

OUTLINE OF COURSE

(Four periods of 50 minutes each)

First Period - - - 50 Minutes

Aug 1 w/7
H. Bickel

**Estimated
Time Re-
quired
(Minutes)**

- I. "MAGIC" - "The Effect"
(A recital of about 10 or 12 dramatic incidents and cases wherein the results obtained by signal intelligence or communications security played the principal role). 15
- II. "The Cause" - or how it's done. 15
1. Signal intelligence - the central clue. Reasons for withholding publicity.
 2. Very brief history of cryptography and cryptanalysis, but going back only to World War I.
 3. How the responsibilities and activities were scattered through several agencies after World War I.
 4. Necessity for integration -
 - a. In respect to cryptanalytic activities.
 - b. In respect to cryptographic activities.
 - c. In respect to both activities, because of interaction on each other.
 - d. Brief statement of how the necessary integration was brought about by 6 Sept. 1945 directive.
- III. Signal Intelligence Operations - General
1. Introductory
 - a. Signal intelligence is only one of the several kinds of intelligence.
 - b. Comparison of reliability, timeliness, and cost of signal intelligence with the same factors in the case of other kinds of intelligence.
 - c. Necessity for occasional checking with information from other sources.
 2. Operations involved in obtaining signal intelligence.

Estimated
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quired
(Minutes)

- a. Interception
 - b. Traffic analysis
 - c. Cryptanalysis
 - d. Translation
 - e. Processing on large scale ("Assembly-line" De-
cryption and translation).
 - f. Publication
 - g. Evaluation and dissemination-the responsibility
and function of Intelligence.
3. "Fusion" or "Regenerative" effects of the respective
operations - how they affect one another.

20

Total Minutes

50

Second Period - - - 50 Minutes

Estimated
Time Re-
quired
(Minutes)

IV Intercept Operations.

- 1 General or introductory--(Operating data-freq, calls, schedules, types of nets and workings, radio procedures, operators chatter, D/F, RFP, Tina, other collateral information)
2. Strategic and tactical intercept (Differences and similarities Difficulties in fixing line of demarcation between functions and activities at fixed and mobile stations)
- 3 Primary bases of and factors in interception efficiency
- 4 How the ASA Officer and the Intelligence Officer can be of assistance to each other in this phase 10

V. Traffic Analysis

1. Introductory-an analogy to make clear what it is about
2. Techniques
3. How traffic analysis and cryptanalysis assist and affect each other
4. The importance of traffic analysis when cryptanalysis is unsuccessful.
- 5 The intelligence derivable from traffic analysis--its limitations, dangers, and possibilities. 10

VI. Cryptanalysis

1. Introductory remarks - Progress made in last 25 years
- 2 High level (or strategic) vs medium and low-level (or tactical) cryptanalytic operations
3. Size and nature of organizations required for efficiency.
- 4 Requirements in regard to space, communications facilities, special machinery, and specialist personnel
5. Priorities and intercept control (How priorities are determined by the relationships among intelligence, T/A, C/A)
- 6 Special role played by rapid communications in successful signal intelligence operations
- 7 How the ASA Officer and the Intelligence Officer can be of mutual assistance in the production and most effective use of signal intelligence 30

Total Minutes

50

Third Period - - - 50 Minutes

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quired
(Minutes)

VII Communications Security-The other of the Siamese Twins.

- 1 Introductory scope, definitions and components of communications security
- 2 Importance of communications security in modern signal communications, and a few examples of insecurity and their consequences
- 3 Communications security is a responsibility of command
4. Responsibilities of Intelligence Officer
- 5 Responsibilities of ASA Officer.
6. Security measures physical security, cryptographic security-authorized codes and ciphers when properly used give adequate security, transmission security
- 7 Different levels of security: high-grade; medium-grade, low-grade
- 8 Modern crypto-mechanisms, their possibilities and limitations, effects of misuse, necessity for indoctrination and training.
9. Problems of plain language transmissions and approved circuits
- 10 Problems of coordination in Joint and Combined communications
11. Evaluation of our security as seen through TICOM operations
12. Tactical traffic of small units-where most of present-day insecurity arises
- 13 How the Intelligence Officer can assist 40

VIII. Friendly traffic analysis, cover, and deception.

1. Effect of our knowledge of T/A techniques on our own security
2. Strategical and tactical T/A
3. Cover and deception
- 4 Coordination required.
- 5 Examples of accomplishments. 10

Total Minutes

50

Fourth Period - - - 50 Minutes

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quired
(Minutes)

IX. The Army Security Agency

1. Functions and responsibilities
2. How it operates in Z/I.
3. How it operates in theaters
4. How it coordinates and integrates
5. Liaison activities

X. Summary, conclusions, and informal discussion

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1. Emphasis on limitations, pitfalls, and dangers, but assurance of value and validity of successful signal intelligence operations.
2. The role played by good evaluation and dissemination.
3. Necessity for protection of sources of signal intelligence, effects of poor communications security on signal intelligence success.
4. Security regulations for protection of ultra.
5. Security regulations for protection of our own communications

30

Total Minutes

50

Outline of Course

(1)

I. "The Effect"

(Recital of dramatic incidents and cases wherein
and communications security
signal intelligence played the primary role)

- 1 Japanese convoy
- 2 Coral Sea and Midway
- 3 Platinium
- 4 Apprehension of spies and secret agents
- 5 Landings (Forch + Overlord) - their secrecy, ^{deception} signet ~~found~~
6. Yamamoto trip vs Roosevelt's journeys
7. Patton's swing
8. El Alamein
9. Combined Naval Cypher No. 3
10. Destruction of factory making Uncle D.
11. Pearl Harbor - Marshall-Dewey letter