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COINS BRIEFING FOR
WASHINGTON PROCEDURES COORDINATING COMMITTEE

8 November 1967

INTRODUCTION

During the next fifteen minutes I will describe the Communi On-Line Intelligence System (COINS) experiment and discuss its present status and projected achievements over the next few month

You are free to ask questions at any time during the brief.

BACKGROUND

Let's consider briefly the origins of the COINS experiment because an understanding of the beginnings of the effort is necessary for a clear appreciation of what has happened over the past two y

In July 1965, the President approved and sent to the Direct of Central Intelligence a recommendation of the Presiden's Fore Intelligence Advisory Board (PFIAB) to the effect that the intelligence community should mount an experiment in interag and interbuilding information handling. Specifically, the recommend stated that the NSA Technical Information Processing System (TIPS would be expanded to include participation by other member agenc of the intelligence community in an experimental operating syste

constituting a first step toward interagency and interbuilding information handling. The PFIAB specified that a capability for extensive handling of the Russain biography problem should be available in the community-wide system by the summer of 1966, and that by the summer of 1967 it should be possible to exchange outputs from various mechanized sources in the fashion pioneered by NSA's TIPS project.

Responsibility for the experiment was given to the Committee on Documentation of the United States Intelligence Board. A working group chaired by an NSA representative and comprised of members from CIA, DIA, NPIC and STATE was formed to handle the technical details of planning and conducting the experiment.

Early planning for the experiment was aimed at a simplified but direct response to the PFIAB recommendation. Under this approach, each participating agency would have provided a copy of its Russian biographic files, in machine language form, to NSA for inclusion in the TIPS library of files. Each participant would then have been connected via remote console and data transmission lines to the TIPS system thus becoming, in effect, just another subscriber in the TIPS network. In this mode, there would have been one central computer system and file library with multiple query stations.

This approach had to be abandoned when NSA, because of the inability of TIPS to provide adequate security compartmentation of the COINS files from the NSA sensitive technical information files, announced that all COINS terminals would have to be located within the NSA Operations Building. This led to adoption of what we call the multi-computer lash-up. This plan, the one we are now trying to implement, calls for a network in which the computer systems of the participants are connected via data link to a central communications switch computer located at DIA, [redacted] Each agency mounts its COINS files on its own computer system which can then be interrogated by any other authorized participant in the network.

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STATUS

The COINS experiment is now at least two years behind schedule, i.e., it will be at least the summer of 1968 before we achieve the capability to handle Russian biographic information in a manner resembling that which the PFIAB said should be achieved by the summer of 1966.

Let's consider briefly the present status of the individual components comprising the COINS experiment:

1. HARDWARE

a. [redacted] is now installed at DIA/[redacted]. This switch has been undergoing test and refinement since late 1966.

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b. NSA and DIA computer systems have been connected by a secure 300 character per second data link to the switch computer since December 1966. The first test message was transmitted in this circuit in February 1967. The first successful round robin test of interrogational cycles between remote terminals of NSA and DIA using an unclassified data file occurred in April 1967. The DIA-NSA link became operational, in a qualified sense, on 1 November 1967. The link is not up on a 24 hour schedule although it can be scheduled at any time required. Reportedly, DIA and NSA are experiencing difficulties in getting both computers operational at the same time.

c. CIA and NPIC computer hardware is in place; however, the hook-up to the switch computer cannot be made until after 1 March 1968 because of DIA's work on expanding its communications center.

d. The remote query stations for each participant are either installed or on schedule.

2. COMPUTER SOFTWARE

Computer programming for COINS is either completed, in the case of DIA and NSA, or on schedule in the case of other participants.

3. COINS DATA FILES

a. Some 25 information files have been made available for use in the COINS experiment. The principal files are:

NSA - FPN & PERSONALITIES
MILITARY PERSONALITIES
S & T PERSONALITIES

DIA - ORDER OF BATTLE
VIET NAM ACTIVITY FILES
MILITARY PERSONALITIES
SOVIET AIRFIELDS (Joint with NSA)

NPIC - TARGET BRIEF FILE

CIA - SOVIET ELITE FILE
CHINA LOCATION DICTIONARY
CHINA ORGANIZATION DICTIONARY

b. Generally, these files are either ready now for COINS or will be ready by the time the full COINS network is operational. In the case of several of the files, detailed descriptions have to be prepared for use in training personnel in the use of COINS.

4. PERSONNEL TRAINING

a. The COINS experiment has two principal characteristics which make an extensive personnel training program an essential prerequisite. First, COINS has a capability to handle only file-oriented interrogations (as opposed to subject - oriented interrogations). This means that the analyst wanting to query a particular file must know precisely the structure, content, code conventions, data elements, etc., for the particular file. Second,

because COINS is an amalgamation of computer systems developed independently by each of the participating agencies, there is no common query language or procedure for retrieving information fro the files. This condition means that the analyst wanting to use the system must have a detailed knowledge of the query procedures used in the computer system containing the file he wants to interrogate.

b. Training in these two areas is underway. ~~and has been completed between NSA and~~ DIA. A significant training effort remains to be completed involving ~~other~~ all participants in COINS. It should be possible to complete this training by the time the network is completed next spring. Currently, DIA and NSA have exchanged standard queries which can be run against each other's system. Until training has been accomplished, there can be no real or free-choice queries.

5. OTHER WORK

a. The COINS Committee has four ad hoc panels working on individual COINS tasks and problems. The Airfield Panel is working on an integration of the DIA and NSA airfield files into a single file for use in COINS. The Remote Computer Transmission Panel is concerned withthe technical aspects of computer and communications switch interface. The work of this panel is largely completed now that DIA and NSA are linked together through the communications switch: of course, it will continue refinement and modification of the switch as other participants are connected and

operational experience is gained. The COINS Evaluation Panel has had only a couple of meetings over the last year and still has a big job left in developing the criteria and procedures for evaluating the entire COINS experiment.

b. The work of the Soviet Biographic Panel is by far the most complicated of all the panels. The panel is attacking two problems simultaneously--the immediate preparations for the first phase of the COINS experiment, and a study of the entire biographic intelligence function for purpose of building a foundation on which to build a follow-on to COINS I. In the first instance, the Panel is drafting a Technical Memorandum of Agreement, to be signed by all participants, enumerating the Soviet biographic files to be used in COINS I, and giving a directory of the minimum required standardized data elements for Soviet biographic files. This Technical Memorandum of Agreement is due to be coordinated soon. The second task involves a study of the entire Soviet Biographic problem covering data standards, sources of information, production of biographic intelligence, files and publications, and requirements. The study, reportedly due in December, is aimed at describing the present situation and showing what could be done toward mechanized handling of biographics in a COINS-like system.

PROBLEMS

COINS has been plagued from the beginning by two problems which seem to have been inherent in the PFIAB recommendation:

1. NSA's TIPS system was not really capable of serving as a vehicle for the experiment because of limitations in security compartmentation.

2. The community did not have the majority of its Soviet biographic files in machineable form when the experiment started.

These problems led to further difficulty. First, the limitations in TIPS resulted in a vastly more complex experiment than PFIAB probably intended, and, certainly, one that could not be achieved in the year allowed. The lack of good biographic files in machineable form forced the use of other files that were available and generally threw doubt on the value of the entire experiment.

The lack of an adequate management structure for COINS has caused a great deal of trouble. There has been no effective central authority to which problems could be referred or from which guidance and direction could be obtained. As a result, COINS has been largely the creature of the COINS Committee and whatever bilateral agreements could be developed between participants. This has contributed to some of the slippage in COINS.

Finally, COINS suffers from a lack of approved, specific objectives against which progress and performance can be meaningfully evaluated. Until this deficiency is corrected, it will be difficult, if not impossible, to assess COINS in terms other than technical or equipment performance and the agency and file use patterns. It is doubtful that we will be able to gain much of an insight into the real value of a COINS-like system in the context of overall community information handling requirements.