

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Due
FROM : 123
SUBJECT: attached

DATE: 2 Oct 51

IK2/1
00359

Proposed memo for Chairman, SECCOM

Attached.

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X

MEMO ROUTING SLIP		USE FOR APPROVALS, DISAPPROVALS, CONCURRENCES, OR SIMILAR ACTIONS	
1 NAME OR TITLE <i>123</i>	INITIALS		CIRCULATE
ORGANIZATION AND LOCATION	DATE		COORDINATION
2			FILE
			INFORMATION
3			NECESSARY ACTION
			NOTE AND RETURN
4			SEE ME
			SIGNATURE

REMARKS

I was in the act of preparing a memo for the Security Committee relative to the safe carrier for COMINT material when the attached memo from O3 was received.

Please review my memo with a view towards referring the O3 proposals to the Committee for comment and recommendations on guidelines of the development.

FROM NAME OR TITLE <i>Sifgener</i>	DATE <i>1 Oct 57</i>
ORGANIZATION AND LOCATION <i>O3</i>	TELEPHONE <i>Jones</i>

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1 OCT 1951)

Memo for the USCIB Security Committee

SUBJECT: Development of Safe Carrier for Conveyance of
COMINT Materials by Air Transport.

1. USCIB recently authorized, on an interim basis, the conveyance of COMINT materials by air over third party territory to certain U.S. commanders in Europe. In connection with this authorization, the Director, AFSA, was requested to initiate a project to develop a safe carrier which would minimize the risk of compromising classified material in the event of a plane crash or forced landing, and at the same time would not involve extra jeopardy to the plane through malfunctioning.

2. In order to ensure that the problem is correctly presented to the development engineers, the Security Committee is requested to formulate a statement of specific requirements which must be met to provide consumers with a practical carrier for the dissemination of COMINT products by air. The statement, in addition to other specifications considered appropriate by the Committee, should indicate, the type of documents which must be conveyed, the minimum size of the carrier; and whether or not photographic processes can be utilized. Careful consideration should be given to the latter question, as previous investigations have indicated possibilities that reduce hazards to this plane.

cc: Duc.

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21 September 1951

Recommendations

I. Microfilm.

- a. Material to be transmitted would be photographed on microfilm, but not developed at point of origin.
- b. Undeveloped film loaded in courier box in dark room.
- c. Microfilm courier box provided with film blanking means (photo flash bulbs) triggered by:
 1. Excessive shock (plane crash).
 2. Unauthorized opening, i.e., without working combination.
 3. At will of courier.
- d. Film removed at destination in dark room and developed and printed.
- e. Special courier box must be developed and procured.

Advantages:

1. Any type of copy possible.
2. Multiple prints at destination possible.
3. Most of equipment standard - courier box simple and light - no physical hazard to personnel or materiel.

Disadvantages:

1. Requires processing, time, materials, facilities, personnel.
2. Unauthorized reading difficult, but possible, especially with connivance of courier. Would require trustworthy courier.

II. Magnetic Tape.

- a. Material to be transmitted would be recorded on magnetic tape, from a teletype, (or voice).
- b. Courier box provided with erasing means triggered by:
 1. Excessive shock (plane crash).
 2. Unauthorized opening, i.e., without working combination.
 3. At will of courier.

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- c. Magnetic tape played back into teletype copy at destination.
- d. One 7" roll of 1/4 in. tape would take 40,000 words.
- e. Special courier box must be developed and procured.

Advantages:

- 1. Most of equipment standard - processing does not require dark rooms and chemicals, etc.
- 2. Courier box simple and light. No physical hazard to personnel or materiel.

Disadvantages:

- 1. Requires preparation, time, materials, facilities, personnel.
- 2. Type of copy limited to teletype, voice, and possibly facsimile.
- 3. Unauthorized reading difficult, but possible, especially with connivance of courier. Would require trustworthy courier.

III. Dissolving Paper.

- a. Material would be recorded on special paper, by typing, etc.
- b. Courier box provided with solvent which comes in contact with paper when triggered by:
 - 1. Excessive shock (plane crash).
 - 2. Unauthorized opening, i.e., without combination.
 - 3. At will of courier.
- c. Special courier box must be developed and procured.

Advantages:

- 1. Any written copy possible.
- 2. No special processing equipment required, courier box would be simple and light - relatively little physical hazard to personnel or materiel.

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Disadvantages:

1. Requires processing all data onto special paper.
2. Destructor action might take 10-15 minutes.
3. Unauthorized reading difficult, but possible, especially with connivance of courier. Requires trustworthy courier.
4. Requires manufacture and procurement of special paper.
5. Requires reproduction on receiving end since special paper cannot be handled in normal fashion.

IV. Incendiary.

a. Ordinary paper of all types interleaved with sodium nitrate and set off by thermite triggered by:

1. Excessive shock (plane crash).
2. Unauthorized opening without combination.
3. At will of courier.

b. Special courier box must be developed and procured.

Advantages:

1. No processing required except for packing courier box.
2. Any paper, plus a reasonable number of non-paper (burnable or meltable objects) can be transmitted.

Disadvantages:

1. Unauthorized reading difficult, but possible, especially with connivance of courier.
2. HAZARDOUS. Even if a special fire proof box is built to house the paper and destructor, there would be a positive danger to personnel and aircraft especially during emergency landings which would not be a security risk; i.e., landing gear collapse at an authorized stop.

V. Cryptographic.

a. The material is enciphered at the sending end and recorded on teletype tape.

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- b. Teletype tape is deciphered automatically at destination.
- c. One roll of teletype tape holds 20,000 words.

Advantages:

- 1. No new equipment or facilities need be developed. No special courier box necessary.
- 2. If properly enciphered using a secure machine or one-time tape, the material is tamperproof and a courier in the full sense of the word is not necessary.
- 3. System could be effective as soon as key tapes and machines are distributed.

Disadvantages:

- 1. Requires processing, time, material, personnel and equipment.
- 2. Only data reducible to teletype signals can be transmitted.

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