

## *SPYCRAFT: The Secret History of the CIA's Spytechs from Communism to Al-Qaeda*

Robert Wallace and H. Keith Melton, with Robert Schlesinger. New York: Dutton, 2008. 568 pages, with endnotes, bibliography, appendices, photos, glossary, and index. Foreword by George J. Tenet.

**Reviewed by Hayden Peake**

On 11 July 1941, President Franklin D. Roosevelt designated William J. Donovan as Coordinator of Information, with “authority to collect and analyze all information and data [on a worldwide basis] that may bear on national security.” To accomplish the mission, the COI was authorized to “employ necessary personnel...and [provide] services” for what became the first US government organization with a worldwide intelligence mission.<sup>1</sup> Donovan quickly created the Research and Analysis Branch and began passing reports to the president. Intelligence collection and sabotage elements soon followed, but Pearl Harbor postponed the formation of a research and development capability. Planning for it began in the spring of 1942, and the R&D unit became official on 17 October. By that time, COI had become OSS.<sup>2</sup> *SPYCRAFT* explains why an R&D capability was needed, how it was formed, what it accomplished, and how it evolved into the CIA's Office of Technical Services (OTS).

After a short discussion of R&D support operations during WW II, *SPYCRAFT* describes the bureaucratically bumpy early Cold War years, as CIA leaders worked to adapt their wartime intelligence experience to establishing and running the nation's first professional peacetime espionage organization. It was uncharted territory, and the Agency struggled to accomplish its primary mission—determining the nature and magnitude of the Soviet threat—while hiring new people, creating a new organization, and developing the techniques and equipment required for clandestine operations. To add to the level of difficulty, it soon became clear that CIA's main adversary, the KGB, had far more experienced officers and better equipment.<sup>3</sup>

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<sup>1</sup> White House memorandum, 11 July, 1941, *Designating a Coordinator of Information*, as reproduced in Thomas F. Troy, *Donovan and the CIA: A History of the Establishment of the Central Intelligence Agency* (Frederick, MD: University Publications of America, Inc., 1981), 423.

<sup>2</sup> *Ibid.*, 39; M.R.D. Foot, *SOE in France* (London: Franc Cass, 2003), 31; Thomas F. Troy, *Wild Bill and Intrepid: Donovan, Stephenson, and the Origin of the CIA* (New Haven: Yale University Press, 1996), 45ff.

<sup>3</sup> Among the sources for these data were GRU agent Peter Popov and KGB defector Peter Deriabin. For details see William Hood, *MOLE* (Washington, DC: Brassey's, 1973), and Peter Deriabin with Frank Gibney, *The Secret World* (Garden City, NY: Doubleday and Company, 1959).

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*SPYCRAFT* tells how this imbalance was overcome. The principal authors—both experienced in the field of clandestine devices<sup>4</sup>—focus on the R&D Branch, which became the Operational Aids Division, and then, under Allen Dulles, the Technical Services Staff (TSS) and the Technical Services Division (TSD). They avoid sterile discussion of wiring diagrams and budgets, however, by keeping the narrative operationally oriented with short case studies. For example, the problems of early post-war deficiencies in equipment are illustrated by a chapter on Soviet Army Colonel Oleg Penkovskiy, the GRU walk-in who supplied missile data critical to the success of US management of the Cuban missile crisis. Had the cameras available to him had greater capacity and the radios he used faster transmission rates, the need for many face-to-face meetings would have been reduced and Penkovskiy's arrest avoided or delayed.

*SPYCRAFT* points out how technical limitations in the Penkovskiy case were overcome thanks to some very innovative, frequently unorthodox, officers who often gave management migraines and thanks to the transistor, which led to miniaturization and the digital era. These new technologies reduced the difficulty of handling agents behind the Iron Curtain, especially in Moscow. Two cases make this point in *SPYCRAFT*. The first is that of a Soviet agent code-named TRIGON, who was recruited in Latin America. To permit contacts after he returned to Moscow, a plan based on dead drops was developed. *SPYCRAFT* tells how TRIGON used a special document copying camera, the T-100, which was a major improvement over the Minox, to record his secrets and relay them to his Moscow handler, CIA officer Martha Peterson. The case ended with Peterson's arrest as she filled a dead drop with material for TRIGON—he had been betrayed by a Czech penetration of the CIA. Photos of Peterson undergoing KGB interrogation and the hollow rock concealment device she used are among the more than 200 illustrations contained in the book.

The second example of this type of technical support began in January 1977, by which time TSD had become OTS. A few months before the TRIGON case ended, Adolf Tolkachev, an engineer working on Soviet stealth technology projects, made repeated and ultimately successful attempts to convince the Moscow station and Agency that he was a genuine walk-in, not a KGB provocation. Between then and 1985, OTS provided Tolkachev with special high-quality and high-capacity miniature cameras, false documentation, a short-range agent communication (SRAC) device, and other support that allowed him to become a very valuable agent with minimum risk. His arrest in May 1985 and subsequent execution was not due to tradecraft errors, inadequate equipment or superior KGB surveillance—he was betrayed by former CIA officers Edward Howard and Aldrich Ames.<sup>5</sup>

*SPYCRAFT* also mentions OTS operations that didn't involve foreign agents. CKTAW, for example, referred to a special device attached to an underground communication cable in the Moscow area that recorded transmissions between the Krasnaya Pakhra Nuclear Research Institute and the Ministry of Defense.

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<sup>4</sup> Robert Wallace is a former director of CIA's Office of Technical Service. H. Keith Melton is an author of intelligence books and collector of intelligence hardware and artifacts. Henry R. Schlesinger writes about intelligence technologies for *Popular Science Magazine*.

<sup>5</sup> See Barry G. Royden, "An Exceptional Espionage Operation: Tolkachev, A Worthy Successor to Penkovskiy," *Studies in Intelligence* 47, No. 3 (2003).

Other special hardware tasks described include the development of a quiet helicopter, hard-to-detect audio surveillance and concealment devices, the development of long-life batteries—a development that contributed to making pacemakers practical—silent drills, and Acoustic Kitty, a novel but unsuccessful attempt to implant a clandestine listening device in a cat's ear.

As OTS grew to meet the demands of operators in the field, so did the breadth of expertise in the service. *SPYCRAFT* discusses these areas too: the making of disguises and the forensic documentation laboratory for the detection of forgeries and fabrications and creation of documentation for foreign operations. Also mentioned are the devices developed to monitor activity along the Ho Chi Minh trail in Cambodia and Vietnam.

Many of the OTS scientists and engineers are given pseudonyms in *SPYCRAFT*, though the operations they reveal actually took place. Three who are identified in true name demonstrate the risks one accepts in the supporting clandestine service operations in a hostile country. The three were sent to Cuba in 1960 under nonofficial cover, using tourist passports, to install listening devices in an embassy in Havana before it was occupied. They were betrayed and spent more than three years in a Cuban jail without admitting their CIA employment. (249ff)

Terrorism was a problem for the CIA by the late 1970s. *SPYCRAFT* has a chapter on OTS's roles in several counterterrorism operations, including the identification of the terrorists who blew up Pan Am Flight 103, the tracking of an al-Qa'ida forger-terrorist, and support to CIA teams in Afghanistan in 2001. In each case new methods and techniques were developed to solve the technical problems.

The final chapters in *SPYCRAFT* are something of a primer on human and technical intelligence. They cover the fundamentals of clandestine tradecraft—agent recruitment, handling, and security—and OTS operations in the era of the Internet. They also discuss special imagery collection devices, for example, the Insectohopter, a clever but ultimately unsuccessful device modeled on a dragonfly. Another technique explained is the use of steganography to hide intelligence in digital images. The case of Cuban agent and onetime DIA intelligence analyst, Ana Montes, is used to illustrate the mix of techniques and equipment—cell phones, digital disks, laptops, steganography, and one-time pads—involved in modern operations.

As with all writings by CIA employees, *SPYCRAFT* was submitted to the CIA Publications Review Board (PRB) to make sure no classified material was included. The authors of *SPYCRAFT* have impishly included in encrypted form, using a one-time pad, the required statement that the PRB reviewed the publication. (xxv) Instructions for deciphering the statement are in an appendix. The clear text is also included, in the endnotes.

In his foreword, former DCI George Tenet, writes that books about “the CIA's operations...often obscure...the technological origins of the gadgets [and] the people who make them.” *SPYCRAFT* fills that gap. Well documented and thoroughly illustrated, it is a long overdue tribute to an unsung group of “techie” and all who support them in achieving amazing technical breakthroughs under difficult conditions.

