be thrilled."

Ratti and his students imagine that iFIND will help friends and colleagues use their computers to meet, socialize, and collaborate without putting personal information at risk. Eventually, Ratti said the application might be used to make connections beyond campus, in cities that install Wi Fi networks.

But for now, Ratti sees the program being used for some quintessentially MIT purposes. Elaborate electronic scavenger hunts could require people to get within a few yards of a target before they could get a clue sent to them. People could wait to arrive at a gathering spot until a critical mass of X's and O's were headed toward the room. People scattered across campus who wanted to meet up in person could calculate the most practical meeting spot -- the "center of gravity."

"If you are a geek," Ratti said, "There are a lot of other fun applications."

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