

I Spy A Red Balloon

A DARPA Network Challenge Team

www.ispyaredballoon.com/

Spy vs. spy on Facebook

—by *Monica Hesse*

On December 5, 2009, the Defense Advanced Research Projects Agency set out to learn how quickly people could use online social networks to solve a problem of national scope. The answer? 8 hours 56 minutes, at least when said problem involved \$40,000 and a bunch of red balloons.

In DARPA's Network Challenge, tied to the 40-year anniversary of the Internet, the Department of Defense's research arm placed 10 weather balloons in public places around the country. The first team to locate and submit the balloons' correct geographic coordinates would get the cash prize. Ready, set, Twitter!



Watch

Spot

Report

More than 4,000 teams participated. More than a few interesting things were revealed about the human psyche. "It's a huge game-theory simulation," said Norman Whitaker of DARPA's Transformational Convergence Technology Office. The only way to win the hunt was to find the location of every balloon, but a savvy participant would withhold his sighting until he'd amassed the other nine locations, or disseminated false information to throw others off the trail.

Sure enough, Twitter and Facebook were all abuzz with offers to sell coordinates for alleged sightings. There was much excitement over the red balloon in Providence, R.I. There was no red balloon in Providence—just a Photo-shopped decoy circulated by a conniving player.

The winning team was spearheaded by Riley Crane, a postdoctoral research fellow at MIT's Media Lab. MIT's team set up an elaborate information-gathering pyramid. Each balloon was allotted \$4,000. The first person to spot one would be awarded \$2,000, while the people who referred them to the team would get smaller amounts based on where they fell on the info chain. Any leftover money, after payment to spotters and their friends, was to be donated to charity. Crane was less interested in the monetary prize than in the potential for social research.

"On the science side, we're scratching the surface of this

tremendous new system" of social networks. "With this data set we have the potential to understand how to face—and exploit—the challenges that come with living in this interconnected world."

The practical possibilities of the Network Challenge go far beyond a research lab. Already the powers of social networks are well documented: Earlier in 2009, information about violence in Iran continued to be dispersed through Twitter even after traditional news sources were squelched. Crane wondered what types of applications might result from data about information dispersal collected during the DARPA Network Challenge weekend: "Could we design an alert system to help us find missing children? Could we redesign the incentive structure for police rewards?"

DARPA officials met with participants throughout the week to debrief them on their strategies. Not everyone believed their motives are pure. After all, what would an intersection between the government and the Internet be without a few conspiracy theories?



The DARPA Network Challenge crown went to MIT, the team that was first to submit the locations of 10 weather balloons placed at 10 fixed locations. (Darpa)

"Looks to me that 'someone' has lost a balloon with something very important in it, and now is making all this fiction to promote its prompt finding," wrote a commenter on NewScientist.com.

Care to comment, Dr. Whitaker?

"That," he said, while trying to keep a straight face, "is an amazing story."