UA'S 'DARK WEB'

Team combing Internet to track terrorism

By Susan Carroll
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TUCSON — University of Arizona computer scientists say they have quietly assembled the world's largest digital library of intelligence on extremist and terrorist organizations culled from the Web.

Researchers hope the project, dubbed the Dark Web, will give them insight into the evolution of terror activity on the Internet, a problem recognized long ago in international intelligence circles and by the U.S. government but one that has become increasingly difficult to track.

Many terror and extremist groups, foreign and domestic, have made the Web a primary source of communication by using sophisticated home pages and other online tools to spread their messages and lure recruits. Three years ago, UA's Artificial Intelligence Lab created a virtual library that uses supercomputers to store millions of Web pages, capture chatter on terrorist forums and copy videos showing gruesome attacks and murders.

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Although this is typically the domain of federal law enforcement, university researchers say their main goal is to perform long-term academic studies on terrorist and extremist groups to better understand their activity on the Web. The lab's director, Hsinchun Chen, said researchers have shared their data with the U.S. government, but he would not say which federal agencies were involved.

"Even the people we talk to in the federal agencies are hampered by the amount of information that's being collected. They don't know how to analyze it," Chen said. "It's a new virtual battleground."

The UA project is unique, Chen said, not only because of the volume of data but also because of the different tools they use for analysis, including programs that find links among terror groups and similarities in writing styles in postings in chat rooms.

Brian Jenkins, a terrorism expert with the California-based Rand Corp., a non-profit research institution, said the number of terrorism-related Web sites has exploded in recent years, from a handful to thousands. Jenkins, who founded Rand's terrorism research program in 1972, said traditional intelligence gathering simply falls short when it comes to the Web.

"The problem is volume," Jenkins said. "We're beyond the point where any individual analyst or any team of analysts can sit down and analyze all this information."

The UA program goes beyond terrorism groups and includes extremists like White supremacists. Scientists have set up programs that glean information from English, Spanish and Arabic sites. The researchers, working with about 15 advanced UA students, analyze the linkage among Web sites using social network analyses.

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> *Lab director of UA's "Dark Web" project*

They also perform Web matrix analyses to measure the sophistication of terror sites, which often keep an Internet address for a short time, then move to avoid detection. The lab is in the university's Eller College of Management and Management Information Systems.

Chen said much of the research tries to answer these central questions: How are terror or extremist groups using the Web sites and for what purposes? Is it recruiting, fundraising or spreading their ideology?

Some of the information on the sites, Chen said, is detailed and specific, in some cases how-to guides for activities like bombing or beheading.

"The Web is the al-Qaida university. They season you, and they recruit you, and they give you all the materials to train you," he said. "It's a very significant international phenomenon."

The UA computer scientists do not investigate specific terror groups, do not try to crack encoded messages or do any other contract work for the government that requires classified security clearances, he said.

Instead, they focus on creating cutting-edge computer programming to make sense of the longer-term trends.

"We provide the tools so the good guys get to do the right thing," he said. "It's very difficult to do this kind of research. They (the terrorists) are hiding. They're hiding in the dark side of the Web."