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President

## HUMINT, SIGINT and now GEOINT

The CIA's U-2 photoreconnaissance airplane had been shot down on May Day, 1960, over the Soviet Union, ending its four-year career, but its aerial photography had answered the critical intelligence question of the day: Was there a bomber and missile gap with the Soviet Union? Aerial photography confirmed there was no gap, and the United States had military superiority over the Soviet Union. That critical knowledge led President Kennedy to call Khrushchev's bluff that ended the Berlin crisis of 1960 and the Cuban Missile Crisis of 1962—without a nuclear war. Overhead photography had more than proved its intelligence value. The CIA had then succeeded, after nearly a dozen failures, in getting its U-2 replacement – the CORONA satellite – into orbit and successfully recovered its film bucket, bringing home more photo coverage of the Soviet Union from its first mission than had the U-2 over its lifetime. But with U-2 photography ended and months between CORONA missions, the light tables at CIA's National Photo Interpretation Center's (NPIC) were dark, with little to do—or so it seemed.

The U-2 and CORONA photography had clearly demonstrated the incredible value and contribution that future space borne reconnaissance could make to our nation's defense, national security, and safety. Behind this scene, the air was alive at departments and agencies in the Intelligence Community (IC). Intensive research and development was underway for the next generation of satellites and sensors, having recognized high tech intelligence collection systems were the wave of the future. The CIA's new Directorate of Science and Technology, under the leadership of the young, dynamic Dr. Albert D. (Bud) Wheelon, would take the lead in developing unbelievably advanced, real-time aerial and space reconnaissance platforms and sensors, often requiring new inventions and technologies not yet available; development of new orbits, new sensors for day, night, and bad weather collection systems—the likes of which the world could

not imagine. The Navy, Air Force, and NSA were on parallel tracks to develop those platforms and sensors necessary for their future national defense missions.

NPIC saw the writing on the wall, as well, and knew what had to be done; develop equally advanced capabilities to not only interpret and analyze the coming flood of collection from all the new reconnaissance platforms and sensor technologies under development, but also determine how best to package and rapidly distribute these future products to end-users, especially our warfighters. Analysts throughout the IC would no longer have to rely on intelligence “estimates” alone, but would soon have new and timely intelligence from new and improved overhead sensor systems for the policymakers as well as the war fighters. NPIC would never be the same.

After some difficult wrangling between the Defense Department and the CIA,<sup>1</sup> the National Reconnaissance Office (NRO) was finally created in the early 1960s as the central organization to coordinate and better manage the exploding new world of high tech, overhead intelligence collection and analysis systems—with equal representation by the Air Force, CIA, Navy, and NSA. There were no more than a dozen scientists assigned to the new NRO when it finally came together. I was one of those, having been seconded from the CIA; others came from the Air Force, Navy, NSA, and the Army Map Service [later known as the Defense Mapping Agency (DMA)].

For a while after the collapse of the Soviet Union in 1991, and the end of the Cold War, the Intelligence and Defense Communities relaxed, and NPIC morphed, in 1996, into the National Imagery and Mapping Agency (NIMA). NIMA went on to combine America's most advanced imagery and geospatial assets, including those of DMA, with a critical mass of special skills and technologies under a single mission umbrella. September 11, 2001 brought home to Americans what before had seemed merely distant terrorist attacks on our embassies in Africa and Naval ships in the Persian Gulf. With them suddenly occurring on US soil, the attacks took on new significance, and arrived in the face of a new enemy – radical Islamic terrorists now in our homeland, hiding as a religion in a religiously-tolerant, naive US. This was not the old, visible enemy with massive armies and nuclear missiles easily monitored by overhead reconnaissance.

The IC and military establishment responded with a new warfighting capability; the integration of intelligence with special operations forces as the best

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1. See Richelson article on page 23 of this issue of *Intelligencer*.

approach to engage this enemy, anytime and anywhere in the world where terrorist ideology had dispersed and was metastasizing.

This new warfare, called Network Centric Warfare, meant getting the right information, in the right format, at the right time, to the military shooter who needs it, whether in a fighter plane, or a special ops group on the ground closing in on a single terrorist target. Planes and Predator drones would need targeting information. The tools of warfare became known as C4ISR — Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance. Network Centric Warfare, a military doctrine described as the serendipitous evolution of a system of intelligence sensors, command and control systems, and precision weapons that enabled enhanced situational awareness, rapid target assessment, and distributed weapons assignment, sought to translate an information advantage, enabled in part by information technology, into the robust networking of well-informed geographically dispersed forces. This networking, combined with changes in technology, organization, processes, and people, allowed new forms of organizational behavior for our policymakers and officials at the highest levels of Government. This new warfare would need more than just maps, but new targeting and more details previously unavailable.

By 1993, it was obvious that NIMA's expanding capabilities and resources were called on more and more to not only support our IC and warfighters, but also the Homeland Security and first responders during a variety of natural disasters. It acquired a new name to match its newer roles—National Geospatial-Intelligence Agency (NGA). This area of intelligence took another leap forward, allowing the integration of multiple sources of information, intelligence, and tradecraft, to produce an innovative and sophisticated new discipline which then NGA director James Clapper formally christened “geospatial intelligence,” or GEOINT—the newest INT, having equal standing with SIGINT and HUMINT.

It was GEOINT that provided President Clinton with the proof he needed to document the Bosnia genocide and killings of the Bosnian Muslims by the Serbs that convinced NATO to enter the fray that ended that conflagration with the Dayton Peace Accords. A more spectacular example was the successful SEAL Team 6 raid to capture Osama bin Laden in the Abbottabad compound, that depended on NGA-provided target information, as well as the way in and out.

The Intelligence Community is now better able to exploit and analyze imagery and geospatial infor-

mation to visually depict physical features and human activity on the earth. Today, NGA continues to deliver these vital intelligence products for military, civil, and international needs. GEOINT enables our nation's leaders to make the better policy decisions. It also supports our military partners' tactical and operational missions abroad. More than ever, NGA puts GEOINT rapidly in the hands of their customers—when, where, and how they need it.

How does such a new, large, complex, high tech organization that supports the entire Intelligence Community, defense establishment, Special Operations Command, and the White House, possibly be managed by a single Director. The answer turns out to be simple—just look at a few of the qualifications and experience<sup>2</sup> of NGA Director Letitia A. Long: Electrical and Mechanical engineer; Deputy Director DIA; Deputy Under Secretary of Defense for Intelligence; Deputy Director DIA; Deputy Director Naval Intelligence; Engineering project manager for various Naval intelligence Research and Development programs. Numerous awards, including the Medal of Merit by the King of Norway, and the National Order of the Legion of Honor of France, attest to her unique qualifications to manage the newest, hottest agency in the IC.

Any new, complex high tech intelligence agency is still somewhat a mystery to most of us. With NGA's well recognized and visible support to natural disasters and first responders around the world – seen in their role in Katrina and Hurricane Sandy, to name a few recent ones – perhaps more Americans will come to realize our intelligence community is not here to spy on us but to spy for us. To remove the mystery and increase a first-hand knowledge about NGA capabilities and activities, our members and their guests have been invited by Director Long for an all day visit to NGA on May 1st, for the inside story, or perhaps the rest of the story. So plan on joining us for the NGA-AFIO 2014 GEOINT Symposium, May 1st, 2014, when we visit NGA headquarters in Springfield, Virginia to hear the wide variety of activities NGA provides to a broad spectrum of customers. An information brochure about NGA is enclosed in the envelope with this issue of the journal, and instructions and a tentative agenda will be mailed to members in late January.

I look forward to seeing many of you for those three special days, with days two and three at the Crowne Plaza Hotel in Tysons Corner, and day one at NGA Headquarters in Springfield, VA. The event closes with our popular **Spies in Black Ties™** dinner.

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2. See page 15 of this issue.