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COINS Paper before 67

CODIB SUPPORT STAFF

CODIB-D-113/4.2
14 July 1966

UNITED STATES INTELLIGENCE BOARD
COMMITTEE ON DOCUMENTATION

Draft CODIB Report to USIB re the Community On-Line
Intelligence System (COINS) Implementation Plan

Attached is a draft, prepared by the CODIB Support Staff, of a CODIB report to USIB re the COINS Implementation Plan. The Chairman is anxious to get this item on a USIB agenda as soon as possible. Unless some of the CODIB members desire CODIB discussion of this draft, we shall not schedule a meeting to consider it. May we have your approval/comments by CoB 28 July 1966.

[Redacted Signature Box]

Acting Secretary

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Community On-Line Intelligence System (COINS)
Implementation Plan

- References:
- a. Mr. Clifford's Memorandum of 15 June 1965 for the President
 - b. Mr. Bundy's Memorandum of 15 July 1965 for the DCI
 - c. DCI Memorandum of 2 October 1965 for the Special Assistant to the President, National Security Affairs, and the Chairman, President's Foreign Intelligence Advisory Board
 - d. Community On-Line Intelligence System (COINS) Implementation Plan (CODIB-D-113/4.1, 25 May 1966, attached)
 - e. CODIB Minutes M-64 (paras. 6-14), M-67 (para. 7), M-68 (paras. 9-16)

A. Background

This report and the appended COINS Implementation Plan are forwarded pursuant to DCI tasking and are responsive to those portions of references (a), (b), and (c) regarding the expansion of the NSA Technical Information Processing System (TIPS) concept into a Community-wide experiment. The Implementation Plan has been prepared by the CODIB Working Group on PFIAB Recommendation Two chaired by a representative of NSA and participated in by representatives of CIA, DIA, State, and NPIC. The objective of the Working Group was the implementation of the following PFIAB recommendation:

That the Technical Information Processing System (TIPS) project, now underway within the National Security Agency, be expanded to include participation by other member agencies of the intelligence community in an experimental operating

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system constituting a first step toward interagency (and interbuilding) information handling. Since results should be sought from the experiment as promptly as feasible, the participation of other agencies should be achieved by September of 1965; the capability for extensive handling of [redacted] should be available in the community-wide system by the summer of 1966; and by the summer of 1967 it should be possible to exchange outputs from various mechanized sources in the fashion pioneered by the TIPS project.

B. Summary of Working Group Findings

1. General Concept

The Working Group has operated on the concept that COINS, while not designed to solve all of the interagency problems of information retrieval and information exchange, will give each participating agency an initial capability to remotely interrogate its own file(s) as well as selected files of other participating agencies. This concept calls for each participating agency to maintain its COINS files in its own information retrieval computer system which is connected by secure data links to the computer systems of other participants in the COINS network. COINS will operate on formatted files, as opposed to narrative text files, and may include the formatted indices to narrative text files, biographic dossiers, finished intelligence files, micro-film or video-film images, and documents. Each agency will establish and maintain those files for which it is responsible or for which it is best suited. The COINS data link will be augmented by the planned secure high-speed facsimile system in the Washington area whenever the response to a COINS interrogation leads to a document, biographic dossier, or other non-formatted file.

2. Ultimate Objectives

COINS is aimed at reducing the Community's duplication of effort in establishing and maintaining EDP programs and formatted files; improving the Community's capability for timely exploitation and utilization of available intelligence; providing a high degree of flexibility in managing, selecting, collating, and distributing intelligence information; improving the utilization, effectiveness and efficiency of EDP equipment, manpower and time; and establishing a technological and security base for the development of more sophisticated and dynamic follow-on intelligence information handling networks.

3. Concept Implementation Phasing

a. COINS I (December 1966-June 1967)

This phase of COINS will use the existing computer systems, upgraded as necessary, at NSA, CIA, NPIC and DIA with State

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Department having a remote (interrogation only) station tied into the DIA computer system. This phase will be oriented to gaining technical experience and improving community information interchange as prerequisites to the development of more sophisticated systems. COINS I computer complexes, remote stations and communications links will be protected to the TOP SECRET SI level with each agency responsible for its own internal security with respect to system hardware and software.

b. COINS II (FY-68)

The follow-on to COINS I will depend largely upon each agency's experience and assessment of the initial effort; however, it is estimated that COINS II will require, as a basic minimum, a self-scheduling remote access computer system at each agency using a common interrogation and communication language and linked through a CIA installed and staffed communications store-and-forward switch.

4. COINS I Implementation

a. Files

Following are the files which each agency has decided to make available initially for the COINS I experiment:

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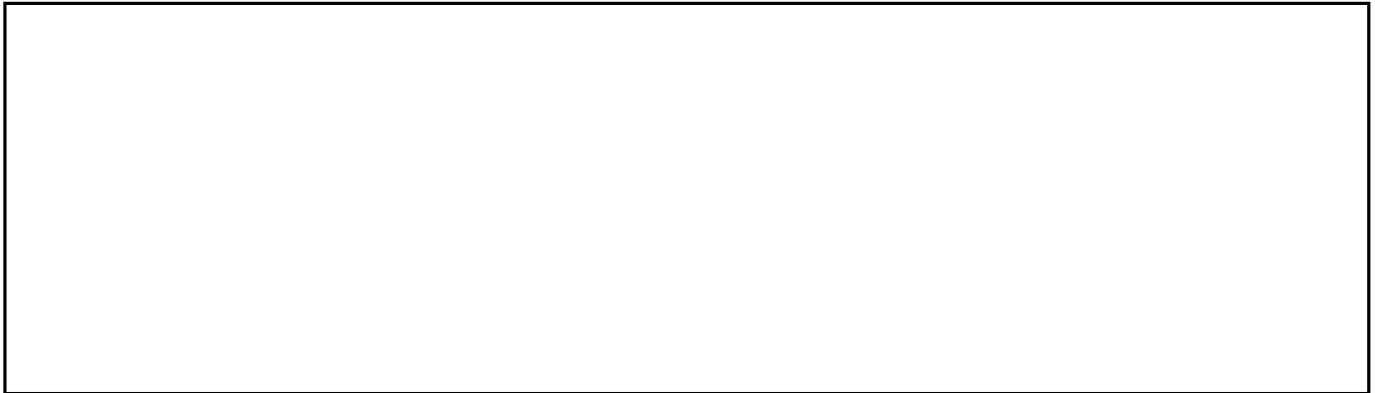
State

None. State Department will participate as a consumer in COINS I and, through a remote station tied into the DIA computer system, will have an interrogation capability only.

Upon approval of the Implementation Plan, immediate steps will be taken to establish standard data elements for the COINS I files. Whenever standardization cannot be achieved, translation tables will be constructed to translate between standard and non-standard data elements. Each agency will be responsible for organizing, formatting and maintaining its own files and for keeping other participating agencies advised of changes.

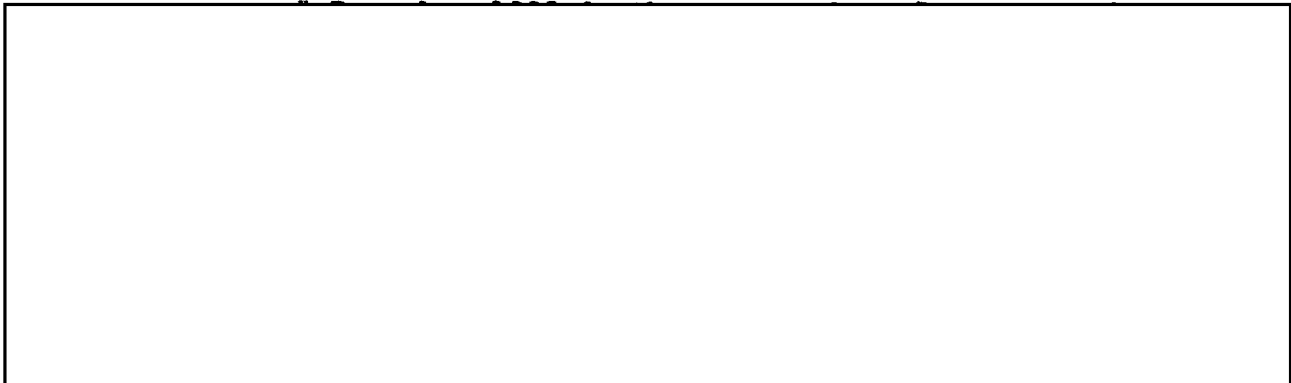
b. Communications

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c. Timing

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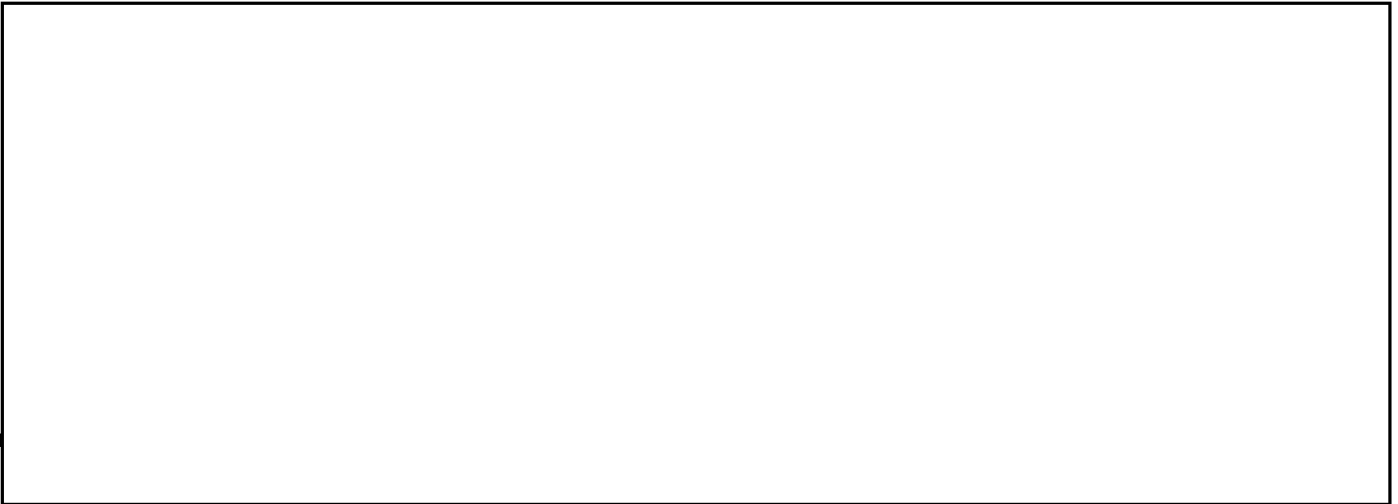
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d. Responsibilities and Costs

(1) Each agency will be expected to provide the funds and manpower necessary to acquire the hardware or produce the software required to implement COINS I by 1 December 1966. The table below shows the estimated costs of implementing COINS I over and above those current or planned for each agency's computer system.

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COINS I IMPLEMENTATION COST ESTIMATES



(2) The communications and cryptographic equipment for each terminal will cost [redacted] Each agency is expected to provide its own terminal equipment which, it appears, can be provided from existing resources without the need for initiating any procurement action. DIA will fund the cost, [redacted] per month, of renting the data link communications circuits. State will pay the cost of renting the 100 word per minute teletype line from DIA to State Department, as well as the cost of procuring and installing their remote station.

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5. COINS I Evaluation

a. A technical evaluation of COINS I will be submitted approximately six to nine months after system implementation. This

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date may slip if the initial files selected do not provide an adequate base for operational evaluation, and new files have to be added in order to establish such a base.

b. The technical evaluation program will be an integral part of COINS I from the beginning of system operation and will be continuously supervised by the COINS Working Group under CODIB. Much of the quantitative data required for the evaluation program will be produced automatically by the computers within the COINS I network. System logs, maintained automatically by each agency's computer, will provide data on the load and activity within the agency. The computer handling the communications switch will automatically generate a chronological list of all activity within the network so that characteristics such as total number of messages sent per day, number of messages per agency, peak loads, and message queue lengths can be derived.

c. Simulation techniques will be used whenever possible to assist the evaluation program and to aid in solving some of the early design and test problems of COINS I before significant operational data have been accumulated.

C. CODIB Comment

1. The COINS Implementation Plan is technically sound, economically feasible, and realistically responsive to the PFIAB recommendation. The plan makes maximum use of existing capabilities, thus, minimizing the time and cost required for new developments needed to initiate the Intelligence Community's first practical experiment in exploiting the powers of the digital computer and high speed communications to solve interagency information handling problems.

2. Although there are technical problems to be solved, the ultimate success of COINS I is dependent upon the solution of non-technical problems such as data element and data representation standardization, information utility, and analyst confidence in the system which supports him. The Implementation Plan recognizes the importance of such non-technical problems and establishes a framework for the solution.

a. In the area of standardized data elements and representations, COINS will use whatever standards exist or may be adopted by USIB. COINS will depend upon the CODIB Subcommittee on Standardization (now being established) for assistance in the development of new standards. (The CODIB Subcommittee on Standardization will perform the work outlined in Chapter I, paragraph 10, Recommendations a and b, of the Implementation Plan.) Wherever standards gaps exist which cannot be solved on a Community basis in time to avoid slowing COINS I progress,

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the participating agencies will adopt special standards which are limited to COINS and which are not binding on the other files of the individual agencies. Translation tables will be used only for those areas where standardization cannot be achieved.

b. Information utility and analyst confidence in the system are being fostered through care in the selection of operational files and attention to the simplification of procedures for using the system.

(1) Some CODIB members, notably DIA and State, although not questioning the technical feasibility of COINS, have expressed doubts that the files initially selected for COINS I will be really valuable to analysts. Those who support this position fear that poorly selected files will discourage use of the system and may doom the COINS I experiment to failure. The opposite view is that initial file selection is not critical because COINS I is confronted by technical problems which must be solved in order to establish an initial operating capability and give the analyst some experience in using this kind of system. Those who support this view believe that the files initially nominated are primarily for experimental use in solving system technical problems, and that more pertinent and valuable files can be added whenever an agency desires to do so. The number and types of new files to be added to COINS I will depend heavily upon analyst confidence in the system which, in turn, will be dependent upon success in solving technical problems. All CODIB members are agreed that strong, continuous management involvement by each agency will be required to keep COINS files dynamic and useful.

(2) Care has been exercised in keeping the analyst a central figure in system design; however, it is unrealistic to suppose that all analyst needs have been anticipated and provided for in the initial design. Consequently, analyst confidence in and effective use of COINS will remain the primary goals of the experiment. Analyst confidence in the system must be actively encouraged through continuous adjustment of the system to simplify its use and increase its responsiveness to analyst needs.

3. It should be noted that actual implementation steps such as file preparation, programming, and procurement and installation of equipment will not be undertaken until the Implementation Plan has received USIB approval. The implementation steps listed require a five to six month lead time. While awaiting final approval of the Implementation Plan and to insure meeting the 1 December 1966 target date, the Working Group will continue necessary detailed planning in the areas of communication engineering specifications, message format and exchange procedures, file specifications and standards, and simulation and evaluation procedures.

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D. Recommendations

It is recommended that USIB:

- 1. Approve the COINS Implementation Plan.**
- 2. Endorse the COINS experiment as a high priority Community effort.**
- 3. Request the participating agencies to provide the required resources to implement the plan.**
- 4. Request the participating agencies to establish procedures for selection of files and for updating the data contained therein so as to keep the system dynamic and responsive to user needs.**
- 5. Require quarterly progress reports.**

[Redacted Signature]

Chairman

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