

units, Flint's monitored American traffic; it once warned a mechanized-cavalry transmitter of a communications-security violation that might have revealed important information to the enemy.

How highly the Allies regarded communications intelligence was demonstrated in a left-handed fashion in the closing days of the war by the case of the missing SIGABA. Also known as the M-134-C, the SIGABA, which had been devised by William Friedman, was a rotor machine like the German Enigma and British TYPEX; like them, it protected top-level communications—an interesting case of parallel evolution and an indication of the cryptographic success of the rotor. And it protected them exceedingly well. The branch of the Army's Signal Security Agency charged with testing American cryptosystems had failed in all its efforts to break down messages enciphered in M-134-C. And, though the United States did not know it at the time, German cryptanalysts had, despite prolonged efforts, likewise found it impossible to read these cryptograms.

But all the cryptographic ingenuity built into the machines would have been expended in vain had only one of them fallen—even briefly—into the hands of the enemy. As a result, probably nothing in the war zones were guarded as closely as the ABA's, as they were called for short. Some units close to the front moved them to the rear each night. Heavy safes protected them when not in use—one safe for the basic mechanism, another for the rotors (for additional key changes, the machine came equipped with more rotors than the five it used at a time), a third, apparently, for the key lists. Armed guards watched over them continuously. The precautions seemed to be paying off, for to the Army's knowledge, not one ABA had ever been compromised.

But on the night of February 3, 1945, two ABA guards, sergeants of the 28th Division, parked the truck in which they were transporting the three safes of a divisional ABA outside a house in Colmar, France, and paid a brief visit to some friendly ladies. When they emerged, the truck and its safes were gone. Counterintelligence began at once to search for it. On the side of a road near Colmar, agents found a trailer that had been attached to the truck—but no truck, no safes, and no ABA.

Panic struck. At Eisenhower's headquarters, security and cryptologic officers went frantic. Ike himself was concerned. Colmar, which had just been liberated, was still close enough to the front for German collaborators or agents planted by the retreating Wehrmacht to have stolen the ABA's. Somehow they might have gotten through the fluid front lines and so to German cryptanalysts. These would then be in a position to do what they had not been able to do before. For with a knowledge of the wiring of the ABA rotors, the heart of the system, and with a working mechanism to complete their understanding, all the German cryptanalysts would have to do would be to determine which rotors in the set had been used for a particular message and their initial setting. This would not be easy, but it certainly could be done.

The danger to the Allies did not come from any possible future solutions,

since new sets of rotors were issued almost immediately. Rather it came from the past. Eisenhower and his high subordinates had been directing the greatest campaign in all history by streams of ABA-sheathed messages. These were all based upon the well-matured plans of high strategy. The past traffic dealing with supplies alone would tell the Germans a great deal about Allied potentialities, since modern war is, to a very considerable degree, a conflict of logistics. If the Germans could translate their back files of intercepts with the missing ABA, they could obtain a profound insight into the broad guidelines on which the Allies were conducting the war in Western Europe. Nor could the Allies easily reshape these plans, for mountains of supplies and millions of men had been moved to conform with them. Thus, given intelligence of this high order, and the massive irreversible momentum of modern war, the Germans might well counter Allied moves so effectively as to add months to the war and thousands of lives to its toll.

None of this was lost on Eisenhower. He personally pressed the commander of his 6th Army Group, General Jacob L. Devers, to find the missing safes at all costs, and Devers assigned the task to his group's chief counter-intelligence officer, Colonel David G. Erskine.

Erskine began by sending out feelers to anti-Nazi German spies in Switzerland to find out if the Nazis had been congratulating themselves on some extraordinary feat recently. Then he spread discreet queries through the 6th Army Group's area to determine if anyone knew anything about a missing truck bearing three safes containing "highly classified documents." Perhaps a French civilian or an American soldier had appropriated the truck without knowing of its precious cargo. Any American finding the truck, or the safes, or both, Erskine announced, would get that coveted reward: home leave. No one claimed it.

Erskine sent L-5 liaison planes skimming low over Alsace, but their pilots spotted no abandoned trucks. So every unit commander in the 6th Army Group was ordered to personally check the serial numbers of every one of his vehicles against that of the missing truck. Nothing. The search was extended over most of the front. Military policemen checked vehicles at roadblocks; canals were drained; informants were checked. The mystery just deepened. Repeatedly, Eisenhower asked Devers, and Devers daily asked Erskine, whether the missing ABA had been found.

After three weeks of intensive but fruitless search, a special squad of American and French counterintelligence agents was formed to concentrate solely on the loss. In charge was Lieutenant Grant Heilman, a tall, blond Pennsylvanian. His operation got off to an embarrassing start when two jeeps parked outside his headquarters disappeared as mysteriously as had the truck. But it picked up when Eisenhower sent a two-star general, Fay B. Prickett, to Colmar to lend authority to the search. Heilman checked everything, including shelled trucks abandoned at the bridge over the Rhine. Erskine's Swiss spies returned negative reports, and his hunch that French

intelligence might have taken the ABA to improve their own cryptology—checked with no less a personage than General Charles de Gaulle, head of the provisional government—did not pan out.

Suddenly, when no more clues could be discerned, Erskine got a tip from a French source. Rushing to a sizable creek called the Giessen River near the town of Sélèstat, not far from Colmar, he saw, lying in the mud, two of the missing 300-pound safes. It seemed likely that they had been dumped into the Giessen from a masonry bridge about a hundred yards upstream from where they had been found and had been rolled downstream by the strong current. Erskine immediately ordered a search of the banks for the third safe. They were barren.

Divers were brought in from Cherbourg to examine the stream bed. They found nothing. Erskine decided to dam the stream and dredge the bottom with a bulldozer. In three days the dam was built and the bottom scoured—with no luck. Heilman, feeling hopeless, began to search the muddy portion of the bed that the falling waters had exposed. Suddenly something metallic glinted in the sun. He rushed over—and found his own buried treasure. It was the missing safe. Both its handles had been knocked off by rocks, but otherwise it appeared, on checking by Signal Corps officers, to be intact.

Thus, on March 20, the search for the missing SIGABA ended, six frantic weeks after it had begun. Erskine, checking again with the French, this time on an I-don't-want-anyone-punished basis, discovered that a French military chauffeur who had lost his truck in Colmar “borrowed” the American one while the sergeants were in the brothel, and, afraid that he might be accused of stealing the safes, pushed them off the bridge into the Giessen. This ruled out the possibility that the secret mechanism had ever been in the hands of the enemy.

Heilman was promoted to captain. Both he and Erskine were awarded the Bronze Star. Uncounted man-hours had been squandered in the search and an unknown toll of nervous energy taken. But the precious messages were safe, and with them the plans that within a few more weeks directed the Allies to victory.