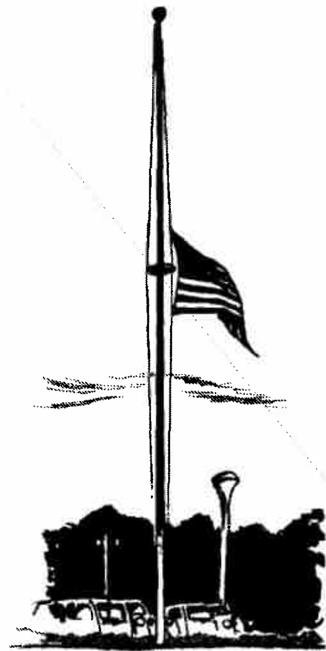
Jacob Gurin and [redacted]

(b)(3)-P.L. 86-36

Ralph J. Canine

He made us a National agency and he started us on many "right" roads, but that alone cannot account for the love with which he is remembered

In spite of the years that have elapsed, there are many who remember vividly the Canine era. To be sure, life was simpler—the Agency was smaller and its problems, seen in relation to those of today, appear somehow less complex. It was a time for bold action on the part of the Agency's leadership; the fate of succeeding generations of NSA'ers was being decided. Patterns of activity had to be developed and traditions molded for later hardening. Organizational schemes were propounded, argued over, and put into practice, and it now seems unlikely that we will ever be able to shake off (assuming that we wanted to) the self-evident truths which determine the separation of functions and the pattern for distribution of authority. While this was going on, our relationships with the forces "downtown" were being shaped, often as a result of politics, departmental interests, Service considerations, and the force of individual personalities.



The Canine personality had a tremendous influence on the Agency at the time, and much of what we are, thirteen years after his retirement, bears his imprint. While there is no way to assess with accuracy how much of what is done today can be attributed to him, the impression retained by many of those who remember our first NSA boss is that he started almost everything—repeat, almost everything—that was not purely technical.

When he came on the scene there were drum rolls and fanfares, make no mistake about that. The man who, in his own words, was "violently against" an assignment to the top cryptologic job, felt that "the way you get people to do things is for them to know the guy that gave the order." To make sure that there was no doubt about who was giving the orders, he started his "House Beautiful" campaign. All furniture in any grouping had to be compatible in color and size, and it all had to be aligned with precision. There was a great deal of censorable muttering as units struggled to rearrange the contents of their motley collections of desks and cabinets to conform with the orders from their tyrannical new overlord. Someone wrote a complaint in to Jerry Kluttz which the Washington Post ran on October 8, 1951:

"Operations at the Hall have practically come to a standstill while the furniture is being shuffled around and sorted into the color scheme decided upon by the top brass. As a result, one wing will be equipped with all green steel desks, another with brown wooden desks and tables, while oak furniture will occupy another.

"But the toughest job is to get the personnel sorted out according to the color of their eyes, the green-eyed ones being put in the Green Room, the hazel-eyed going into the Oak Room, and the brown-eyed into the Brown Room."

Like his informant and the rest of us, Kluttz missed the point. But it is inconceivable that anyone in the Agency was unaware of the new, positive presence. [redacted] tells the story of a test run by the chief of a major office to see how well known he was to his people. He sent around a group of photographs; only about 15 percent of his people recognized the office chief and his deputy, but almost all spotted General Canine without hesitation. Of course this pleased the Old Man, who couldn't help feeling some irritation on those occasions when he was denied entrance to a secure area because he was not recognized. There are some who swear to the truth of the story about the lady who refused to let him into the wing whose entrance she was guarding. In answer to his protest that he was General Canine, she insisted that she wouldn't let him in "even if you were a Colonel."

The General was always ready to admit how impressed he was with the talent of the denizens of the Agency. But

he often punctuated his praise of our cryptologic prowess with pithy comments such as "We are long on technical brains and short on management brains." He felt strongly about developing careers for Agency employees and succeeded in convincing the DOD that our top people deserved a share of the jealously guarded supergrades. He often reminded those around him that what qualified him to be the Director of NSA was his long experience in the Army with pack mules. He was especially tough on what he called unreconstructed rebels. Questioned on this topic last year in a television interview here at NSA, he admitted that some he had never converted. "I asked for advice but I didn't guarantee to take it," he went on. His nature required him to take a positive stand on each issue. Determined to hear both sides of any question brought to him, he would then take a position in which he would "keep both of my goddamn feet on the same side of the goddamn fence at any one time."

Recognizing that the revolution in cryptologic technology and the expansion of the Agency called for a reevaluation of our organization and methods of operation, General Canine was eager to employ all the talent he could to help with the solution of these problems. Well knowing how many eyebrows he would raise among the cryptologic professionals, he brought in outside consultants on a variety of problems. He was never intimidated by them, however, and after one firm had made an exhaustive study, developed a new organization scheme, and written a list of recommended appointments for the key jobs on his blackboard, he asked for an eraser. "I make my own choices," he said. "I did some of the things they recommended," he said later, "and threw some of them in the wastebasket." But he sought professional advice on lighting, on the colors of walls and draperies, and on such things as management engineering.

Jack Gurin is a confessed Canine hero-worshiper. He entered Sigint with ASA in 1946, having previously been a Japanese linguist in Military Intelligence. The line, staff and technical jobs he has held are too numerous to reflect in this space, but his experience is well reflected in cryptologic literature, to which he has contributed generously. In addition to his professional writings, he collaborated in a recently published translation of Tolstoy's *Anna Karenina*. He is a fixture in the NSA Men's Chorus, and in the Agency's instrumental groups he is known for his ability to play almost any unoccupied instrument.

[redacted] referred to elsewhere as *Spectrum*'s lady reporter, is a graduate of the Penn State journalism school. She joined the Agency as a linguist in 1964 and since April 1968 has been a member of the D1 editorial staff, writing *Cryptologic Milestones* and *Newsletter* articles.

Once he was defending the Agency's budget before a Congressional committee when one of the Congressmen challenged a request for 111 management engineers, with the pointed observation that General Motors employed only 10 such specialists. The Old Man defended the item so persuasively that it was approved, but after the hearing our Comptroller admitted that there had been a typing error and that the number should have read 11.

On days when no meetings were scheduled at his Nebraska Avenue office, the General made a point of visiting either the Agency school, then on U Street, or Arlington Hall. He liked to chat informally with Agency people at all levels, discussing with them why they did their jobs and how they did them. General Burgess, when he was Director of Production, left strict instructions with the guards at the Hall that he was to be informed the moment the Director entered either A or B Building, in which PROD's operations were being conducted. The Director repeatedly told General Burgess, without disguising the irritation he felt, to stay in his office on these occasions, but to no avail. To avoid being escorted, he tried to enter the side doors inconspicuously. (If you've never been a general, you have no idea how difficult it is to be inconspicuous.) On one occasion he warned the Pfc at the gate: "Don't you dare call Burgess, or you'll lose that stripe on your arm!"

He was anxious to get the best equipment for the Agency to use in performing its mission, but his attitude on expenditures was the same as if he had been dispensing his own funds. The story is told of his asking a high-ranking official: "How many pens on your desk?" The answer was: "Two." "What color ink is in the right one?" "Black." "Left?" "Black." "You only need one."

When General Canine first came to the Agency, he found out, he said, that "people are either born first-class cryptanalysts or they ain't." He was concerned about increasing the work force to cope with increasing commitments but insisted on maintaining the high level of professionalism he found here. "I wasted a lot of money," he admitted, "trying to find out what made a good cryptanalyst. I tried hiring mathematicians, but I found that some of my best cryppies couldn't add up their own checkbooks." He did, however, build up the NSA school into an impressive institution, and made major investments in managerial and executive training programs. Of his own experience with cryptologic schooling, he confessed that "Bill Friedman tried to teach me C/A, but I gave up after the first lesson."

Although he would never hesitate to go downtown to fight (or plead) for what the Agency needed, he was careful about the connection between those needs and his own relationships with the military and civilian hierarchy.

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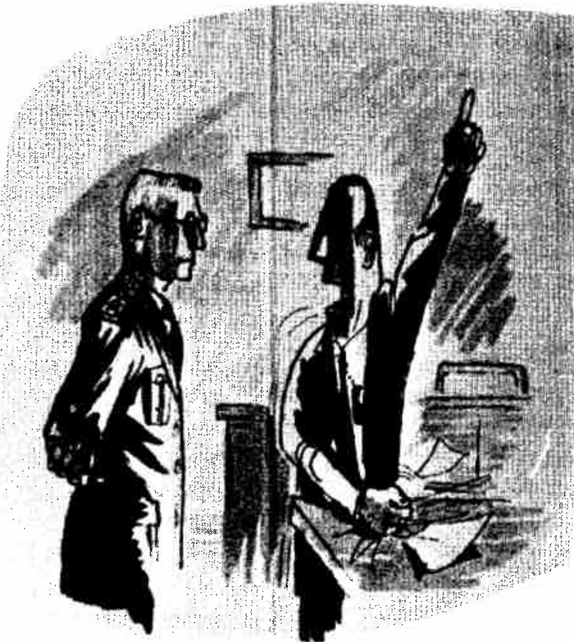
On one occasion he admitted sadly that the Joint Chiefs wanted something done that he was reluctant to do. When someone asked why he didn't just say no to the request, he pointed to the stars on his shoulder and said: "I didn't get these by saying no to the JCS."

He respected the technical prowess of the professionals around him but he never let anyone forget who was the boss. "You may vote but I don't have to count the votes." "You guys give me a hard time and you'll wind up on an island so far out that it'll take you six months to get a message back." He could use a military or academic title as an epithet; the higher the rank attached to it, the greater the scorn, the more like a dirty name it sounded.

His favorite position when at his desk was with both shoes up on the blotter. It was between those shoes that he would set his sights on the man briefing him. On one occasion one of PROD's more persuasive spokesmen was soaring aloft on some impassioned rhetoric in praise of a proposed reorganization. The General favored him with rapt attention and was all smiles. Pleased by this response, the speaker finished with a flourish and stepped back with triumph on his face—to hear the Old Man release a two-syllable expletive he retained from the horse artillery which even a classified magazine can't print. The meeting collapsed and the proposal was not mentioned again. And the General could let fly an awesome temper, as on one occasion when he was shouting at a senior official, accusing him of being the cause of just about everything that had ever gone wrong in the Agency. When his victim remonstrated by saying he didn't know what the hell the General was talking about, General Canine answered: "I know you don't, goddammit! It's your boss I'm mad at, not you. But he's not here!"

Who would have thought he would be as effective as he was? On the face of it, he was an unlikely choice for Director. He had little background in intelligence, little in communications, and none whatsoever in cryptology. He came from a long career of directing the activities of military men; his previous experience with civilians had been limited almost exclusively to secretaries. In the Army, as he put it, "at least I knew what the problem was." But whoever saw beyond these surface limitations knew his man. General Canine soon found out about the problems of the Agency, quickly grasped the essentials of the technical aspects of its work, asked perceptive questions, and became disturbingly effective in judging whether the job was being done properly or not. He molded a proud, sometimes arrogant group of technicians into an agency; he instilled a unity of purpose and a sense of achievement into a group of individualists. He was willing to accept new tools for management, and was enthusiastic about many of the new and somewhat wild-eyed attempts to systematize management techniques. But he drew the line at some and maintained his position



CANINE-ISMS

A standard greeting:

"Are you earning your pay?"

On protracted indecision:

"When are we going to stop rolling from cheek to cheek and get moving on this?"

Considering someone for promotion:

"How often does he walk on water?"

Another promotion question:

"What does he do for the man who shoots the cannonballs?"

After a management lecture:

"Forget everything he told you and listen to me."

On cryptologic strategy:

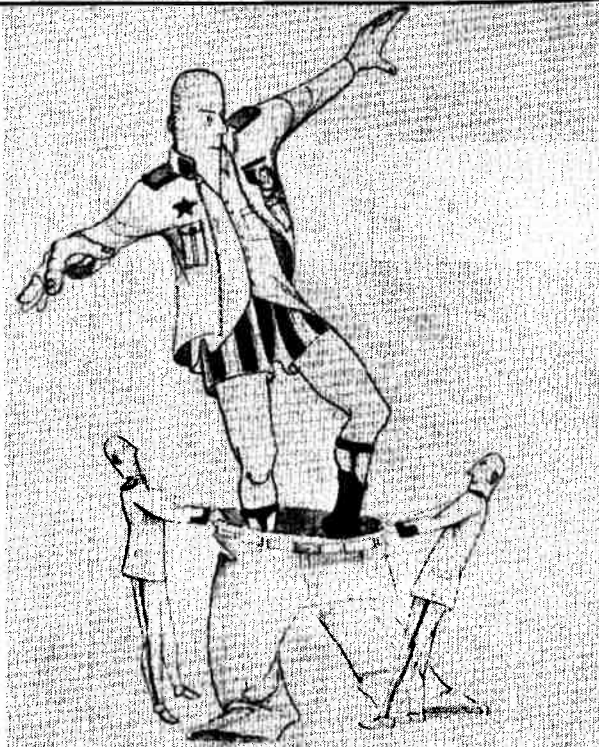
"Don't forget, the Russians also have to put on their pants one leg at a time."

In response to an unfortunate question from a member of a Congressional committee:

"I don't think you would want to be burdened with the responsibility of that information."

On briefings:

"I don't mind the long-hairs coming in and giving me a lot of baloney. When they believe their own baloney, though, they're dangerous."



After a visit to R&D where he was unseen by geniuses lost in thought:

"The only way you can tell whether someone in R&D is working or dead is when he shifts from cheek to cheek."

On changes in uniforms:

"Forty years in the Army and I wind up wearing black shoes!"

stubbornly. "I don't believe in cost-effectiveness," he once remarked. "If you need something, you need it. When I was in the artillery and they asked for 10 rounds I gave them 100."

He never missed any of the Agency's social events—moonlight cruises, dances or whatever. He deeply admired the competence and dedication of those who really made the organization function and he was vocally and shamelessly proud of his association with them. There was little that escaped his eye or ear, and when he heard that a remarkably attractive secretary, a runner-up to the title of Miss District of Columbia, was to be transferred from the office directly opposite his, he saw to it that the action was cancelled. At one of the Agency dances he insisted on a small table just for Mrs. Canine and himself, refusing to be seated with his aides and principal staff officers. "I work with these guys all day," he said. "I'm not going to sit with them all night." What he was driving at, but could never have brought himself to say, was that they could kick their heels higher if the Old Man wasn't too close by.

So he hid his soft side when he could; many times he couldn't. On one occasion one of his assistants read to him a list of tasks which another assistant, whose father had recently died, was to perform on a proposed TDY. The list was loaded with policy problems. The Old Man had just one question: "Is his mother all right?"

The Gray Fox Swallowed the Bait

April 1863: The Federals, learning the enemy was reading their cipher, kept it in use for deceptive traffic and came near bagging Lee's army

Drive along the Rappahannock River below Fredericksburg, stop on any hillock that strikes your fancy, gaze across at the hills above the opposite bank, and you can picture yourself--depending on which side of the river you are on—as a Confederate signalman deciphering Yankee wigwag messages or a Federal signalman giving the same treatment to Confederate traffic.

In that setting one of the few extended Sigint contests of the Civil War took place—for seven months, from November 1862 to June 1863.

The position was as if arranged to the specifications of the cryptanalytically inclined signalman. Earlier in the eastern campaigns—at the two battles of Bull Run, in the Shenandoah Valley, at Antietam near Hagerstown—the circumstances were unfavorable. The situation was too fluid or the topography or vegetation too unfriendly for the opposing signal corps to get much of a line on each other. In their Peninsula compaign against Richmond the Federals had captured "the Rebel code" but the intercept opportunities in that flat and wooded country were probably few.

The long dry spell ended in November 1862 when Burnside received command of the Army of the Potomac at Warrenton and promptly marched off down the Rappahannock, stopping opposite Fredericksburg. Lee followed on the opposite side of the river. The armies settled down in a locale where the signal station that could be seen by its respondents was also likely to be in view of enemy telescopes across the river. And the river itself was so formidable a tactical obstacle that a good long stay there was promised—as long, it turned out, as the Federals chose that region as a route to Richmond.

In those days interception and decipherment were a collateral duty of the same Signal Corpsmen who carried on wigwag communication. Visual observation, when enemy positions or troops could be seen, was another duty that came ahead of Sigint. But with enemy flags within easy view at Fredericksburg, no time was lost in tackling intercept chores. Very shortly after arriving there, Federal headquarters had a report from one of the signal officers below the town that he was intercepting and reading "Rebel Signals." Although the records do not show it, the Confederates were probably already busy at least at the intercept half of the Sigint game.

The "Rebel Signals" were in a monoalphabetic substitution (see cut, p. 19)—which need not surprise us. Both armies had begun the war without adequate cryptographic preparation and, as already said, the flag stations had had little exposure to enemy view. In fact, at this stage of the war a new substitution system was

I will not disclose, discover or use the plan for signals communicated to me, without the written consent of Dr. Meyer & the consent of the U. S. War Department.

Edw. P. Alexander,
2nd Lt. of Engrs.
U. S. Army

It was inevitable that the Union and Confederate armies would know a great deal about each other's signaling systems. Dr. Albert J. Myer, U. S. Army surgeon, invented wigwag signaling and conducted a series of experiments with it between Sandy Hook, N. J., and New York harbor in 1859. An officer of the faculty at West Point was detailed to assist him—Second Lieut. Edward P. Alexander, a Georgian. Alexander signed the above agreement to keep Myer's system secret and to refrain from using it without consent. But when Alexander went South in 1861 his first undertaking was introducing the system in the Confederate Army.

It operated at the first major battle of the war, at Bull Run in July 1861—and it was Alexander himself who put it to decisive use. From his station on what is now known as Signal Hill, a mile east of Manassas, he saw the glint of sunlight on Federal bayonets eight miles distant. He flagged a warning to his commander that the enemy was turning the Confederate left. The Southerners wheeled about in time to meet and then turn back the Federal columns.

While Alexander was thus making himself useful, Dr. Myer was on the same battlefield without employment. Balloons that he and his men were to have used as their observation stations were inflated before leaving Washington and were caught in trees along the march and abandoned.

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regarded by both users and solvers as merely a new visual-telegraph code rather than as a new cipher. Cryptanalysis was a word they had never heard or seen.

Burnside's Battle

General Burnside was too anxious to get across and assail Lee on the heights behind Fredericksburg to devote any time to intelligence preparation. If his signalmen produced any decrypts that helped him direct his attack, they have not yet turned up in the records.

On December 13 he sent his infantry up the frozen and fortified ridge. The result was a carnage from which the Federals were glad to be able to withdraw. Six weeks later Burnside was through, replaced by "Fighting Joe" Hooker.

Hooker, who disliked his nickname, soon distinguished himself as Administrative Joe. The army was rent by dissension at the top and bad morale below. There were grave deficiencies of supply, weaponry, organization, training and discipline in all directions. And Hooker set matters aright in all directions. "Joe Hooker is our leader, he takes his whiskey strong" became a line in his soldiers' favorite marching song, reflecting their feelings about both Joes, Fighting and Administrative.

One of Hooker's improvements concerns us here. The army went into the intelligence business in a proper way for the first time.

From General McClellan, Burnside's predecessor, Hooker had inherited a substantial intelligence tradition, and it was all bad. McClellan had an intelligence bureau headed by the Chicago detective Allan Pinkerton. In support of McClellan's constant pleas for more men and more time, Pinkerton absorbed himself in showing that the Confederates had two or two and a half times the strength they actually had. It was an essentially corrupt intelligence operation, and eventually the top brass in Washington came to suspect what was going on. Among McClellan's top officers, including Hooker, it was more than a suspicion.

When McClellan was relieved, Pinkerton left with all his men except one—John C. Babcock, an architect from Chicago, ex-private in an elite infantry company that had

Signal Station near Fredericksburg
Nov 28th 1862

S. T. Cushing
Capt + Chief Sig off.
Sir;
We respectfully submit the following special report on "Rebel Signals"

Code.

A. 11 = 11	S. 223. = 221	Giving -- Call of Station
B. 111. = 111	T. 222 = 222	1 .. End of Word
C. 114. = 112	U. 22 = 12	555 .. " " Message
D. 143. = 121	V. 2223 = 2221	11.11.5. I understand.
E. 1 = 1	W. 2231 = 2211	The end of a sentence is made
F. 1111. = 1111	X. 2314 = 2112	by giving the flag two whirls
G. 1114. = 1112	Y. 2343 = 2121	in an upright position.
H. 142. = 122	Z. 2311 = 2111	
I. 14. = 12		
J. 1431. = 1211	Abbreviations	The motions of the flag are
K. 1434 = 1212	T. The.	the same as in our system but
L. 1423 = 1221	L. Line	the order of reading is reversed,
M. 1422 = 1222	U. You	the 2's are read to the left and
N. 1142 = 1122	UR. your	the 1's to the right.
O. 23 = 21	Messa. Message	When through a message
P. 231 = 211		the flag is thrown to the ground
Q. 2234 = 2212 Numerals		and left there until called
R. 234 = 212	22223 = 22221 11431 = 11211	or until they have another
		message to send.

Above is the report of the Federal signal officer who first read "Rebel Signals" at Fredericksburg. Note that he had solved one visual-telegraph code and most of another. This indication that the wigwag stations used more than one code at a given place and time is not duplicated in any of the other records of Civil War signaling that have turned up to date.

been shot up on the Peninsula and disbanded. Babcock was all the intelligence bureau Burnside had.

Babcock, a civilian and only 26 years old, did not have enough clout even to get to interrogate knowledgeable prisoners. Hooker retained him but went looking for someone to put over him.

Linguist, Lawyer, Intelligence Chief

The right man was found in an unlikely way. The army had a French-speaking regiment from New York City. Through some odd circumstance it needed a colonel who could give regimental commands in French. Its call for help was answered by George H. Sharpe, a 35-year-old lawyer and ex-diplomat, already the colonel of an upstate New York regiment. By stepping briefly into this linguistic crisis, Sharpe came to Hooker's attention. He had the wrong language—Confederate English would have been better—but he got the chiefship of the new intelligence bureau. And so we see that the Government's history of recruiting intelligence brass from the New York bar goes back quite a long way.

Babcock, no admirer of the Pinkerton order-of-battle techniques and elastic arithmetic, swung immediately into an easy relationship with his new chief. Prisoners, deserters and refugees no longer escaped interrogation. The new "Bureau of Military Information" succeeded in getting its hands on information from all sources. Sharpe established intelligence liaison with a fellow townsman who was chief of staff of the army McClellan had left below Richmond. He recruited a small corps of spies from Hooker's army and the surrounding country, including two or three from the other side of the Rappahannock.

One of the spies, an ex-sailor who was a sergeant in an Indiana cavalry regiment, got into the Confederate camps late in February. His cover is not indicated in the records, but it must have been a good one, for he spent ten intimate days with the Johnnies. He covered their front and rear lines and came back with pinpoint information on fortifications and infantry concentrations. Counting his trips to and from Hooker's headquarters, he rode 250 miles.

Meanwhile Babcock was compiling an O/B; by the time Hooker was ready to march, the Bureau's estimate of Confederate strength was as close as the Confederates probably had it themselves.

Everything the Bureau could learn pointed to a concentration of Lee's army on his right, at and below Fredericksburg. There a low plain intervened between the river bank and the ridge Burnside had assaulted. Above the town the banks were high and steep, the terrain above them hilly and rough. There, it was clear, Lee was depending on these natural obstacles plus artillery and fairly light infantry support at the few fordable places.

Col. George H. Sharpe

Maj. Gen. Joseph Hooker

Col. Albert J. Myer

Maj. Gen. Daniel Butterfield

Against staff advice favoring an attack downriver, below the point of Burnside's main thrust, Hooker decided to move against Lee's left (upriver) wing. He would send his cavalry far around the Confederate left to break the Richmond-Fredericksburg railroad. If both halves of the scheme worked, or even if only the first half worked, he might, by getting in Lee's rear, bag virtually the whole Army of Northern Virginia.

Getting Across

Available crossings were Banks Ford, U.S. Mine Ford, and Kelly's Ford—three, twelve and twenty-six miles above the town, respectively. Kelly's Ford was above the difficult riverside terrain and also well above Lee's farthest infantry outposts. But Jeb Stuart's cavalry covered that region. If the Federals tried to march through it, Stuart would discover them in plenty of time for Lee to bring up his whole army.

Before Hooker committed himself to a choice of river crossings, the activities of his intelligence bureau and signalmen made one route stand out far above the others.

On April 9, just four days before the campaign was to begin, one of the signal officers read a message which showed that the Rebels were reading the Federal cipher. The discovery was communicated to Colonel Albert J. Myer, the Chief Signal Officer in Washington.

The Army of the Potomac's signal officer, Captain Samuel T. Cushing, was under Myer's orders rather than Hooker's. Before issuing Cushing a new cipher, Myer directed him to continue using the compromised one and to send messages that would induce the Confederates "to believe that we cannot get any clew to their signals" and other messages about "imaginary (Federal) military movements."

Hooker had long made a point of having as little to do with Washington as possible. But the cavalry was about to march, soon to be followed by the infantry: Myer's scheme dovetailed with Hooker's own plans. The following message was concocted (it appears in the records in the handwriting of Dan Butterfield, his chief of staff, but Butterfield could have written it at Hooker's dictation):

> A cavalry force is going up to give Jones & guerillas in the Shenandoah a smash. They may give Fitz Lee a brush for cover. Keep watch of any movement of infantry that might cut them off & post Capt. C.

(Fitzhugh Lee, nephew of R. E. Lee, commanded a brigade of Stuart's cavalry that was patrolling the country above the Confederate left. "Capt. C." was Captain Cushing.)

a cavalry force is going up to give
[illegible] & guerillas in Shenandoah a smash
they may give Fitz Lee a brush for cover
Keep watch of any movement of infantry that
way that might cut them off & post Capt C

General Butterfield's draft of the message that deceived R. E. Lee. (Its text is given on p. 21.) This paper found its way into the possession of Colonel Myer, the author of the deception scheme, in the War Department. To the end of his life he preserved it in a small collection of Civil War cryptographic and cryptanalytic items that is still known as Myer's Secret File.

The success of the plant may have been due to its having been arranged to simulate what we now call operator chatter; "Capt C" (Cushing) was the Army of the Potomac Signal Officer. Evidently its writer reasoned that the Confederates would be suspicious of an official message with contents so revealing.

The Federal command had already been educated to such a suspicion. During this same period, on April 22, the Federals intercepted a Confederate message which was certainly a plant. It directed the movement of an infantry division and had the appearance of officialness—it was from "Gen L" to "Gen H" (Hill). The intercept touched off some excitement around Butterfield's tent, but no action followed. Butterfield evidently concluded that it was a fake.

Thus the Federals had the better of the Sigint and deception contest before the battle of Chancellorsville, but their experience led them to outsmart themselves a few weeks later. Early in June, Lee began pulling units out of the Fredericksburg lines and sending them toward the Shenandoah Valley. Their destination was Pennsylvania. On June 5, when Hooker was hungry for evidence as to what was going on across the river, his signalmen intercepted a message reading "Have any of our troops crossed the Rappahannock?" The signature was "Capt F."—Capt. Frayser, an enemy signal officer. Probably suspecting that the enemy had borrowed the "Capt. Cushing" trick, the Federals did not begin their pursuit for another week. But the message was probably genuine, for on June 5 Lee's march was approaching crossings of the Rappahannock above Culpeper.

The message went out from one of Cushing's flag stations on the river on the afternoon of the 13th, the day the cavalry left camp. Next day the Federal signalmen intercepted a Confederate message passing upriver (toward Lee's headquarters) which upon decipherment proved to be the planted message, slightly garbled. Again on the 15th it was passed: evidently its interceptors were making sure it would reach Lee.

So far, so good. But whether Lee would swallow the plant was another question. The answer is available to us in Confederate records; on the 14th he wired his commander in the Shenandoah Valley:

> I learn enemy's cavalry are moving against you in Shenandoah Valley; will attack Fitz Lee in passing. . . . General Stuart, with two brigades, will attend to them. Collect your forces and be on your guard.

By this time the Federal horsemen were at Rappahannock Station—a good day's march *toward* the Valley, but with no intention of going farther in that direction. And the Confederate cavalry had marched in parallel with them, to a point 18 miles above the extremity of the Confederate infantry. The country opposite Kelly's Ford was now empty of Confederates except for cavalry pickets, thinly spaced.

A Soggy Delay

Then the weather intervened. Heavy rains made the Rappahannock a torrent; when the Yanks crossed to give Fitz Lee his "brush for cover" they were warmly received and had to swim their horses to regain the north bank. They sat down to await the jumpoff of the infantry.

It did not come until after nearly two more weeks of rain. That delayed the infantry and should have given Lee time to realize that his cavalry had been feinted out of position. In fact, one of several theories that occurred to him during those days was that Hooker was planning an upriver movement, but he considered U.S. Mine Ford its

Signal Department,
Head-Quarters, Army of the Potomac,
Camp near Falmouth Va. April 15th 1863.

Maj. Gen. D. Butterfield
Chief of Staff.

General:

The following report from the Signal Station at the Seddons House is respectfully forwarded:

"All quiet to day. We received the following from the Enemy Signal Stations:

(Left to Right) "Official - (two or three words lost here) dispatch received from Yankee Signal Flag. - Our cavalry is going up to give Jones and guerrillas in the Shenandoah a march. They may give Fitz Lee a brush for cover. Keep watch of any movements of Infantry that might cut them off and post Capt C." signed. Sergt. Bartlett Section A."

I am, General, very respectfully
Your obedient servant
Saml T. Cushing -
Capt & Chf Signal Officer A of P.

From the above report, Federal Headquarters knew that the planted message had been intercepted, deciphered, and transmitted to Lee.

Its transmission over the Confederate "line" was copied by the Federal station at the home of the Seddon family, kin of the Confederate Secretary of War, three miles below Fredericksburg.

As it appears here, the planted message is a quotation within a quotation. It begins after the expression "(Left to Right)," which refers to the direction of the transmission as viewed from the Federal side of the Rappahannock.

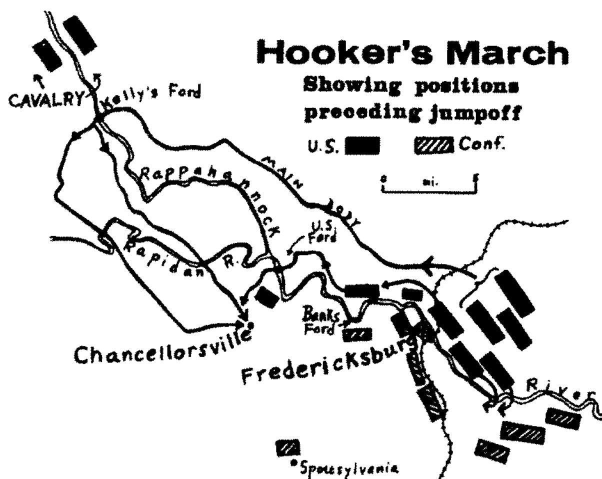
uppermost limit. Probably because of the difficulties a Federal crossing would encounter along that part of the river, he did not see fit to draw Stuart back from his mission of watching the Federal cavalry.

Hooker and Butterfield, seeing that their signaling ruse was apparently working, now received a piece of intelligence that raised the attractiveness of that 18-mile opening. It came from one of Sharpe's spies, a Jewish farmer of Northern birth living a few miles south of U.S. Mine Ford. He sent by messenger on the 15th a report that Lee's infantry on that wing was now reduced to about 5000 and that the country was empty of troops from the camps near the ford for a distance of six miles to the south. Actually this gap measured only about four and a half miles, but that was enough for Hooker's purpose.

Hooker could now see a clear path to Lee's rear. By going upriver to Kelly's Ford, crossing the Rappahannock there and a few miles south of it the Rapidan, he could march unopposed to within ten or twelve miles of Fredericksburg. The light infantry force he would then encounter could not stop him from going further to reach high, clear ground within three or four miles of the Confederate front, near its center. Lee would have to fight him there or retreat, in either case at a severe disadvantage.

Hooker set out on April 27 with 55,000 men and the tightest march security the army had ever known. He crossed at Kelly's on the night of the 28th–29th, cutting off or capturing many of the pickets who could have warned Stuart or Lee.

Stuart was not far away, but the simultaneous movement of the Federal cavalry, southwestward toward Culpeper, led him to believe the enemy's main march was in that direction. Lee did not learn of the presence of Northern infantry on and behind his left until evening of the 29th. And the information was not from Stuart but from couriers who had ridden to him from the fords where Hooker's columns had crossed the Rapidan.



Chancellorsville

By that time those columns were converging on Chancellorsville, a plantation house at a road junction ten miles west of Fredericksburg. They had marched more than 50 miles through a populated and unfriendly country without seeing a body of enemy larger or more formidable than a bridge-building detachment on the Rapidan. They were sitting unmolested in the gap the farmer-spy had reported, and they were within six or seven miles of their objective, the high ground near Banks Ford, with only two or three enemy brigades to block their way.

Thus far this has been the story of an intelligence coup. The rest is a story of intelligence that went to waste.

George Meade's corps, marching by the roads closest to the river, did not stop at Chancellorsville but kept moving on the 30th toward Banks Ford. Then Meade, in high spirits, was shown an order halting the army at Chancellorsville. Sharpe's bureau had established that Lee had not moved toward Chancellorsville on the 29th. Still, Hooker was in the process of deciding to let Lee come to him.

And by the 30th that was what Lee was doing. Hooker had sent a three-corps secondary attack against the Confederate right. These troops put down pontoons at night and appeared by surprise on the right bank of the Rappahannock as dawn came on the 29th. Conscious that he faced the bulk of Lee's army, their commander proceeded with great caution, which was encouraged by Hooker.

Reading their relative inactivity as an indication that their crossing was a diversion, Lee concluded that the main threat was on his left—even though he still had no information of a major force there. With the bulk of his army he set out toward Chancellorsville on the 30th.

The rest is soon told. The armies felt each other out on May 1 and Hooker's decision to fight a defensive battle at Chancellorsville hardened. The ever-present thickets—the locality was known as the Wilderness—he saw as an advantage to the defense.

Next day an enemy column was seen moving southwest and he judged it a retreat—the retreat he expected. By midafternoon, Federal scouts, pickets and signal officers were detecting the enemy's presence on the right flank. Their officers scoffed at the reports and did not forward them to Headquarters. Thus Headquarters was denied the information that could have changed its mind.

The "retreating" column was half of the Southern army, under Stonewall Jackson, marching for an unprotected gap between Hooker's right wing and the river that had been discovered by Stuart. At suppertime,

preceded by a torrent of rabbits, fowl and other game, Jackson's men came storming through the underbrush, crushing one corps.

Three more days of fighting followed, ending with the Federals concentrated in a favorable position against the two rivers. But they never recovered from Jackson's demoralizing blow, the blow that cost him his life. Hooker took the army back across the river on the 6th.

Post Mortem

What whipped him? The usual explanation is that although a brilliant corps commander, when he took over the army he turned out to be unable to "make war on the map." A more convincing explanation is that, being a heavy drinker and having gone on the wagon at the start of his march, he was not himself. But there is also an explanation purely in intelligence terms: he had sent away all his cavalry except three regiments, and they were not nearly sufficient to provide the reconnaissance he had to have.

Lee's biographer, D. S. Freeman, could have had mainly Chancellorsville in mind when he wrote that "the contingent factor is three times as ponderable in close action as the preconceived plan." Hooker's plan, like the intelligence work it was based on, was excellent—except for the part of it that contemplated going into battle with so small a cavalry force that he was almost blind. At Second Bull Run the Federals had been defeated through a flank march by Jackson after they had run their cavalry into a state of near-total depletion. The same thing happened to Hooker when he voluntarily did without a sufficient mounted force. Strange but true, that this mistake should have been made by a commander notable for his appetite for information about the enemy.

Chancellorsville was Lee's greatest battle and the Federals' most unnecessary defeat. Hooker, relieved before the armies met next at Gettysburg, has received small honor from history. History has been unaware of one of his major accomplishments—establishing a sound intelligence service. The Bureau of Military Information served under Meade and Grant to the end of the war. From its earliest existence onward, the commanders it served, despite the built-in disadvantage of operating in territory friendly to the enemy, were better informed than Lee. The Bureau now is only a distant precursor of today's intelligence service. But if it pleases you to know your origins, you will have a soft spot in your heart for Administrative Joe. And for Colonel Myer's "other duties as assigned" Sigint operatives.

Picture credits: Lieut. Alexander's oath, Butterfield's draft of the deception message, and the November 1862 report of solution of Confederate cipher—from "Myer's Secret File," National Archives. Photo of Col. Sharpe—Library of Congress. Photos of Gen. Hooker, Gen. Butterfield, and Col. Myer—National Archives. Capt. Cushing's April 1863 report of interception of Confederate transmission of the deception message—from Gen. Hooker's papers; lent by Joseph Hooker Wood III of Huntsville, Ala. Another version, from a different intercept, and related data are in Col. Sharpe's files, National Archives.