To go with supplement to F.F. collection.

Mr. Friedman spoke first of the recent passage of the Forrestal security bill, which imposes such stringent penalties that we wondered whether we ought to leave then and there, without going beyond the opening pleasantries. However, I stated very firmly what I had said on other occasions of talking with him and Captain Rhoads: that I had no wish to waste either his time or mine on topics which would be likely to remain under security classification, because the History is a document designed for publication. On that basis, we talked. At the end of an hour and a half, I returned to the use I would make of the Signal Corps intelligence story, and explained that I wanted to have Mr. Friedman see whatever I wrote on the subject even before it goes to review here in the Office of Military History. I think he was relieved, and I know I shall be when I get it out of the way, for I am determined to forego the entire subject rather than risk the faintest contention of having revealed any secrets. The real problem lies not there, but in the use of materials in the public domain, like the 39-volume series of Pearl Harbor reports, which make Intelligence unhappy. Regarding them, Intelligence has persuaded itself that if nobody mentions them again, nobody will think of them again. I don't think that the opposite Intelligence is quite so thickheaded as to forget unless we remind.

In any event, this was the substance of our talk:
When Friedman and a wife went to work for Signal Corps in 1921 it was on a contract basis for six months. At end of second six months she dropped out and he became a Civil Service employee. In 1922 the Code and Cipher Unit, OCSigO, had one clerk besides Friedman.

Beginning in 1921 he gave a two-week course at Monmouth for officers. The next year he was a regular course of the officer curriculum and continued to be offered till about 1931.

Friedman's other duties in his first years consisted of working out field codes, WD staff codes, MI code and the WD Telegraph Code. He also started certain cryptanalytic studies and laid down methods and principles. He even wrote technical papers.

Not until about 1930, when the new duties devolved on the SC, did Signal Intelligence Section acquire additional civilian personnel. Four men came in as cryptographic assistants via Civil Service. They have been with Signal Corps ever since.

Until the war shadows began to darken in 1938-9 the Sig Intell Sect remained a small organization. Training a nucleus of expert civilian cryptanalysts and code and cipher compilers was its main object. Fortunately, beginning in the fall of 1931 (?) Signal Corps officers began to receive training in the Section. They were expected to learn cryptographic techniques and become proficient in supervising code and cipher work. By December, 1941 about a dozen officers had been given this training but on Pearl Harbor day less than half were engaged in SC cryptographic work.

Another source of officer personnel for cryptographic work was the Japanese language officers assigned to Sig Intell Sect after tour of duty in Japan. This began by the late Thirties but never involved many officers.

As a result of the limited and unlimited emergencies, Sig Intell Sect began to build up so that by 7 Dec 41 there were about 35-40 civilians and three officers in the newly created Sig Intell Service. (Arlington Hall site was chosen because it was about the right size though it should have been some 40 miles from Washington. Buildings begun about 1939.) The Service was activated in 1938 for administrative reasons; easier to get funds (?)

Gen. Mauborgne supported cryptography quite strongly. Reason why he ordered Friedman to concentrate on Jap codes in 1939 was that U.S. had always anticipated that its enemy lay to the West and could depend on the British to handle Germany and Italy. There was no understanding between us and G.B. about this division of work. Mauborgne evidently was a bit worried about Japan by 1939—enough so to order a concerted attack on the Jap codes and ciphers.

Cryptanalysis was not an organized, regular activity of Sig Intell Sect in 1920's and early 1930's. The chief obstacle was shortage of foreign cryptograms. The first monitoring station for this purpose constructed at 'Monmouth (when?) and then transferred in turn to Ft. Hancock and Ft. (?!) Hunt. For another thing, there was little encouragement within the SC or 3-2 to proceed with cryptanalysis; there was a widespread feeling that it wasn't right for us to engage in this sort of underhanded stuff.
It was because Friedman, more or less on his own initiative, dabbled in this field of cryptography that his later accomplishments with Jap codes were possible. Until Yardley's office was closed, SO did almost no cryptanalysis. But after Friedman took over Yardley's records and the SO was authorized the solution of enemy cryptograms during wartime, a slight impetus was given.

Friedman never discussed Yardley's work with the latter (while N.Y. office was open) but knew somewhat what Yardley was doing. Not much cryptanalytic was accomplished in N.Y. because the unit there had the job of turning out a shipping code for a private firm; it didn't keep very good office hours; and Yardley was mixed up in a number of outside activities. (Friedman thinks that Yardley was a better administrator than cryptanalyst and that breaking of Jap code in 1920 was the work of Yardley's subordinate (L..) who is now with State Dept.) than of Yardley.

In 1929 a study was made by Maj. Owen S. Albright (SC) of WD cryptography. Because N.Y. office not well organized he recommended that its solution duties be turned over to SO. (Stuart Heinleman headed VII in 1929.) Not clear how instrumental Friedman was in the closing down of N.Y. office.

The closing down may have been decided upon even before Stimson became aware of its work on 15 May 1929. Friedman even believes that Hoover was responsible for the withdrawal of State Dept funds; rather Yardley told Friedman this, since State was contributing annually $15,000. by 1929, and WD $10,000., letter decided it could not foot the entire bill and so the N.Y. was closed. This does not mean that officials in State Dept did not appreciate value of N.Y. office. However, they had no authority to continue it once State brass decided otherwise.

It may be said that in year's 1930 to 1935 cryptanalysis in WD lagged, primarily because there was no impetus from top WD officials and because Sig Intell Sect found it so hard to get cryptograms. Another factor was shortage of SO personnel and funds. At one time about only source of foreign cryptograms was what Mauborgne could pick up with his small intercept station at the Presidio in Calif.

IBM tabulating machines began to be purchased (4 machines) in 1936 though some were used a short time before, and paid for by OVG. These machines did the work of many clerks and were most valuable in code and cipher work.

As for encoding and enciphering machines, these were developed and in use before the war. STGABA was conceived by Friedman and developed jointly with Navy. SICOM was conceived and developed solely by SO. They proved their worth in the war and it is Friedman's opinion that our codes and ciphers surprised the German and Japanese. Whether they were better than the British, Friedman would not say. He holds patents on STGABA and SICOM but hasn't realized a dime yet.

As for the EM trained at Arlington Hall during the war, many of them went out with Sig Intell Detachments. Few went into cryptanalysis because we already had trained civilian experts (check this).

It would appear that SO was short in officers (cryptographic) when war came but we set up to expand warfare rather easily. Equally important, the most important code machines were already in use and we had quite a body of codes and ciphers. Latter far superior to what was available in WW I, 'we seem to have made greater strides in code work between the wars than did Germany, England is a question mark Friedman would not discuss.
1. What was the main activity of the Code and Cipher Unit prior to 1929-30?

2. When did the Signal Intelligence Section begin to pick up World War II?

3. In the 1930's what percentage of activities of the Signal Intelligence Section were devoted to cryptanalysis of foreign messages?

4. How successful was the Signal Intelligence Section in producing expert civilian cryptanalysts?

5. When a Signal Corps officer completed the two-year course in the Signal Intelligence Section, what was he qualifed to do well? In the event of war, would he be expected to be a compiler of codes and ciphers? A cryptanalyst? A code clerk? A cryptographic expert?

6. Were mobilization plans for signal intelligence followed when World War II broke out?

7. Was Arlington Hall visualized just as it came to develop?

8. In 1940 and 1941 what percentage of EM who transferred from the code clerk's school at the Monmouth's RTC made good at Arlington Hall?

9. How did the Army's code and ciphers used in World War II stack up against those used by England, Germany, Japan?

10. Was the Army Field Code a success in WW II?

11. When were SIGABA and SIGCUM developed?

12. Where were the Hollerith machines in use when Pearl Harbor came along? Had they been replaced, and by what?
1. When did SC receive responsibility for codes and ciphers?

2. Was the Code Compilation Section of G-2 (in WW I) staffed largely with SC personnel? How long did Colonel Gibbs retain control of tiny MI unit in 1917?

3. What were the units of Code and Cipher Section of G-2 (MI-8)? Was there a code and cipher solution unit, as Yardley says?

4. Did CSO have any control over MI-8 during WWI?
5. When did SC begin to use signal intell. units in the overseas departments for training?

See Clinton's notes

6. Did the SC or War Dept. know well in advance that Yardley's N. Y. office would fold in fall of 1939?

Yes at least 2 months before became a 'preliminary service afterwards in his visit to N.Y. early in 1939.

7. What were the reasons for Signal Intell. Service being created in April, 1939?

To administer Bureau.

8. Why did Mauborgne ask Friedman and his people to concentrate on Japanese codes? Had SC ever before broken any Jap codes? Other foreign codes?

Was worried about Jap and we thought looked on Jap as potential enemy. No Jap codes broken before 1940.
9. Exactly what was meant by "magic" when it was used in 1940-41?

10. What was the strength of SIS in 1938, 1939, 1940? Were any really new functions assigned to SIS between 1938 and 1941?

11. What was Gen. Mauborgne's influence on cryptography while CSO? Gen. Olmstead?

12. When did the SIS really gear for war, get on a war footing?

In 1939 it got its major functions
In 1940 it hired more people & equipment, more work available.
By 1934 this increased to 39,000 civilians. 
39,000 in 15,000 dollars. Starting from about $25.

By 1936's End, this officer was assigned 
and lost for duty.

Just about seven months have elapsed.

I am in the line of fire,

Sent for to give the man by Commission.

The same with General.

13. In the early 1930's it was expected that mobilization requirements for crypt. personnel would be about 170 officers. How far off was this planning?

We were for short, fifteen officers and others we were being well geared for war requirements.
1. Exactly when did SC receive responsibility for codes and ciphers?

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On this form indicate all duties in engineering, art of power and metabolism in technical papers from 1921 present to December 1929. Also, at the request of Governor, assumed responsibilities at 51 & AGO and 11th function.

Edward, Corwin, Teacher