

'Unearthing' the Truth in Defense of Our Nation

Interagency Effort Uses Multi-INT to Find Underground Facilities

By Maj. Mark Esterbrook, USAF

"Unearthing the Truth in Defense of Our Nation"—that's the motto of the Director of Central Intelligence's Underground Facility Analysis Center (UFAC). NGA is one of several agencies involved in the Center, which is composed of highly specialized analysts. This involvement is but one example of how NGA is moving toward multi-intelligence (Multi-INT) collaboration.

Simply put, the world has gone underground. Since the disintegration of the Warsaw Pact and the fall of communism, the United States and its friends and allies have faced a changing threat environment that continues to evolve.

These changes are driving modifications in the way knowledge bases, used to protect national security, are

built. The activities of greatest interest are now more geopolitically diverse, and the time available to react with traditional collection and analysis techniques is shorter. Additionally, those who threaten national security have become far more sophisticated and knowledgeable about geospatial capabilities.

Converging Intelligence

Historically, it was possible to divide knowledge base efforts among the intelligence and non-intelligence agencies because the effort was very detail-oriented and less urgent in many respects. With the potential for strikes in the United States now a much greater reality, the cost of

measured and separate approaches to threat knowledge bases is too dear. The convergence of intelligence disciplines has become an operational imperative in order to provide decision makers with more specific, timely, and focused analysis of where the threat originates from in order to thwart it prior to attacks on U.S. soil and interests.

Enter the UFAC. Created in 1997, the UFAC is a consortium dedicated to detecting, identifying, characterizing and assessing for defeat adversarial underground facilities or Hardened and Deeply Buried Targets (HDBTs). More specifically, the center's mission is to provide intelligence and related data supporting HDBT defeat to national policymakers, weapons developers and military forces and their commanders, and lead the Intelligence Community and Defense Department in that effort.

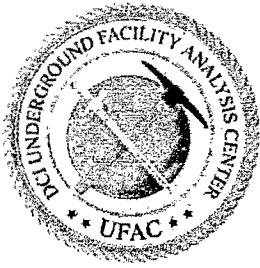
NGA's Role

NGA plays a key role in this effort by applying many of its primary tradecrafts to the task at hand. As one might expect, geospatial intelligence is one of the most important elements of analysis, especially High Resolution Terrain Information (HRTI) data. In addition, through Defense Intelligence Agency Web pages, applicable maps, related site diagrams, and related imagery are but a mouse click away. But at the heart of NGA's participation is detailed and tailored analysis. Such analysis paves the way for operational uses, including targeting decisions, for intelligence officers and operational forces around the world.



A soldier investigates an underground facility in Afghanistan.

U.S. Army photo



The UFAC includes primary intelligence agencies as well as key organizations outside of the national intelligence community. Each organization contributes its unique skills and capabilities directly to the creation of a truly coordinated response.

The organizations that make up the UFAC include the CIA; DIA's Central Measurement and Signatures Intelligence (MA-SINT) Directorate, Technical Collections Directorate and Intelligence Directorate; the Defense Threat Reduction Agency, NGA, National Security Agency, U. S. Geological Survey, and U.S. Strategic Command Joint Intelligence Center. Without the collaboration of these organizations, the UFAC's ability to successfully tackle the underground mission would be lost.

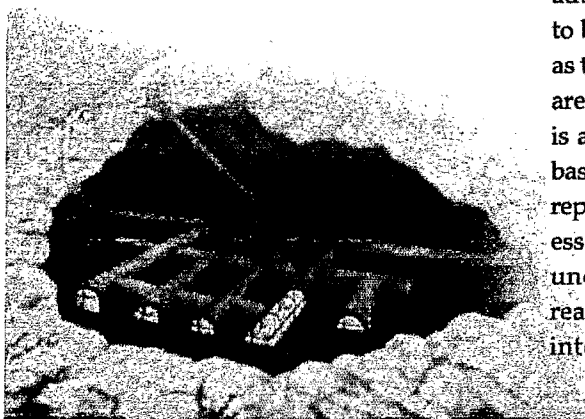
As shared knowledge is the key to the U.S. military transformation, it is, as well, the key to HDBT defeat. The purpose of underground facilities is concealment and survival. Detection and characterization are difficult at best. Determining function and construction features presents complex collection, analysis and engineering challenges. Typical underground facilities protect and conceal key military and civilian leadership and operations involving communications, command, control and computers, weapons of mass destruction

and terrorism/insurgency. Today the center researches over 10,000 such facilities, and there is a suspected equal number yet to be discovered—a daunting task for any organization!

Knowledge Base

The UFAC knowledge base consists of two elements:

- Individual analysts and engineers. The most valuable knowledge base component is the minds of the UFAC and affiliated analysts, engineers and collection managers. Applications and tools cannot duplicate the associative and intuitive skills inherent in good analysis. The intellectual understanding that is the product of analysis remains a human—not a machine—trait. This makes analyst/engineer development vitally important. The key features of that development are recruitment, training, broad experience and the understanding of need that comes from interaction between the consumer and the UFAC members and affiliates. The UFAC program includes analytic growth in both mission and task. Staying the course on that program is a fundamental management and oversight imperative.
- Consumer-accessible automated databases. Unlike the human analyst/engineer/collection manager, automated databases, at present, tend to be static entities only as complete as their last human input. Two kinds are pertinent to the UFAC. The first is a family of internal support databases. The second is the knowledge repository in which is assembled the essentials of UFAC analyst/engineer understanding in a way that is readily accessible, searchable and interoperable. Technology offers



Multi-intelligence collaboration is the key to defeating hardened and deeply buried targets.

the opportunity to enhance these databases in new and increasingly effective ways

The Future...

Six goals are guiding UFAC development. These will likely evolve with time and experience, but the main thrusts that they represent, which are fundamental to successful intelligence operations, are unlikely to change:

- Bring the multi-discipline UFAC analytic capacity to a level of sustained sophistication that assures its continuing status as an essential contributor to U.S. national interests and security.
- Establish a focused, integrated, supportive relationship with the collection community.
- Lead U.S. HDBT knowledge-building activities and work with friends and allies to ensure broad-based substantive cooperation.

- Establish and maintain an enduring, interactive relationship with each operational, policy, and weapons development/acquisition entity for which underground facility knowledge is mission essential.

- Ensure, through active programmatic support and involvement, the continued examination of new ways to collect against, analyze and exploit underground facilities of all types.

- Sustain funding and, as appropriate, encourage growth for the center and its affiliated activities.

In the final analysis, the fusion of intelligence disciplines, engineering analysis and collection requirements is not a future pipe dream. It exists in the here and now and the UFAC represents yet another resounding success story in NGA's pursuit of true Multi-INT collaboration.