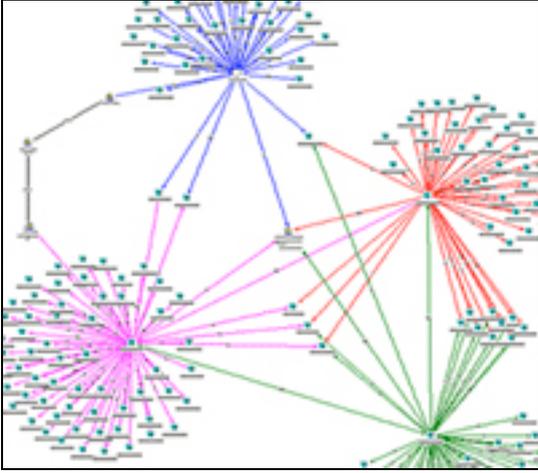# FINDING THE MISSING LINKS
Technology Helps FBI Unravel Criminal and Terrorist Networks

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It's said that success often depends on "who you know." For criminals, it can be their undoing. Try as they might to hide behind phony phone numbers, fake names, and bogus credit cards, new technology can pick up their tracks and use evidence of their social networks, money trails, and phone trees to nail their true identities.

Take the case of the missing Saddam Hussein, hiding in a remote lair in 2003. How was he located? Largely by tracing his ties to others through a technology called network analysis. Likewise, the hunt for snipers terrorizing the D.C. area was narrowed using the same technology. In the case of the "Virginia Jihad Network," a group of 11 Northern Virginia men who trained for war against the U.S. in the days after 9/11, FBI analysts used link-analysis technology to visualize the connections between members as a pyramid, with the group's leader, Ali al-Timimi, at the top.

"From there, we wanted to see how strong the connections were and how they were connected to each other," said Dawn, an intelligence analyst who worked this last case. She plugged in photos of the suspects, along with their phone records and a raft of other clues culled from databases and gathered by agents. The software revealed patterns and connections illustrating a vivid and intricate web of links among the accused jihadists. The picture helped crystallize al-Timimi's place at the center the organization. He was sentenced earlier this month to life in prison.

"It's just easier to get a sense of what's going on if you can see a picture in front of you," Dawn said. "It's also a good tool if someone's saying they didn't know somebody."

Studying a group's social network for clues is not new to investigations—we've all seen mob bosses fall when underlings sing. What's new is using technological tools to visually connect suspects.
"Any kind of number structure data you can get, it will link it together," said Jack Israel, the FBI's chief technology officer.

The Bureau licenses the software and trains all its intelligence analysts to use link analysis for intelligence and for investigations of everything from mortgage fraud to terror networks.

"It's absolutely essential when we are trying to figure out a bad guy's social network," said Israel. "It shows you the network. And when you start taking apart the network, that's when you can disrupt the operations."

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