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(U) Cryptologic Almanac 50th Anniversary Series

(U) Delmar C. Lang: A SIGINT Innovator

(U) Del Lang, a man with over 30 years of experience as a SIGINT professional, developed and improved methods of support to the military during the Korean and Vietnam Wars. Throughout his career, he advanced the concept that SIGINT must be delivered to the customer on time and in a useful format. An Agency senior credited Lang with being the primary architect of how the NSA does things in Asia.

(U) Del Lang was born in Cleveland, Ohio. After high school, he became a salesman, but sales was not to be a long-term career. Lang followed the pattern of most young men by joining the military in World War II. He enlisted in the Army in March of 1942. Military life suited Lang, for he rose to the rank of staff sergeant quickly and applied for officer candidate school. In June 1943 Lang was commissioned as a second lieutenant in the army air corps. Despite his strong desire to be in combat, Lang spent the remainder of World War II in China, as a special services officer and as a squadron adjutant.

(U) To escape the drudgery of office work, Lang applied for language training. In 1949 he went to the Army Language School to study Chinese. Since he could not go to China due to the communist takeover, Lang joined the Air Force Security Service (AFSS) in 1950.

(U) During the early stages of the Korean War, Lang helped organize a Chinese language training program at Yale University. The graduates of this first class from Yale, with Lang at the helm, were deployed to Korea in March of 1952. Lang, who had risen to the rank of captain, found himself in combat for the first time. He demonstrated innovation and leadership by developing a method to provide real-time SIGINT support to [redacted] pilots.

STATUTORILY EXEMPT

(U) In 1952 the enemy began to change tactics. The Chinese provided ample radar tracks for allies to monitor because they tracked every plane, whether it belonged to the Soviets, Chinese, or United Nations forces. In 1952 the Chinese stopped tracking communist aircraft and tracked only "hostiles." Communications intelligence was disguised as radar when provided to the controllers in the Tactical Air Control Center (TACC) and to the pilots that he directed. Now that radar information was very limited, there was no method to get SIGINT to the controllers or pilots.

(U) Captain Lang, who was in charge of a COMINT team that supported the TACC on Cho' Do island in North Korea, was frustrated by this situation. He felt that it was

unconscionable to withhold information that might save the lives of American pilots. Lang recommended placing a Chinese linguist next to the ground controller in the TACC. AFSS accepted his recommendation on 8 March, 1953.

(U) Because of collocation, the Chinese linguist was able to provide real-time SIGINT support to the TACC. The Chinese linguist in the TACC had a field phone on his desk. The other end of the phone line was attached to the output of a receiver at the Security Service intercept unit three-fourths of a mile away. The Chinese linguist heard the information at the time of intercept and quickly told the ground controller. The ground controller immediately used the information to instruct the pilots on [redacted] fighter aircraft to take appropriate action. The ability to inform the TACC controller of the enemy's intentions two or three minutes in advance of the [redacted] radar reflections of general enemy activity proved invaluable to the [redacted] GCI system. STATUTORILY EXEMPT

(U) There were times when COMINT was the only source of information to the ground controller because radar reflections were unavailable. In one day, which Lang described as the "great Korean turkey shoot", American F-86's downed 15 MiG'S without a loss, even though none of the MiG'S was ever seen on radar. As Lang explained: "we may have stretched security, but we got the job done." The TACC had real time SIGINT support.

(U) In 1965, Lang left the military at the rank of LTC. He continued to work at NSA on Asian-related problems, but in civilian status.

(U) During the Vietnam conflict, Lang was involved with various projects to improve SIGINT support to the military. He was part of the team that developed the TEABALL concept to provide SIGINT warning to American pilots who flew over North Vietnam during the LINEBACKER campaign.

(U) The LINEBACKER strikes were authorized by President Nixon in retaliation for the North Vietnamese Easter offensive. Pilots were given greater freedom to strike enemy targets than they had had during the earlier Rolling Thunder campaign. The North Vietnamese responded to LINEBACKER by adopting new tactics. Their MiGS flew at low altitudes to avoid American radars. The MiG pilots would home in on a particular flight of B-52s, would execute a single high-speed pass, launch missiles and turn tail for home. These tactics were very successful. For example, in June 1972, MiG-21s downed eleven air force fighters to a loss of only three. Lieutenant General John Vogt, commander of the Seventh air Force demanded a better MiG warning system.

(U) TEABALL was the SIGINT response to Vogt's plea for help. The TEABALL concept was similar to the methods Lang used in Korea to provide real time SIGINT support to air controllers in the TACC and to pilots. Intercept operators used a secure hotline to pass the North Vietnamese tracking and other useful intercept directly to the controller. TEABALL

became operational in August of 1972.

(U) In November 1979, Lang was recognized by the agency for his many contributions. He received the exceptional service award which is the highest award that may be bestowed on a civilian.

(U) After 36 years of Federal service, Lang retired in 1980. Lang was extremely dedicated to the mission and championed on time delivery of SIGINT in the proper format to the military. Throughout his career, Lang's interest in Asia never waned. Even in retirement, Lang maintained his interest by teaching English to Chinese immigrants. Del Lang died on 4 August, 1997.

[(U//~~FOUO~~) Sharon A. Maneki, Center for Cryptologic History, 972-2893s]

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