

~~TOP SECRET ULTRA~~OUTLINE OF COURSE

(Four periods of 50 minutes each)

First Period - - - 50 Minutes

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).
- II. "The Cause" - or how it's done.
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. *Responsibilities of Int Officer*
    - b. Signal intelligence is only one of the several kinds of intelligence.
    - c. Comparison of reliability, timeliness, and cost of signal intelligence with the same factors in the case of other kinds of intelligence.
    - d. Necessity for occasional checking with information from other sources.
    - e. *Responsibilities of ASA officer*
  2. Operations involved in obtaining signal intelligence.

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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
4. *head for security to provide & discuss*

Total Minutes

50

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Second Period - - - 50 Minutes

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Time Re-  
quired  
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## IV. Intercept Operations.

- Info from other memos - RCTG p.5*
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.

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## 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.

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## 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.

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## Third Period - - - 50 Minutes

Estimate  
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quired  
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## 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.

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## 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.

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*See for  
manuscript  
+ see  
introduction  
@ Crypt-  
see of the*

## Fourth Period - - - 50 Minutes

Estimated  
Time Re-  
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.

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