

Personal Files W. F. Friedman

ST  
poor paraphrase  
April 22, 1930

AG 311.5 (4-14-30)  
Pub.

Subject: Codes, ciphers, secret inks, radio interception and goniometry.

To: The Chief Signal Officer

1. Reference responsibilities of C.S.O. in accord with AR 105-5 and change No. 1 thereto of May 10, 1929. Following statement of War Dept. policies transmitted.

2.a. AR 105-5 as amended places responsibility for following activities on Chief Signal Officer.

- (1) Code and Cipher Compilation
- (2) Code and Cipher Solution
- (3) Interception of ~~enemy~~ radio and wire traffic
- (4) Location of ~~enemy~~ radio transmitting stations by goniometric means.
- (5) Laboratory arrangements for employment and detection of secret inks.

b. "The fundamental reason for placing the responsibility for these duties upon the Chief Signal Officer is that all correlated duties in connection with secret communication may be assigned to one operating agency for efficiency of operation. To serve this purpose these duties will be organized by the Chief Signal Officer into a single coordinated service."

c. At discretion of Chief Signal Officer "it is suggested that 'Signal Intelligence Service' be the designation for this coordinated service'.

3. "The general mission of this service is, as for all other military services, the proper organization and development in peacetime to the end that the service may be prepared to operate at maximum efficiency in war."

4. The specific missions

a. The preparation and revision of all codes ciphers and other means of secret communication to be employed by Army in time of peace and war (note: current AR make this office responsible for the printing of codes and ciphers, for their distribution in accordance with distribution tables prepared by the CSO and for their accounting.)

b. "In time of war the interception enemy communications by electrical means", location of enemy radio transmitting stations by goniometric means; "and in peace time the necessary organization and training of personnel and the necessary development of equipment to render this service capable of immediate operation in war."

c. "In time of war the solution of intercepted enemy messages or other documents, intercepted by Army, or for coded by other agencies for solution. In peace research work, ~~XXXXX~~ and organization and training of personnel to render this service capable of immediate operation in war.

d. Laboratory arrangements for detection of intercepted enemy documents written in secret ink, and for selection and preparation of secret inks "to be employed by authorized agents of our own forces in time of war; and in peace time necessary research work to render this service capable of immediate operation in war."

5. Mobilization Plans

a. Under War Dept.

- (1) Preparation of all means of secret communication employed by Army in peace and war including secret inks, except that upon its organization GHQ will begin preparation of field codes and ciphers required for current replacement for subordinate units.
- (2) Interception of enemy communications and cryptographic work incident to it.
- (3) Detection and solution of secret inks.

b. At GHQ

- (1) Replacement field codes and ciphers
- (2) Interception
- (3) Cryptographic location
- (4) Solution of communications in code, cipher, secret ink or other disguise.

c. HQ. Field Armies

- (1) Interception (2) cryptographic location
- (3) "The solution of intercepted enemy code or cipher messages by the assistance of cipher keys and solved codes as furnished by the service at General Headquarters."

6. Based on these policies, CSC to "submit at a conveniently early date a recommended draft for an Army Regulation to cover the functions and duties of this service." X Draw up additional regulations adequate to cover activities of service and deemed appropriate for publication.

7. Peace Time Objectives.

A. Code Compilation

(1) Ultimate aim is the preparation of authorized codes, satisfactory in character and sufficient in the number of copies and editions, for employment by the Army during both peace and war".

When war comes for secrecy reasons necessary "to change certain characteristics of the codes employed during peace, and the required number of copies of each code will be greatly increased". Preparation and publication of codes required considerable time, "it would be improvident to wait till the outbreak of war to begin this work"

(2) As objective in peace, as funds available "there will be at all times in the possession of the office [GPO] for immediate distribution one edition of each authorized secret code, with cipher tables if necessary, and in the possession of the Chief Signal Officer two reserve editions of such codes and cipher tables."

b. Code and cipher solution.

(1) Ultimate aim in peace is training of sufficient personnel to develop experts in solution of enemy code and cipher messages in war. Will require much time. Large commands require operation of this activity in peacetime training. "it is necessary that it operate for them during their training exercises", Joint Army and Navy maneuvers etc.

Objectives should be in peace

- (1) Training personnel
- (2) Furnishing specialists to large commands for peace time maneuvers after personnel has been sufficiently trained.

Peace time training to be centralized under OCSigO. Comparatively small number of trained personnel to be assigned to corps areas and cpts. for maneuvers and returned to OCSigO. This will insure necessary continuity of initial training under OCSigO, only military agency presently qualified to carry it on. Each corps area or department requiring service should ultimately be in a position to furnish independently. Therefore CSO should be prepared to furnish trained specialists of this service for permanent assignment to such corps areas or cpts. as D may later decide, when training has prepared sufficient personnel able to function as independent unit.

c. Radio Intercept

(1) Close relation to code and cipher solution, since interception aimless unless messages solved on other hand solution dependent on intercept for material "It is evident therefore that the operation of both services should be carried on in close liaison." Ultimate training of both involves mutually coordinated operation.

(2) Peace time problems

1st Development of equipment

2nd Development of technique of operating personnel  
need for this service in maneuvers.

~~SECRET~~

It is also a possibility that during peace time or during periods of strained relations the War Department or Commanders of Departments and of certain corps areas may desire the operation of this service, provided the services of a code and cipher solution agency can be made available".

Practical operation is regional and "cannot be concentrated in any locality" as code and cipher solution can. "In other words intercept stations must be located at certain critical points where their operation may be effective", in depts. and corps areas, while solution may be anywhere, provided proper communications facilities between the two are available.

(3) Peace objectives

- (a) Development of equipment under CSO
- (b) Location of intercept station to be prepared to operate directly under CSO
- (c) When sufficient equipment developed location of stations at critical points
  - (1) Hawaiian Dept.
  - (2) Panama Canal Dept.
  - (3) Philippine Dept.
  - (4) Eighth Corps Area
  - (5) Ninth Corps Area

To operate under dept. and corps area commanders CSO to recommend when such stations should be established and then WA will take up with dep. and corps area commanders concerned.

(4) Plans for interception

- (a) When certain interceptions desired by WD, CSO will recommend station or stations best able to perform service. WD will issue necessary instructions.
- (b) Corps area or dept. commander desiring interceptions will obtain them by facilities under their control.
- (c) Messages intercepted by CSO stations will be transmitted to his solution service
- (d) Corps area or dept intercepts transmitted by mail to WD for solution by CSO solution service until solution established in corps area or dept.

~~SECRET~~

205

~~SECRET~~**1. Goniometry**

Results in two phases performed by same units one supplemental to radio interception one giving location of enemy radio transmitting stations and indicating tactical disposition of enemy.

Plans for peace to include development of equipment, organization and training of personnel, and location of stations for goniometric service similar to intercept plans.

**2. Secret Inks. objectives**

In peace: establish small laboratory for research to produce

In war: establish agency for the detection of secret inks employed by the enemy - recommendation of suitable secret inks for use by our authorized agents.

By order of the Secretary of War

Alfred J. Booth  
Adjutant General

~~SECRET~~

206