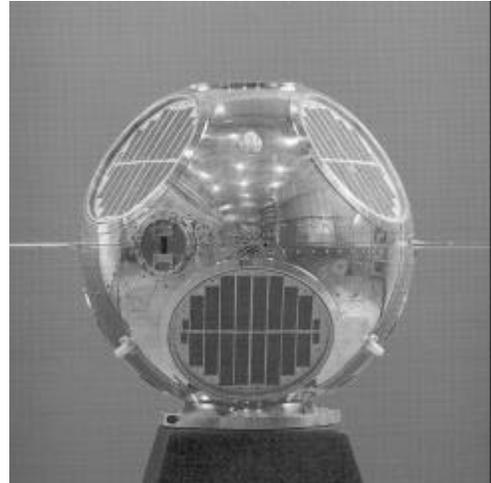

THE NRO AT FORTY: ENSURING GLOBAL INFORMATION SUPREMACY

R. Cargill Hall

Forty years ago United States leaders created a hybrid National Reconnaissance Office (NRO) to meet the unusual intelligence demands of the nuclear age and the Cold War. In so doing, they bound together for the first time in one organization all the major elements of the Intelligence Community, the military services, and numerous industrial firms in what would become a continuing partnership. The chain of events began when President Dwight D. Eisenhower and a few confidants undertook national and international initiatives between 1953 and 1961 intended to reduce military uncertainty and help preclude a surprise nuclear attack. Among them, they approved for development remarkable overhead technical systems that could collect *reliable* intelligence about the military equipment and disposition of Soviet strategic forces; in the process they opened the Soviet Union to American scrutiny. During this period they also established the national policy and organizations needed to guide and execute a newly emergent enterprise: astronautics.

Eisenhower's strategic intelligence collection systems included high altitude balloons (Project GENETRIX), airplanes (Projects AQUATONE U-2 and OXCART A-12/SR-71), and, moving above airspace into outer space, reconnaissance satellites. The United States Air Force had begun the latter effort independently and by 1956 had contracted with industry for its reconnaissance satellite program, first known as Weapon System (WS)-117L. Although a classified program, after the launch of Sputnik I in October 1957 WS-117L (later renamed SAMOS) was widely and accurately reported by the media to be a reconnaissance vehicle. This distressed the President, who insisted on absolute secrecy in matters of intelligence. In early 1958 he ordered the film recovery element removed from SAMOS, (an element that appeared most promising for rapid development), and named a CIA-Air Force team to manage it—a team similar to the one that had managed the U-2. With that action he established an unacknowledged, classified reconnaissance satellite program to become known publicly as the DISCOVERER biomedical research project,

and, to those witting of its true purpose, as CORONA. A year later in 1959, Eisenhower approved a second unacknowledged reconnaissance satellite program eventually known as GRAB (Galactic RADIation and Background) experiment, designed to collect electronic intelligence (ELINT) from Soviet air defense radar. This reconnaissance satellite mounted two payloads: one of them, announced publicly, measured Solar Radiation (SolRad) and served as a cover for the second, unannounced and highly classified ELINT package.



GRAB SIGINT satellite employed to locate and identify Soviet air defense radar in the early 1960s.

Launched on 22 June 1960, GRAB operated on orbit for a number of months and thus has the distinction of being the country's first successful reconnaissance satellite. The Naval Research Laboratory managed GRAB for the Director of Naval Intelligence and the National Security Agency (NSA). Finally, in late August 1960, after the loss of a U-2 airplane inside the USSR provoked an international furor, Eisenhower removed the SAMOS program from Air Force military control and placed custody of it in a civilian-directed office in the Department of the Air Force—an office that reported directly to the Secretary of Defense.



Joseph V. Charyk, Undersecretary of the Air Force and first Director of the National Reconnaissance Office, 1961-1963.

The man selected to head the new Pentagon office and the Air Force reconnaissance satellite program was Air Force Undersecretary Joseph V. Charyk. A small contingent of military officers and government civilians who ran it now reported directly to him, bypassing entirely the Air Force chain of command—much to the dismay of some Air Force leaders. When in January 1961 John F. Kennedy succeeded Eisenhower as President, a newly appointed Secretary of Defense, Robert S. McNamara, asked Charyk to remain as director of the Defense Department's satellite reconnaissance office. On 6 September, McNamara

formally established the National Reconnaissance Program (NRP) that would consist of "all satellite and overflight reconnaissance projects whether overt or covert," and he converted the civilian Air Force office into the National Reconnaissance Office to manage that program. This

directive also made the NRO a classified organization whose existence was known only to those directly involved. (For many years even the name of the office was classified Secret within compartmented channels.) An accompanying agreement with the CIA named as the NRO's joint directors Under Secretary of the Air Force Charyk, and the CIA's Deputy Director (Plans), Richard M. Bissell, Jr., who together had full authority to execute the effort. In the charter and interagency agreement, control of the CIA-managed CORONA film recovery satellite program also transferred to the NRO, now to be funded through the NRP budget—much to the dismay of some CIA leaders—while the Navy's GRAB satellite program required another agreement before it, too, moved to the NRO and NRP funding in May 1962.



Richard M. Bissell, Jr., CIA Deputy Director (Plans), Director of Project CORONA, and temporarily Co-director of the NRO in late 1961, before resigning from the CIA in early 1962.

At that time Charyk, a Department of Defense (DOD) civilian, was formally named sole



SECDEF Robert McNamara who established the National Reconnaissance Program (NRP) and the National Reconnaissance Office to manage it, and approved the 1961 NRO charter for the DOD.

Director of the NRO (DNRO). Another charter agreement between the CIA and Defense Department in 1963 identified the NRO Deputy Director (DDNRO) as a CIA billet. A few years later, on 11 August 1965, DCI William Raborn and Deputy Secretary of Defense Cyrus Vance signed what is the current NRO charter. It reaffirmed the NRO to be a “separate agency of the DOD” responsible for “the management and operation” of the National Reconnaissance Program. Most important, it established an Executive Committee to approve or modify the NRP and its budget, and allocate development responsibilities and corresponding funds for specific reconnaissance programs to the CIA or Defense Department components of the NRO “best equipped with facilities, experience and technical competence to undertake the assignment.” The EXCOM, as

it came to be called, consisted of the Deputy Secretary of Defense, the Director of Central

Intelligence, and the Special Assistant to the President for Science and Technology. Other non-voting attendees included the DNRO and the Director of the Bureau of the Budget, or his designee. This three-person Board of Directors met periodically to address program demands. By deciding key issues, such as the assignment of new space reconnaissance starts, it administered the affairs and budget of the NRP successfully for a number of years.

In succeeding years the NRO and its contractor-team designed, built, launched and operated various high-priority reconnaissance satellites. Together, the NRO's confederated Satellite Programs A (Air Force), B (CIA), C



DDCI Pearre Cabell signed the 1961 NRO charter for the CIA.



Mys Shmidt Air Field: First Image of an Intelligence Target taken by CORONA 14 (Mission 9009), on 14 August 1960.

(Navy), and its aerial systems comprising Program D (transferred to the USAF in 1974) revolutionized strategic intelligence collection, made possible verifiable arms control treaties, and set the Cold War firmly on course to its denouement in 1989-1991. In fact, the first images of the Soviet Union returned by CORONA satellites in August and December 1960 all but eliminated the prevailing supposition that a “missile gap” favored the USSR—an assessment publicly acknowledged to be erroneous by Secretary of Defense Robert McNamara in early February 1961.

Nevertheless, a high percentage of cloud-covered pictures retrieved from film-limited spacecraft cost dearly—a fact made plain by the returns from early CORONA flights.

Beginning in 1962, an NRP-funded low altitude weather satellite, the first operational system of its kind, orbited the Eurasian land mass in front of imaging satellites, transmitted vital meteorological information, and made possible cloud-free photography over areas of interest. In the early 1970s this program would be identified publicly as the Defense Meteorological Satellite Program, DMSP. (At century's end DMSP would be combined with its civil counterpart to form a



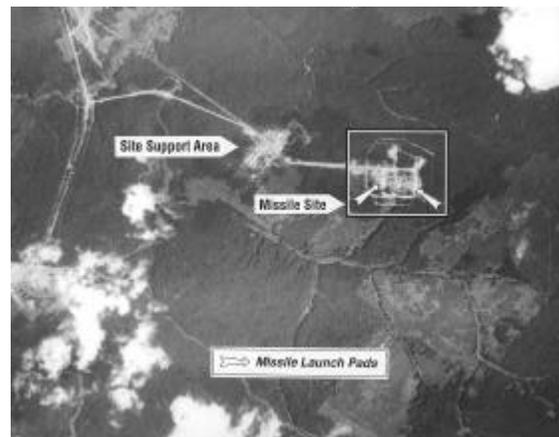
An artist's rendition of the early NRO-Air Force meteorological satellite, 1962-1965.

single program, the National Polar-Orbiting Operational Environmental Satellite System [NPOESS].) In the mid 1970s the film-limited CORONA-type capsule recovery satellites were succeeded by near-real time electro-optical imaging satellites, limited now almost solely by auxiliary power. The GRAB Signals Intelligence satellites likewise led to successors far more technically sophisticated and powerful. Contemplating these changes in 1977, Miles Copeland, a retired intelligence officer, reflected: "a satellite circling the world . . . will pick up more information in a day than

the espionage service could pick up in a year." Indeed, by the 1980s improved technology applied in space and on Earth opened the way to using overhead intelligence for tactical support of military forces. Though tested successfully in the 1991 Gulf War, that support was found wanting in various respects; a system architecture designed to furnish national leaders strategic intelligence was not so easily adapted to support combat commanders engaged in the field.

For the NRO and the entire Intelligence Community, 1991 marked a sea state change in intelligence requirements, customers, and technology applications. The Gulf War early in the year focused national attention on delivering tactical intelligence to war-fighters quickly and in the form they desired. Later that year, the collapse of the Soviet Union, which was superceded by the Confederation of Independent States, greatly reduced the strategic threat to the United States.

Responding to the lessons of the Gulf War, the NRO established the Operational Support Office (OSO) in 1992 that addressed directly tactical military concerns. Service TENCAP (Tactical Exploitation of National Capabilities) organizations working with the NRO and its mission partners created new and improved mobile vans and receiving equipment that brought satellite imagery and



Yurya ICBM Complex, USSR, imaged by a CORONA (Mission 9038) on 28 June 1962. Note clouds nearby the facility.

signals intelligence directly to deployed American forces at the Corps, Division, and even Brigade level, as well as to combatant ships at sea. The Secretary of Defense and the Director of Central Intelligence, with the approval of Congress, subsequently consolidated existing assets and established the National Imagery and Mapping Agency (NIMA) in 1996 to improve still further intelligence support to war-fighters. Undergirding these efforts, the use of improved land lines and the launch of new communications relay satellites, both military and civil, provided a wideband electronic highway over which immense amounts of intelligence moved around the world swiftly and securely. The demise of the USSR and reduction in the strategic threat, however, caused some U.S. officials to question openly whether America's reconnaissance satellites were not surplus Cold War artifacts that could be correspondingly reduced in number, if not eliminated entirely.

As events transpired, post Cold War threats to the nation's security unfolded in ways not foreseen. After 1991, the Cuban Missile Crisis and other super power confrontations of the mid-to-late twentieth century might be forgotten, but, if anything changed, the uncertainties in international affairs increased. International terrorists and drug and crime cartels became more sophisticated and virulent. They, too, made use of the electronic highway, the internet, and new encryption technology to secure communications. Rogue states frequently aided these forces, while they exported arms and worked to perfect and hide from view weapons of mass destruction. Vehicular bombing attacks killed U.S. citizens at home and abroad. American leaders now focused intelligence collection assets, including NRO satellites, to monitor this mushrooming array of dynamic, unpredictable, and globally dispersed targets. NRO reconnaissance satellites also were recruited to help federal and international agencies deal with natural and man-made disasters (volcanic eruptions, earth quakes, and oil spills for example), smuggling, and diplomatic and peacekeeping activities among other evolving intelligence requirements. Security policy changes allowed the NRO to downgrade and declassify certain intelligence-derived products, making them widely available and increasing their value to the government and the public. The Departments of the Interior, Agriculture, Commerce, Energy, and Transportation joined the NRO's growing list of customers. By the turn of the Millennium, the nation's civil and military leaders had answered the question posed just a few years before: In no way could reconnaissance satellites be considered surplus to anything, much less a declining asset.

The NRO itself also changed significantly in the last decade of the twentieth century. The existence of the NRO was made known publicly in 1992 and some of the early NRO space projects



NRO Headquarters consolidated in Chantilly, Virginia, 1995-96.

Pentagon, together with office elements located elsewhere around the country, moved to a new headquarters complex in Chantilly, Virginia. These corporate changes were overshadowed in 1995 when auditors discovered NRO obligated funds (committed but not yet spent) carried forward from one fiscal year to the next by the formerly separated alphabetic programs. The amount of this “forward funding,” over three billion dollars, had not been reported to the Comptroller at NRO headquarters. It caused a media sensation and hurt seriously the NRO’s credibility among government officials at home and abroad.

A new NRO Director Keith R. Hall and Deputy Director David A. Kier, appointed by the Secretary of Defense



DDNRO David A. Kier

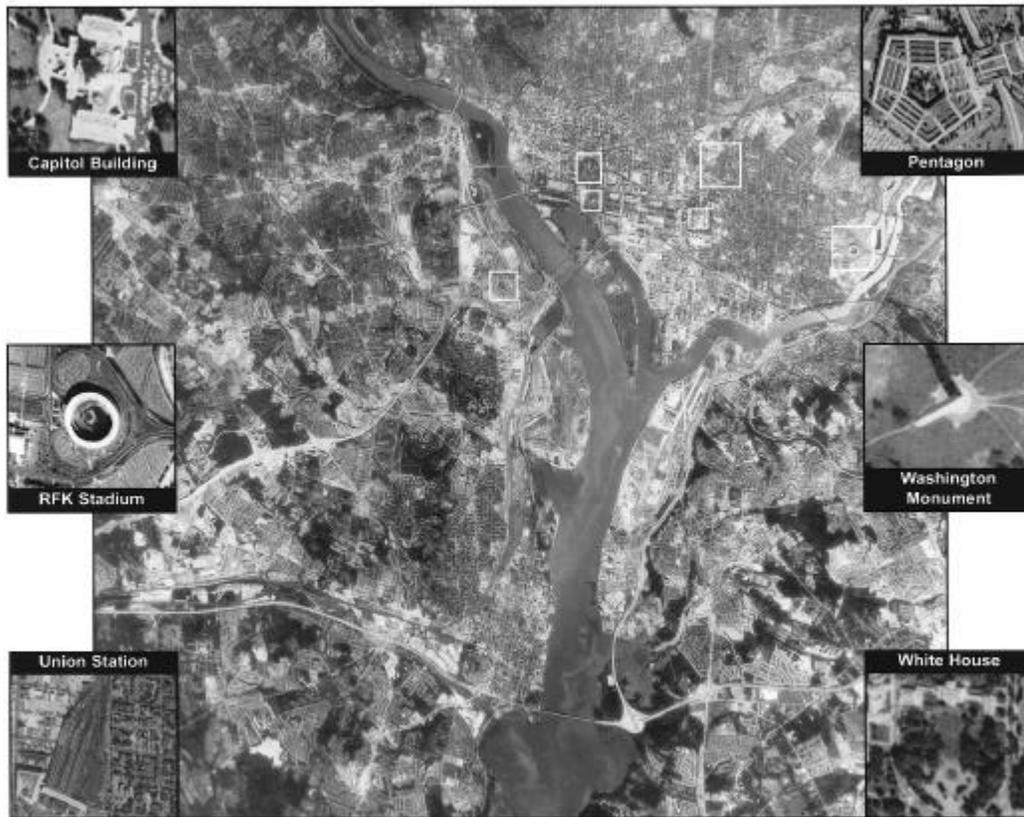
and Director of Central Intelligence and approved by Congress, set to work to ensure financial accountability and speed delivery of intelligence products to the NRO’s civil and military



DNRO Keith R. Hall

customers. They established a Deputy Director for Resource Oversight Management (DDROM), and by 1999 that office had made the NRO a model of superior financial management

in the federal government. They established a single Contracting Center to manage NRO contracts, and a Deputy Director for National Support (DDNS) to work closely with the civil organizations now using NRO intelligence products. The DDNS joined a Deputy Director for Military Support (DDMS) created earlier to support the military services. They also formed an office of Advanced Systems and Technology (AS&T) to pursue revolutionary research and development efforts, long a hallmark of the NRO alphabetic programs, and committed to it ten percent of the NRO's resources. Finally, together with other NRO leaders, they completed plans for the future overhead imaging and signals intelligence satellites that will replace existing NRO overhead assets early in the twenty-first century. With these changes in place, NRO personnel are positioned to ensure global information supremacy for the United States in the years ahead. In that endeavor, each will contribute to an intelligence enterprise with a heritage second-to-none—whose lineage can be traced to a small civilian-directed office established in the Department of Defense forty years ago, on 31 August 1960.



UNCLASSIFIED

Washington, D.C.

CORONA Mission: 1101-2
Pass/Camera: 157D/FWD
Date: September 25, 1967