A technician's personal story of his work in radio and photographic transmission of intelligence to the British service affords a glimpse of wartime espionage through foreign agent eyes.

REMINISCENCES OF A COMMUNICATIONS AGENT
Expatriate

During World War II, I was employed by the British intelligence service in one of the European countries which was at first neutral, then a German ally, and finally under German occupation. I had two concurrent jobs. One was to maintain radio communications with a base on the Mediterranean some 750 miles away. The other was to photograph intelligence reports, maps, and sketches and to conceal the films in inconspicuous objects which could be smuggled across the border.

Some of the techniques used in these operations were supplied by my superior and some were of my own devising. Although these procedures have now undoubtedly been antiquated by technical progress since the war, they should still hold some historical interest. Certainly some general principles of conduct which were important to me have continuing validity as precepts for the clandestine agent of today.

After the Germans had overrun my homeland and imprisoned me along with many others, I escaped and made my way to this country which was still neutral and where the people were traditionally well disposed toward my people. I wanted to avenge the ravaging of my homeland, within my small individual power, and to continue the struggle against its brutal occupier. Therefore, although I am not British nor a great admirer of the British, I entered their intelligence employ as the occupation most promising for fulfillment of this my purpose.

The work was dangerous, very dangerous after the Germans came in. Every person living in the city where I worked had
to be registered. Block managers and the superintendents of apartment houses were charged with seeing to this registration; they enforced it scrupulously, so that it was virtually impossible to live there without having a card in the file at police headquarters. A separate file was kept on foreigners. When the Germans came, one of their first acts was to take over this file, and they began arresting suspects on the very first day.

That I was not arrested I attribute to the virtue of my simple and partly genuine cover. I was actually a student at the polytechnic institute, and I remained by choice a very needy one. I found quarters in a servants’ boarding house, a small room not opening on the hallway but directly off the kitchen, which fortunately had an outside entrance. Foreign students who lived in better quarters or could afford luxuries the Germans became curious about.

With respect to my radio work it is not the techniques I used but my lack of techniques and procedures for security that is noteworthy. I made the transmitter myself, and it was a good one for those days; but there was no way its frequency could be changed to throw anyone who might be suspicious of my traffic off the scent. I therefore limited my transmissions to two hours each.¹ I changed the location from which I made radio contact as often as I could, but I had to work in the city or its inner suburbs. Most of my transmitting, in fact, was done from a house only about 30 yards from one of the Gestapo offices.

Moreover, there was no securely established schedule for these radio contacts, and at the end of each transmission a time for making the next one had to be arranged. If the Germans had deciphered these arrangements they would have known when to look for me next. There was no kind of guard or even lookout during the transmission; I was always alone, with two pistols for protection.

Once when I was called upon to lend my transmitter to a friendly intelligence service in an emergency, I had an opportunity to observe the security precautions they took for their operators. They had the use of isolated buildings in the coun-

¹ Under the circumstances described a limitation to fifteen minutes would have been the proper precaution. — Editor
try for their radio contacts, and they kept five to eight armed guards around the house, lying in the grass at a distance of fifty yards or so, all during the transmission. On one occasion, they recalled, the Germans had come raiding, but the guards held them off while the operator escaped with his equipment.

Unfortunately, my superiors were not willing to furnish this kind of protection, and the work of transmitting was consequently quite enervating. I was compensated and heartened, however, whenever the American bombers would come over and destroy some enemy airfield and I knew that my efforts had helped make the raid possible.

In my photographic work I felt less exposed, if scarcely at ease. The Germans usually made their house raids and arrests either between six and eight in the morning or between ten in the evening and midnight, so the hours between one and six a.m. were comparatively safe. Once every two weeks or so there would be an accumulation of material for photographic forwarding and a courier, witling or unwitting, to take it out of the country. My superior would bring me this material after midnight. I would get to work on it by one o'clock and finish by about five. Then I could get an hour's sleep before meeting my superior at six to deliver the product.

The material consisted of typewritten intelligence reports, maps locating bombing targets, sketches of military installations, layout plans of airfields and refineries, etc. The language was usually French, sometimes German, never English to point to the identity of the service. Some of the reports were enciphered. Usually there would be 30 to 40 pages of typing and three to five maps or plans; but once there were 80 typed pages and 40 sketches, a substantial quantity of incriminating paper in my little room. The sketches required quite a bit of preliminary work before photographing. They had been made by agents employed at the installations they pictured, and they needed some cleaning up and a calculation of the proper enlargement ratio to keep their scale true. An accompanying report would usually refer to the sketch and give further data on the plant or airfield, such as precise location, whether surface or underground, number of planes, troops, fuel tanks, etc.
I used a Leica camera with a 24x36 mm (1" x 1 1/2") frame, usually without the close-up attachment. I laid the original materials out on the floor and fixed the camera perpendicular to them. It could accommodate six typed sheets in one frame, but usually only one of the large sketches at a time. I shot each frame three times, to get two negative copies to keep in reserve. This part of the work was done under the greatest tension, with the material spread out all over the room. Whenever the gate opened, I stopped and listened to the footsteps on the stairs which told me what floor the late comer was heading for. If he stopped climbing at my floor, I frantically tried to get things out of sight. The Gestapo did make arrests in this boarding house, but never came to my room.

The next job was developing the film. (I had often considered lightening my work by sending out undeveloped film, which would also have been less dangerous for the courier; but I wanted to check the developed negatives to be sure they were good, and I was reluctant to risk the damage in transit to which undeveloped film is liable. I therefore never tried it.) After washing off the fixer solution I rinsed the film in alcohol to hasten its drying, and then immediately checked the legibility of the photographed texts with a special magnifying glass. When I was satisfied that the negatives were all good I could start burning the originals in the kitchen stove next to my room.

By the time I had disposed of the original papers, the film would be dry. Taking a strip of a dozen frames at a time, I placed it emulsion side down on a sheet of plate glass and wiped the back with a piece of cotton dipped in acetone until the heavy celluloid was dissolved and only the thin emulsion remained. I now cut the emulsion strips into individual frames and separated the negatives which were to be sent out from the two copies to be kept in reserve against the possibility of loss in transit. The reserve copies I put in a match box or wrapped in a paper. I tied this tiny package on the end of a string and suspended it through a hole in the wall under the kitchen sink, sealing the hole afterward so the end of the string was not visible. It would be only through the unluckiest of coincidences that this cache would be discovered.
I then returned to the negatives to be dispatched. You recall that there were six pages of typing on each frame. These I cut apart, so that each page of the original report was now represented by a wafer of emulsion less than a quarter-inch square, and very thin. Stacked together in page sequence, 40 pages would be less than an eighth of an inch thick. When packaged for the courier the stack was usually rolled into a pellet the size of a small pea.

How the film was packaged depended on whether the courier was witting or unwitting and how he would cross the border. One of the unwitting couriers was a German — and a Nazi Party member — who traveled on business to Switzerland and Turkey. For him I once concealed the film in the lining of a lady's compact which my superior asked him to carry as a gift to a friend in Ankara. A sentimental letter accompanying the compact secretly instructed her what to do with it.

For witting couriers who were not likely to be suspected a good place of concealment was the heel of a shoe. Safer, however, was a pack of cigarettes. I would open a new pack, being careful not to leave any evidence of tampering, take a cigarette from the middle of it, remove half the tobacco, insert the film pellet, repack the tobacco, and reseal the pack so that it looked fresh from the factory. The report might possibly be lost, but there was little chance that it would be discovered.

But it was best not to use the same method repeatedly. One variation I used was the flashlight battery. I took apart the middle cell of a three-cell battery, replaced part of the contents with my film pellet, and resealed the cell. This cell would be dead, so I substituted a lamp rated at two volts for the original rated at three and a half in order to avoid any suspicion arising from a weak light.

When word was received by radio that the report had arrived, I would recover the two reserve copies from under the kitchen sink and burn them, so as to be left briefly without any compromising material on hand. The reports, as a matter of fact, always got through, and I was praised for my packaging. There were never even any complaints that passages were illegible.

I should like to emphasize again, in conclusion, that my success was due in large measure to the fact that I always lived
in very humble circumstances. None of my friends and acquaintances could have imagined that I was doing intelligence work. The landlady thought me a poor and simple student. I stipulated to my employers that I should be paid only enough to subsist on from month to month, for an agent who spends freely, shows that he has money, or frequents expensive places is not a secure agent.