

CIVILIAN EMPLOYMENT BOARD
~~CONFIDENTIAL~~ Held
 12 November 1947

AS-14

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PRESENT:

Major Jack K. Faulds
 Major Harold D. Jones
 Major Maurice K. Klein
 Lt. Lt. H. S. Buchanan

Mr. Harry L. Clark
 Mrs. Ethel Fish
 Dr. J. Kullback
 Mr. Alfred W. Rose
 Mr. Frank D. Rowlett

PROMOTIONS:

The following promotions were submitted to the Board for review:

Richard C. Hix
 From Electrical Engineer, P-4, O-RL-11-15 to
 Electrical Engineer, P-5, O-RL-13-118

Upon presentation of Mr. Hix's case, Mr. Rowlett made the motion that the action be approved. The motion was seconded and it was voted that the promotion was approved.

John L. Beckman
 From Electrical Engineer, P-3, O-RL-CC-8-1 to
 Electrical Engineer, P-4, O-RL-CC-9-3

Upon presentation of Mr. Beckman's case, Mr. Rowlett made the motion that the action be approved. The motion was seconded and it was voted that the promotion was approved.

Leigh A. Brite
 From Electrical Engineer, P-2, O-RL-CC-108 to
 Electrical Engineer, P-3, O-RL-CC-364-1

Upon presentation of Mr. Brite's case, Mr. Rowlett stated that there was no comparable person in the same competitive level therefore he recommended that the action be approved. The motion was seconded and it was voted that the promotion was approved.

THERE BEING NO FURTHER SUBJECTS FOR DISCUSSION, THE BOARD ADJOURNED AT 1008 HOURS.

John L. Sullivan
 JOHN L. SULLIVAN
 Chairman
 Civilian Employment Board

Declassified and approved for release by
 NSA on 04-17-2014 pursuant to E.O. 13526

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CIVILIAN EMPLOYMENT BOARD

AGENDA

For the meeting to be held 1300
Wednesday, 12 November 1947, RM 117 Ho.

(Mr. Sullivan's secretary is requested to attend to take minutes)

1. Review of promotions in critical grades

- (a) Richard C. Hix
Electrical Engineer, P-4, O-RL-IE-15 to
Electrical Engineer, P-5, O-RL-IE-118
- (b) John L. Beckman
Electrical Engineer, P-3, O-RL-CC-8-1 to
Electrical Engineer, P-4, O-RL-CC-9-3
- (c) Leigh A. Hrite
Electrical Engineer, P-2, O-RL-CC-108 to
Electrical Engineer, P-3, O-RL-CC-364-1

Declassified by NSA/CSS

Deputy Associate Director for Policy and Records

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On 20130910 by REM

HIX, RICHARD C.
Electrical Engineer, P-5

Duties and Responsibilities

Serves as assistant Chief, Intercept Equipment Branch, which is responsible for the design, development, and construction of equipment, peculiar to the mission of Army Security Agency, for detecting, identifying and intercepting signal communications and for use in controlling such activities and handling intercept traffic. Assists the Chief in the direction and control of the technical and administrative work and assumes his full duties in his absence.

A. Assists in planning and organizing the Branch development program.

1. Recommends to Branch Chief the initiation of research projects, recognizing need for carrying on basic research from knowledge of (a) problems encountered in current intercept and development work and (b) anticipated long-range requirements.

2. Conducts basic research program. On own initiative but subject to the approval of the Branch Chief makes changes in the course of the research and in the priorities assigned to the various problems to be investigated.

3. Serves as advisor to Branch Chief in the preparation of time and cost estimates for anticipated projects, including (a) projects initiated within and outside the Branch and (b) long-range plans as well as specific projects to meet current requirements. Is required to have considerable engineering experience and ability in order to evaluate the scope and complexity of new projects and draw conclusions as to the number of engineering hours required, number of laboratory hours, number of personnel and degree of ability, cost, adequacy of facilities, completion date. Makes detailed investigations, reports findings, and discusses estimates with Branch Chief who is responsible for making Branch recommendation as to whether project should be initiated.

4. Serves as advisor to Branch Chief in determining whether project should be undertaken locally or by contract. Makes investigation to determine time, cost, and facilities involved. As delegated by Branch Chief, makes initial contacts for awarding contracts to commercial concerns in order to discuss technical matters and to determine whether engineering personnel and plant facilities are adequate for handling contract. Reports findings to Branch Chief with recommendations.

B. Is directly responsible for making project assignments, reviewing, and coordinating the work on all projects under development within the Branch. Has full supervisory authority over branch personnel on all operational matters.

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HIX, RICHARD C.
Electrical Engineer, P-5

Duties and Responsibilities (Continued)

1. Establishes specific operating policies, practices, procedures and standards applicable to the work of the branch, e.g., specifies type of reports to be submitted by project engineers; engineering standards; production standards.

2. Makes assignments of projects to section heads subject to approval of Branch Chief, makes changes in organization and physical set-up of Branch to insure efficient operation in the light of changing conditions and assignments. Conducts long-range research project by making assignment (s) of major portions to section head(s) and coordinating the various projects into total research programs.

3. Reviews and approves plans made by section heads for approach to project assignment. Reviews projects during various developmental stages and advise subordinates on difficult aspects of the work, that is, on problems on which little previous research has been done, e.g., the various engineering and operational problems which must be considered in the design of a universal terminal equipment to receive many types of sequenced and interlaced time-division impulse transmission.

4. Reviews engineering reports, manuals, specifications, etc., submitted by section heads for approval of Branch Chief, Checks to insure that all aspects of the assignment have been covered; that explanations are adequate and clearly stated; and that conclusions and recommendations are feasible.

5. Trains subordinate engineers in techniques specifically applicable to intercept problems. Is responsible for the complete orientation of new personnel and for keeping all engineers informed of current developments which are pertinent. Holds meetings, conferences, and training classes as necessary.

6. Performs various administrative duties in addition to the supervision of current operations, such as investigating unusual priority supply problems, originating and answering correspondence on technical matters, preparing and reviewing efficiency ratings on engineers and laboratory mechanics.

C. Engages in liaison activities with (1) other Branches and divisions within the agency for the purpose of determining specific requirements and general trend in requirements for intercept equipment and (2) outside agencies, or Navy and Signal Corps for the exchange of information on related development work.

D. Prepares special reports and makes special investigations which do

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HIX, RICHARD C.
Electrical Engineer, P-5

Duties and Responsibilities (Continued)

not fall within the scope of a single section, e.g., recommendations, from an engineering and functional viewpoint as to whether centralized or local terminal equipment would more satisfactorily meet the requirements of the agency; report results of tests and developments to other laboratories (Navy, S. C.); make investigation and request information from outside concerns on their developments.

K. Serves on various technical committees and attends meetings within and outside agency on matters relating to the mission of the branch.

1. Serves as alternate member of the sub-committee on Intercept and D/F Operations of the Joint Army-Navy Committee, the purpose of which is to effect coordination of intercept activities among Army, Navy, and British.

2. Serves as member of Receiver Committee at Signal Corps Laboratories. Present agency's requirements for such equipment as would be adaptable to intercept.

3. As delegated, attends meetings of Signal Corps Technical Committee. Currently, the discussions are concerned with general trend of Signal Corps development work and standardization of equipment for the Army.

4. Serves as member of sub-committee on Intercept and Direction Finding of the Army Security Agency Technical Committee.

Qualifications:

a. Education - Degree in Electrical Engineering with major in communications or its equivalent in education and experience.

b. Experience - At least 4 years professional engineering experience in design, development and construction of radio communications and electronic equipment. Of these 4 years, one year concerned with design of antennas, transmission lines and receivers, one multiplex terminals, and one year's experience in the ASA concerned with the design and development of intercept equipment for the Agency. At least one year's experience in supervising and coordinating the efforts of several lower grade engineers and laboratory assistants, reviewing engineering reports, carrying on liaison, writing reports and correspondence. A head of a section in the Intercept Equipment Branch who has held that position for at least 1 year is eligible for the position of Assistant Branch Chief.

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John A. Beckman
Electrical Engineer, P-4

Duties and Responsibilities

Under the supervision of an engineer of higher grade, serves as project engineer for research and development problems of major importance and difficulty in the field of ciphony. Receives guidance concerning broad objectives and major engineering and administrative policies with final responsibility for the formulation of working plans, the devising or adaptation of methods, and the completion of assignment in accordance with technical standards. Coordinates all aspects of the work from initial statement of result desired to final solution of problem or final development of project under consideration.

- A. Directs broad research, development, and testing projects with responsibility for planning and completion and for the development of new techniques, not based upon established principles, to meet the technical problems involved in:
 1. Developing ciphony equipment to meet specific requirements necessitating the use of numerous and original electronic circuits, e.g., Speech Equipment, AN/CS-5.
 - a. Translates general characteristics into specific engineering problems and makes initial determinations as to method (or methods) of approach.
 - b. Constructs, tests, and modifies experimental models to establish operating principles and security features.
 - c. Designs final models to meet requirements of space, weight, constructional features, manufacturability, etc.
 - d. Supervises a small group of engineers and technicians engaged in designing, constructing, and testing.
 2. Testing developed models, analyzing performances, and recommending changes in the design and operation of equipment, e.g., Speech Equipment, AN/CS-5, which involves the proper operation of numerous types of special electronic circuits. Terminals are in 3 separate locations, each terminal weighs 4000 lbs. and contains approximately 750 tubes, and complete unit has monetary value of approximately \$3000,000.
 - a. Plans and directs testing program.
 - b. Devises tests and designs specialized apparatus for use in testing equipment.

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John A. Beckman
Electrical Engineer, P-4

Duties and Responsibilities (Continued)

- c. Analyzes results to determine acceptability of additional units, makes modifications, and, when feasible, recommends redesign.
 - d. Supervises a small group of engineers and technicians engaged in conducting tests and designing and constructing test equipment.
3. Conducting research studies of complex nature, investigating new methods of transmission and encipherment of speech to provide security, e.g., pulse techniques as applied to ciphony; frequency multiplying and frequency dividing of voice signals.
- a. Determines approach and, when necessary, makes assignment of sub-projects.
 - b. Designs, constructs, and tests experimental models.
 - c. Makes recommendations which serve as a basis for the development and construction of equipment to meet given set of military characteristics.
 - d. Supervises a small group of engineers and technicians when necessary to design, construct, and test components of equipment.
- B. Writes or supervises the preparation of engineering reports, including project history, results, and recommendations. Is responsible for the technical validity and adequacy of results.
- C. Writes specifications or supplies engineering information to be included in specifications for contracts with commercial concerns.
- D. Engages in liaison activities with: (1) commercial concerns developing equipment under contract to insure fulfillment of specifications; (2) Agencies engaged in related work, such as Navy, Bureau of Standards, for exchange of information; (3) using forces of other units of the Army Security Agency to supply information as to proper operation and maintenance, analyze performance records, and when necessary, recommend design changes to correct failures.
- E. Performs related duties in connection with:
- 1. Procurement of supplies and equipment.

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John A. Beckman
Electrical Engineer, P-4

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Duties and Responsibilities (Continued)

2. Review of technical reports.
3. Authorization of shop work.

F. May serve as sub-section head with responsibility for the technical supervision of subordinate engineers and, when necessary, for the administrative control over project engineers of the same grade. In the latter instance, serves chiefly as a reporting channel by making assignment of large-scale project and following up to insure completion upon date set without responsibility for validity and adequacy of results.

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SMITH, LEON A.
Electrical Engineer, P-3

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Duties and Responsibilities

Under general supervision of an electrical engineer, (P-5), performs professional engineering duties in the design and development of cifax equipment, (1) assuming responsibility for making independent decisions necessary for the completion of an assignment involving the application of known techniques and (2) referring to his superior all decisions about experimental techniques involving radical departure from established practice.

Is responsible for a small project or for one phase of a large project conducted by a project engineer or section head (Example 1. Design electro-magnetic portion of geared timing mechanism for key generators. Example 2. Re-design any of SFB-3 necessary to increase operating efficiency. Receives assignment in the form of statement of specific conditions to be satisfied by circuit or device or outline of objectives to be attained, (e.g., precise timing, constant amplitude, proper wave shape, limited as to power requirement and weight) with a suggested method of solution or a general plan of attack. Is responsible for planning the details of methods and procedures to be used in carrying through to completion assigned project involving design, testing, analyzing results, and making recommendations. Work is reviewed for technical validity, adequacy, and adherence to general methods and objectives. Performs or supervises the work involved in the various phases of development of a typical project. E.g., Redesign of SFB-3.

1. Discusses problems with section head or higher grade engineer to clarify requirements and recommend solutions.

2. Develops equipment or components of equipment usually requiring the use of complex circuits.

a. Plans specific working methods. Usually makes detailed block and schematic diagrams. Determines specific limitations, investigates new developments to detect useful techniques, and makes tests and calculations to analyze and evaluate experimental techniques. Devises test procedures and determines course of development work from evaluation of results. Must have thorough knowledge of electronic and electro-mechanical principles in order to amplify and implement general suggestions for solution.

b. Designs novel and critical portions, e.g., electro-magnetic circuits necessitating the use of components with extremely close tolerances and/or synchronizing circuits with critical requirements. Circuits must meet many specialized requirements, and often necessitate the experimental use of newly-developed circuit components.

c. Is responsible for the building and testing of experimental and/or prototype models. May supervise engineers and lab mechanics in this work.

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BRITS, LEON A.
Electrical Engineer, P-3

Duties and Responsibilities (Continued)

1. Plans the most suitable layout, considering ease of operation, maintenance, and adaptation. Provides the necessary drawings and supervises construction.

2. Plans and supervises testing. Develops specialized test equipment as needed (e.g., error counter for SPN-3). Conducts tests during various stages of development and upon completion of project.

3. Analyzes test results and makes design changes to improve performance. Determines whether or not finished model meets project objective.

d. As necessary, writes engineering reports, makes recommendations relative to engineering policy (e.g., acceptability of final model from contractor), prepares specifications, and provides instructions for operation and maintenance of equipment.

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