

Recommended specifications in connection with the classification of civilian positions for employees performing cryptographic and cryptanalytic work.

1. The class specifications for positions as prescribed by the Personnel Classification Board only cover a few cryptographic duties and do not cover cryptanalytic duties whatsoever. In order that this office, which has cognizance of personnel performing such duties for the War Department, may have a plan to be guided by, the following general specifications are recommended. These recommendations correspond very closely with similar specifications already provided in the Personnel Classification Board pamphlet.

#### Cryptographic Work

2. Cryptographic work in government service can be generally divided into two classes:

- (a) Those performing straight cryptographic work such as deciphering, decoding, enciphering and encoding regular traffic. This class would also include those connected with the supervision of such work and those who prepare or assist in the preparation of codes and ciphers.
- (b) Those who perform cryptographic work in connection with the cryptanalytic activities of a research desk.

In the latter case the work is similar to, but not identical with, the work done by the first class, but is easily as important and difficult. In the latter class, due to the type of work involved, it will normally be essential that the person doing this cryptographic work must also be an excellent typist and be able to follow the work through more than is required of those in the first class.

3. The following specific classifications are recommended:

- (a) Assistant cryptographic clerk - CAF-3 - "Under immediate or general supervision, to perform cryptographic work commensurate with encoding and decoding telegrams in connection with the cryptanalytical research activity." (\$1620-\$1920)
- (b) Cryptographic clerk - CAF-4 - "Under immediate or general supervision, to perform responsible cryptographic work similar to that of reviewing and revising the encoding and decoding of telegrams, including the classification and certain cryptanalytic steps in code and cipher research work from a detailed outline in connection with the cryptanalytic research activity." (\$1800-\$2100)

- (c) Senior cryptographic clerk - CAF-5 - "Under general supervision, to perform difficult and responsible cryptographic work similar to preparing or assisting in the preparation of codes and ciphers such as performing independently all the cryptanalytic steps in code and cipher research work from a bare outline in connection with the cryptanalytic activity." (\$2000-\$2500)

Cryptanalytic Work

4. Work of this character is not covered in class specifications except that under the Scientist Group the performing of technical work in a mathematical science is covered. Work of this character is clearly of a scientific nature and should be classified as professional and scientific work.

5. The following specific classifications are recommended:

- (a) Cryptanalyst aid - SP-5 - "This position will be the normal starting point of a person with two years college work including courses in mathematics or equivalent training, who is entered immediately upon a special course of instruction for work as a technical assistant in cryptanalysis." (\$1800-\$2100)
- (b) Junior cryptanalyst - P-1 - "This position will be the normal starting point of a person with training equivalent represented by that of graduation with a degree from an institution of recognized standing with major work in mathematics, and with a good working knowledge of at least one foreign language, who is entered immediately upon a special course of instruction for work as a cryptanalyst." (\$2000-\$2500)
- (c) Assistant cryptanalyst - P-2 - "To perform under immediate or general supervision, independently or with a small number of subordinates, cryptanalytic work requiring previous experience and training, and, to a limited extent, the exercise of independent judgment." (\$2600-\$3100)
- (d) Associate cryptanalyst - P-3 - "To perform independently or with a small number of trained assistants, under general supervision but with considerable latitude in the exercise of independent judgment, responsible cryptanalytic work requiring extended training and considerable previous experience." (\$3200-\$3700)
- (e) Cryptanalyst - P-4 - "To perform, under general supervision, difficult and responsible work requiring considerable cryptanalytic training and experience, and the exercise of independent judgment." (\$3800-\$4400)

- (f) Senior cryptanalyst - P-5 - "To perform, under general administrative supervision, important cryptanalytic work requiring extended training and experience, the exercise of independent judgment, and the assumption of responsibility for results; or for the administration of a small organization engaged in cryptanalytic work." (\$4600-\$5200)
- (g) Principal cryptanalyst - P-6 - "To act as assistant head of a large organization engaged in cryptanalytic work, or to serve as a consulting specialist in connection with new machines and systems, or to devise new machines or systems independently." (\$5600-\$6400)
- (h) Head cryptanalyst - P-7 - "To act as administrative head of a large organization engaged in cryptanalytic work; or to act as professional consultant to a department head in connection with cryptanalytic work." (\$6500-\$7500)

6. It must be recognized that in work of this character no similar activity exists in civil life, and that it will be necessary in the government service to commence persons, in general, with a college education, in this kind of work and eventually train them for this duty.