

A tale of four towers

By BEN IANNOTTA

When Ralph Haller returned to the National Reconnaissance Office (NRO) in 2007 after stints at the CIA and in private industry, something was obviously different at the spy-satellite agency's Chantilly, Va., property. Four new office buildings had opened since he left in 1993, and with these "towers," as NRO employees call them, came a divided management structure that has contributed to the agency's slow adoption of Internet-like intelligence tools for tapping the agency's spy trove.

Those tools are mostly a dream at the moment, but they would merge eavesdropping from NRO's signals intelligence satellites with fine-resolution photos taken by its imaging satellites and place them seamlessly on the desktops of U.S. intelligence analysts who enter search terms. The displays would include metadata describing the context of the intelligence collections, and links to other data that might be of interest. The goal is to "provide services that look a lot like what you might see on the Internet," said Haller, who is leading the NRO reorganization in his new role as the agency's first chief operating officer and, since January, its deputy director.

If Haller succeeds, a U.S. foreign weapons analyst would be able to view detailed photos

of a missile test site abroad and simultaneously learn what people on the ground were saying at the moment the satellite photos were taken.

For that to be possible, Haller first must tear down and rebuild a management system that has treated signals intelligence and imaging satellites and their products as though they came from separate agencies. Haller said he hopes to complete his reorganization no later than September and begin distributing better products soon thereafter.

Former NRO Director Don Kerr, who was traveling and could not be reached for comment, started the NRO reorganization in 2006 before leaving the agency last fall to become the No. 2 U.S. intelligence official. Kerr's motivation came directly from the Sept. 11 terrorist attacks on the U.S., a retired official involved in oversight of the NRO said. "Let's never again be accused of not connecting the dots, or somehow preventing them from being connected," the official said.

'TOWERS OF EXCELLENCE'

Today, one NRO tower houses the signals intelligence experts who manage those satellites and their classified receiving stations around the world. Another houses imagery staff with parallel duties. A third handles the agency's telephones and computer networks. The fourth tower, Tower One, houses top

managers and the agency's advanced systems planners. Historically, an NRO official might work his entire career in the signals intelligence tower, oblivious to the work of colleagues in the imagery tower. Over the years, separate imaging and signals intelligence staffs evolved at NRO's five satellite receiving stations around the world.

NRO officials jokingly describe these separate buildings as "towers of excellence." Haller is in the process of creating a new Ground Enterprise Directorate — known as the Enterprise Integration Division in earlier proposals — that will tie together the signals and intelligence products in hopes of ending the jokes. A new Systems Operations Directorate will oversee operations of the signals intelligence and imagery satellites at receiving stations around the world.

NRO's customers among the panoply of U.S. intelligence agencies have access to a classified computer network today, but the network is far less powerful than the one they probably go home to, and far less popular. "The intelligence community has embraced that [information technology] rather slowly," Haller said.

Much of the time, U.S. intelligence analysts find information through friendships with those in the business of collecting and processing intelligence. Lance Killoran, a former weapons analyst who is now a top NRO im-



SATELLITE IMAGE: GEOEYE; INSET: MICROSOFT/PICTOMETRY INTERNATIONAL

The "four towers" of the National Reconnaissance Office, Chantilly, Va., shown in satellite and aerial photos.

With reorganization, NRO aims for Internet-like access to data

agery manager, likened the problem to a scavenger hunt.

"You've got to go find a friend over in [signals intelligence], a friend in the human area, and you convince them that your problem is important," Killoran said at October's Geospatial Intelligence Symposium in San Antonio. "Then what do we do to you? We send you on the ultimate scavenger hunt across all the systems and agencies to try to pull together that data that's now been distributed out there together relative to your problem."

Once the management changes are in place, the Ground Enterprise Directorate will provide the equivalent of Internet applications to make sense of data for analysts. The data will flow over the equivalent of an Internet provider managed by the NRO communications directorate. Information companies should not expect much new NRO business soon, however. "In the short term, we don't expect any significant [requests for proposals]," Haller's deputy, Air Force Brig. Gen. Ed Bolton, said. "We're not going to take the can opener out and tear up contracts and re-compete things." But, he added: "Any corporation or person that has the ability to fuse data; to provide multi-int products; to be able to provide cueing services, so we can provide holis-

tic products, ... that's going to be very competitive in the world that we foresee in the future."

A TASKING DEBATE

NRO officials don't expect the reorganization to have much direct effect on what might be the biggest criticism leveled at the agency by U.S. defense officials, albeit almost always behind closed doors or through jokes at social occasions. The criticism is this: The Pentagon believes the NRO does not give it as much respect as the Central Intelligence Agency in the fierce competition to decide where to point, or task, spy satellites. And so, through a program called Rapid Eye, the Pentagon's Defense Advanced Research Projects Agency is proposing to fold up a small, unmanned airplane inside a rocket, blast it halfway around the world and unfold it from a re-entry vehicle to form an instant ISR aircraft. The Defense Department, through its Operationally Responsive Space initiative, is funding work on small rockets and satellites that could be launched quickly to meet battlefield demands for intelligence.

Those initiatives are motivated in part by the trouble the Pentagon has in winning NRO tasking competitions. "There are people who think it's worth having a little competition in

the space mission," the retired NRO oversight official said.

Haller is aware of the criticism and the danger of making promises that can't be met. "I'm not ready to tell you that right now tasking will change drastically," he said. "Collection resources compete, and collection isn't ever present."

What might change is the quality of tasking requests. "I think that what will happen is that as people begin to use this data more interactively, [when there] is a request for tasking, it will be a request that is more competitive," Haller said.

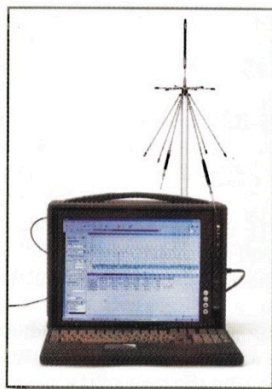
If the changes at NRO were merely a matter of printing up new organizational charts, it would be easy to wonder why they have taken two years to enact. Bolton said NRO officials had to proceed cautiously under the rule "Don't break anything." The end product will be a system that delivers intelligence information that is as rich in detail as anything on the open Internet, he said.

"At home you might have a Mac computer, AOL Internet provider, Google surf engine, YouTube. You type something in and the next thing you know you're seeing Ella Fitzgerald sing from the 1940s. So you're talking about seamless and fused," Bolton said. ■

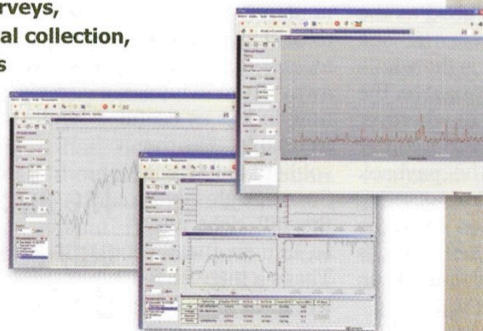
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