COMMAND & GENERAL STAFF COLLEGE
School of Logistics
19 November, 1947

DIRECTIVE FOR ANALYTICAL STUDY SUBJECT

SUBJECT NUMBER 6-11

SUBJECT: Maximum use of Civilian Communications Capabilities for National Security.

PURPOSE: To study the capabilities of civilian communications companies in the U.S., such as Bell System, RCA, Western Union, Press Wireless, with a view toward development of a plan for utilization of these facilities to provide a trained and qualified reservoir of communications personnel.

SCOPE: 


b. Importance and necessity for civilian assistance in securing and training of technical communications personnel in a national emergency.

c. Current efforts to institute "Affiliated" units in the Organized Reserve Corps; failure of these efforts to utilize the maximum available capabilities offered in this field.

d. Consolidate reactions of civilian leaders of companies approached in current Affiliation Plan as to possibility of extension of the Affiliation Plan to develop maximum potentialities.

e. Draw up a plan to serve as a basis for Department of the Army action, and possible joint Army-Navy-Air action, to obtain maximum use of these civilian communications capabilities for national security.

COORDINATE WITH OTHER ANALYTICAL STUDY SUBJECTS: (None).

REFERENCES:

C-14794
Affiliation Plan, Part I, II. WD 1 Nov 46.

Liaison Bulletin
No. 110
Public Information Division - "WD Affiliation Program" - 21 July 1947.

M-5-1033
History of Sig C Affiliated Plan - World War II - Aug 44.
STAFF STUDY 6-11

School of Logistics
Command & General Staff College
FORT LEAVENWORTH, KANSAS
26 May 1943.

SUBJECT: Maximum Use of Civilian Communications Capabilities For National Security.

1. PROBLEM: To recommend a plan for the maximum utilization of the capabilities of the civilian communications industry in providing trained and experienced technicians, specialists, and experts to meet Signal Corps wartime personnel requirements.

2. DISCUSSION:

   a. Basis: The civilian communications industry in the United States, with a plant value of over 7 billion dollars, employing over 1½ million skilled communications men, and rapidly expanding, is capable of furnishing sufficient skilled and experienced personnel in wartime to meet practically the entire Armed Forces and industrial requirements. (Annex 1).

   b. Background: Signal Corps experience in both recent Wars has demonstrated and proven the value and benefits of military utilization of civilian industrial trained and experienced technicians as implemented through the "Affiliation" principle. (Annex 2).

   c. Current Programs: Current programs leading toward a utilization of this civilian skilled manpower reservoir, principally through the "Affiliation Program", can ultimately utilize only a minor fraction of the segment of this group of personnel which would be available to the Armed Forces, in wartime. Current program limitations and implementing experiences indicate a definite need for a more comprehensive program of civilian skilled personnel utilization. (Annex 3).

   d. Conclusion:

      (1). Since there exists in the Signal Corps a positive wartime requirement for trained and skilled civilian
communications personnel; since there exists within the civilian communications industry a sufficient force of this category of personnel to meet practically all wartime manpower requirements; and since current programs provide for only a minor utilization of this civilian capability; — the urgency of the problem warrants consideration of a plan designed to achieve maximum utilization of this capability. (Annex 4).

(2). Such a plan is accordingly proposed; the "Proposed Affiliation Personnel Plan" envisages essentially a national manpower registration which provides for eventual registration, classification, training, and assignment of all U.S. manpower to appropriate National Defense category, thus achieving a maximum utilization of civilian communications capabilities for National Security. (Annex 5).

3. RECOMMENDATION: It is recommended that this "Proposed Affiliation Personnel Plan" be forwarded to the Chief Signal Officer, Department of the Army, Washington, D.C., for study and for necessary action leading to adoption.

WILLIAM E. HELTZEL
Lt. Col, Signal Corps

ANNEXES:

1. Civilian Communications Industrial Personnel Capabilities.
2. "Affiliation" Background.
3. Discussion of Current Civilian Personnel Utilization Programs.
4. Conclusion.
5. The "Proposed Affiliation Personnel Plan".
### Annex 1.

#### Civilian Communications Industrial Personnel Capabilities

<table>
<thead>
<tr>
<th>Industrial Activity</th>
<th>Yearly Plant Value</th>
<th>Yearly Revenue</th>
<th>Skilled Employees</th>
<th>Licensed Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common Carriers (1946):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>$6,685,000,000</td>
<td>$2,252,000,000</td>
<td>486,000</td>
<td></td>
</tr>
<tr>
<td>Telegraph</td>
<td>$362,000,000</td>
<td>$176,000,000</td>
<td>42,000</td>
<td></td>
</tr>
<tr>
<td>Radio (Public)</td>
<td>$34,000,000</td>
<td>$19,000,000</td>
<td>3,000</td>
<td></td>
</tr>
<tr>
<td>Ocean Cable</td>
<td>$96,000,000</td>
<td>$31,000,000</td>
<td>3,000</td>
<td></td>
</tr>
<tr>
<td><strong>Radio (1947):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broadcast</td>
<td>$108,000,000</td>
<td>$323,000,000</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td>375,000</td>
<td>341,000</td>
</tr>
<tr>
<td>Amateur</td>
<td></td>
<td></td>
<td>83,000</td>
<td>81,000</td>
</tr>
<tr>
<td>Aircraft</td>
<td></td>
<td></td>
<td>74,000</td>
<td>62,000</td>
</tr>
<tr>
<td><strong>Associated Communications Activities:</strong></td>
<td></td>
<td></td>
<td></td>
<td>560,000</td>
</tr>
<tr>
<td><strong>TOTALS:</strong></td>
<td></td>
<td></td>
<td>$7,285,000,000</td>
<td>$2,801,000,000</td>
</tr>
</tbody>
</table>

**Bell Telephone System (American Telephone & Telegraph Company)**

- **Incorporated assets:**
  - 1946: $7,380,000,000.00
  - 1947: $8,772,000,000.00
  - Gain, 1947 over 1946: 11.9%

- **Total Employees:**
  - 1946: 588,000
  - 1947: 663,000
  - Gain, 1947 over 1946: 12.7%
AFFILIATION BACKGROUND

All data and information on "Affiliation" background, covering the periods of World War I, the period 1920 to 1938, and the period of World War II, was extracted from the "History of The Signal Corps Affiliated Plan", prepared by the Military Personnel Branch, Personnel and Training Service, Office of the Chief Signal Officer, Washington, D.C., in August, 1944.

The following extracts from this document are quoted as being typical of the information contained:

"World War I experience clearly demonstrated that a Signal unit organized from the employees of a telephone company had an unusually high morale, was particularly efficient, and required only a minimum of training." (Page 14, Chapter I).

"World War II is a service war with American industry and research playing a most important part. Certainly to look forward to post-war planning for the Army, it would be shortsighted if this country failed to foresee and plan a still further improved Affiliation program. Such a plan should make sure that the organized reserves of the Army are not, as individuals, engaged in unrelated civilian activities. Instead, it should be as complete in the use of an industry's manpower in the war effort as it should be in the use of an industry's physical plant and equipment for the production of war supplies". (Page 4, Introduction).

- ANNEX 2 -

- 1 -
DISCUSSION OF CURRENT CIVILIAN PERSONNEL UTILIZATION PROGRAMS.

1. The War Department Affiliation Plan:
   a. The Plan: The War Department Affiliation Plan was released and became effective on 26 May 1947. This Plan established the War Department Affiliation Program: "the application of a plan which contemplates that civilian organizations will "sponsor" certain key service type units of the Organized Reserve Corps". The Affiliation Program is an integral part of the Organized Reserve Corps program; it is an application of the lessons learned from application of the affiliation principle in World Wars I and II. All policies are governed by the provisions of the current Organized Reserve Corps regulations and requirements are based on the current Organized Reserve Corps Troop Basis. Responsibility for accomplishing the act of affiliation (including the selection of and negotiations with all "sponsors") is assigned to chiefs of technical and administrative services for type units of their respective services, including comparable service units normally under the jurisdiction of an Army Ground Forces. Activation, expansion, and training of all units are the responsibility of Army Field Forces. The purpose of the Plan is to provide for civilian organizations to "sponsor" and provide trained and qualified personnel for military service units, thereby insuring the utilization of technically qualified personnel in assignments similar to those performed in civilian life.

b. Implementation: Pursuant to the provisions of the Plan, the Chief Signal Officer, War Department, inaugurated the Affiliation Program at a Signal Corps conference in the Pentagon, Washington, D.C., on 11 June 1947, attended by many of the leaders and representatives of the nation's communications industry, all potential sponsors. Since that date representatives of the Chief Signal Officer have visited and conferred with all potential sponsors concerning participation in this Program. Implementation delays are being experienced, the reasons for which include:

   (1). Restrictive ORC eligibility requirements.

- ANNEX 3 -
- 1 -
ANNEX 3 (CONTINUED)

(2) Excessive post-war industrial production problems.

(3) Natural hesitancy of ex-service personnel to join the Officers Reserve Corps and the Enlisted Reserve Corps.

(4) Participation voluntary to both parties.

(5) Limited benefits to civilian organizations.

c. Limitations: Based on current Organized Reserve Corps Troop Basis Signal Corps personnel requirements (classified), this program will, when ultimately and completely implemented, utilize less than 20% of the skilled communications personnel which would be lost by the industry to the Armed Forces in case of a major emergency, due to the following limitations:

(1) Only current Organized Reserve Corps Troop Basis units are involved.

(2) No "pools" or reserves of critical specialists are authorized.

(3) Sponsoring by units limits locations to larger cities.

(4) Membership eligibility requirements unduly restrict skilled personnel participation.

(5) Applicable only to Army and Air Forces.

2. The Organized Reserve Corps: There are within the Organized Reserve Corps Troop Basis certain Signal Corps units which have been determined not suitable for Affiliation, to include: Division Signal Company (Infantry, Armored, and Airborne), and Signal Company, Engineer Special Brigade, which, while not suitable for Affiliation, do have vacancies for certain skilled communications personnel. These vacancies may be filled by qualified personnel from industry; however, this is not a part of any plan, and even at maximum extent of such utilization could utilize only an insignificant percentage of this manpower reservoir. Under present Department of the Army consideration, for release in the near future, is a plan whereby, within the Organized Reserve
Corps, "composite groups" of reserve personnel (officer and enlisted) may be established by technical or administrative service for research and development, to operate under the Director of Research and Development, Logistics Division, Department of the Army. These groups will be limited, however, and will involve only a very limited number of any skilled group of personnel. It is contemplated that separate groups will be formed by several of the large civilian industrial organizations whose normal activities include research and development.

3. National Guard of the United States: While there are over 140 Signal Corps units authorized on the current National Guard Troop Basis, there exists no plan contemplating the utilization of qualified civilian personnel to fill appropriate vacancies. In some cases, however, this source of personnel is utilized. The extent of such utilization may ultimately absorb approximately 1% of the skilled communications personnel considered available to the Armed Forces in any major emergency.

4. Other: At the present time there are no other plans or programs in operation or contemplated for the utilization of skilled industrial communications personnel within the Army; there are no similar plans either in operation or contemplated by the Navy.
CONCLUSION

1. **Signal Corps Personnel Requirements:** Although the exact Signal Corps personnel requirements as based on the current Troop Basis cannot be quoted here, available published data on Signal Corps activities in World War II, and available data on the "Proposed Field Type Army" of the future, include:

   - Signal Corps strength, 7 Dec 1941: 55 officers, 345 Res O, 1570 EM.
   - Signal Corps strength 1944: 27,148 officers 275,000 EM.
   - Signal Corps school output WWII: 37,400 Off., 20,200 00., 375,000 EM.
   - Signal Corps training institutions included:
     - 6 Replacement Training Centers
     - 6 Service Schools
     - 4 Depot Schools
     - 3 Unit Training Centers
     - 30 Vocational & Industrial Schools & Colleges - Full Courses
     - 268 Civilian Schools and Colleges - Pre Service Training.

   **Signal Corps Personnel in the "Proposed Field Type Army":**

<table>
<thead>
<tr>
<th>OFFICERS</th>
<th>WARRANT O</th>
<th>ENLISTED</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Signal Corps</td>
<td>391</td>
<td>28</td>
<td>6738</td>
</tr>
<tr>
<td>Assume 70% skilled</td>
<td>275</td>
<td>20</td>
<td>6120</td>
</tr>
<tr>
<td>10 Field Armies (Assume for Combat Zone)</td>
<td></td>
<td></td>
<td>64,150</td>
</tr>
<tr>
<td>100% additional for Comm Z and ZI</td>
<td></td>
<td></td>
<td>64,150</td>
</tr>
</tbody>
</table>

   Total requirements, initial only, skilled, 1st year 128,300

2. **Conclusion:** Comparison of the data contained in paragraph 1 above with that contained in Annex 1, together with an assumed first year loss to the Armed Forces of skilled communications personnel from the industry of 250,000 (15% of 1,672,000), it can be determined that industry can well meet the entire Armed Forces requirements. An analysis of the factors of the many valuable months required by the Signal Corps to train such a number of unskilled personnel, as demonstrated in the last war; of the ready availability of the industrial reservoir of skilled and qualified personnel; of the years of extensive
planning necessary to implement any plan for military utilization of this skilled personnel; and of the limitations of current programs of such utilization—all place positive emphasis on the urgent need for some definite and comprehensive plan to achieve the maximum utilization by the Armed Forces and industry, during wartime, of the civilian communications industrial personnel capabilities.
THE "PROPOSED AFFILIATION PERSONNEL PLAN".

1. Purpose: The purpose of the Proposed Affiliation Personnel Plan is to outline the general plans necessary to execute the registration, classification, training, and assignment of all U.S. manpower to appropriate categories within a National Defense Troop Basis, in order to achieve the maximum utilization of all skills and professional abilities existing in the U.S. manpower structure in wartime.

2. Scope: This Plan is designed to involve all U.S. manpower; it is to be effective at the earliest possible date subsequent to the necessary Congressional enactment and Executive approval.

3. National Defense Troop Basis: As a foundation for this Plan there will be established a National Defense Troop Basis which will determine the proper and appropriate numbers of the available U.S. manpower by various skills and professions for assignment to several categories, to include: Armed Forces (Army, Navy, Air Forces), Industrial Force, Government Force, Agriculture Force, and Reserve Force (including all other). The first two categories of Armed Forces and Industrial Force will be designated as "Essential" categories.

4. Registration: This Plan will be initiated by a national registration of all U.S. manpower which will by appropriate and coordinated procedures establish an initial and continuing reporting of the training, abilities, and other desired data on all U.S. manpower.

5. Classification: All personnel thus registered will be classified as is found necessary and as determined by detailed requirements established by the National Defense Troop Basis. This procedure shall include the supervision of assignment of appropriate grades and ranks within each Force.

6. Assignment: All personnel thus classified will be appropriately assigned to one of the categories of National Defense, and thereafter each Force will continue appropriate assignment procedures to extents determined necessary, but to include detailed assignment for every individual in the "Essential" categories.
7. **Training:**

   a. A basic training program will be mandatory for all personnel of the "Essential" categories; this training will embrace essentially an orientation into the wartime responsibilities, duties, requirements, and organization of the "Essential" categories of personnel and will be conducted on a regular schedule (possibly monthly).

   b. An advanced training will be offered as an option to all personnel in the "Essential" categories; it will provide advancement through achievement, plus, to selected individuals, appropriate officer commissions and promotions in grade and rank.

   c. Training will be conducted by both civilian enterprises under Armed Forces supervision, and by the Armed Forces.

8. **Benefits:**

   a. Benefits will accrue to participating individuals by monetary payment for actual training time involved, plus assignment of appropriate grade or rank based on standardized criteria.

   b. Benefits will accrue to participating civilian organizations through tax and/or other considerations.

9. **Coordination and Standardization:** All procedures under this Plan will be accomplished through close coordination of all participants involved by appropriate joint boards and committees; all procedures will be standardized to the maximum extent compatible with efficient operation to permit complete latitude in individual desires to change classification and assignment.
ANNEX 6

BIBLIOGRAPHY


11. SIXTEENTH CENSUS OF THE UNITED STATES, POPULATION, VOLUME III,


14. OFFICER PROCUREMENT, War Department Circular 101, April 1947, as amended, to include all current Organized Reserve Corps and National Guard of the United States instructions and regulations.

15. WAR DEPARTMENT BASIC PLAN, dated 1 October 1946, as amended. (SECRET).

16. WAR DEPARTMENT "4-5 ARMY" TROOP BASIS, current. (SECRET).