CODIB-D-87/1
26 July 1961

UNITED STATES INTELLIGENCE BOARD

COMMITTEE ON DOCUMENTATION

RCA/ACSIMATIC Briefing, 14 July 1961

1. Attached for the record is a summary of the presentations given (Attachment A) and a corrected list of attendees (Attachment B).

2. It should be noted that the over-all classification of the briefing was SECRET, but that no Company Proprietary information was included. The TIROS photography and gear seen was Unclassified.

[redacted]

Secretary

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Attachments - 2

CODIB-D-87/1
26 July 1961
Attachment A

Summary: RCA/ACSIMATIC Briefing, 14 July 1961

Briefing Location: RCA Astro-Electronic Products Division Laboratory, Locust Corner, Hightstown, New Jersey

Company Participants: Barton Kreuzer, Vice-President; Saul Sternberg, Chief Engineer; Marvin S. Cohen, Manager/Project ACSIMATIC; Dr. Warren Reed, Deputy Chief/Collations Systems Branch; Burnett Sams, Senior Systems Analyst and Programmer; A. W. Reickord, Chief Engineer/Project ACSIMATIC; Dr. Herbert M. Gurk, Chief/Scientific & Technical Intelligence Group; E. Bradbury, Assistant Manager/Project ACSIMATIC; John Marsh, Marketing Dept.; Ralph Teare, Chief Contracting Officer/Project ACSIMATIC; Maj. Gen. R. A. Schow, USA (Ret.).

ACSI Representative: John F. Kullgren, Army CODIB member and Special Assistant/ACSI for Project ACSIMATIC

1. Following a late CODIB arrival due to low ceiling conditions at Trenton's Mercer County Airport, Mr. Kullgren in his introductory remarks welcomed the group on behalf of ACSI and turned the meeting over to Mr. Kreuzer who conveyed RCA's welcome. Mr. Cohen then summarized the Collation System, stating that his and successive briefings would be at the SECRET level and would not involve any Company Proprietary information.

2. Mr. Cohen distinguished between what he called 1) passive handling (cataloging, dissemination and storage) of documents, and 2) collation of information (as done by the analyst). He said that the collation analyst was best equipped to provide feed-back to the collector on file gaps. The collation process he described included extraction, assimilation, retrieval, research, file maintenance, and finished intelligence production. Statistics were given on anticipated message rates, daily query rates, response times, etc. /N.B. Much more detailed information than this trip summary will attempt can be found in the monthly classified ACSIMATIC progress reports distributed routinely to the CODIB-member agencies, also available centrally in the CIA/Office of Central Reference ADP Collection/. Major problems

encountered in designing ACSIMATIC include: a) retrieval speed and accuracy; solution: file structure; b) man-machine functions and organization; solution: input procedures; c) man-machine communications; solution: computer programming; d) control and operational efficiency; solution: programming system; e) implementation; solution: equipment configuration.

3. Dr. Reed then discussed file structure, stating that random access capability was not by itself satisfactory - that file organization was also required. He presented a chart describing a glossary file, hierarchy index file and information record file, the latter being tied in with a bulk data file and a history file. In discussing the collation logic he described the input processor (doing validity checks, establishing hierarchy relations, distributing data in core memory) → collation and retrieval → correlation analysis → file, updating, editing → output. On a disc file, with 1/10 second random access capability, are stored the glossaries, hierarchy list and information record. On magnetic tape are the program library, bulk data and historical files. 100,000 plus instructions are required for the logic.

4. Mr. Sams discussed the programs to be handled with a general purpose computer and peripheral equipment, with octal code conversion to AMCAL code in mnemonic form, describing the great number of routines required for a fairly simple problem. Mr. Reickord then described the equipment system as a three-phase effort: a) central processor system; b) data storage system; c) analyst console system. He said that in the second half of FY 62 they expect to have 12 magnetic tapes, 100,000,000 character disc storage, memory core in the central processor of 32,000,000 words with three in-out processors, one paper tape, one card, and one printer unit.

5. Dr. Gurk discussed problems in developing operational scientific intelligence programs. He differentiated between the "horizontal" collation system to develop a broad data base for large volume storage and retrieval and the S & T "vertical" concentration on a narrow subject, doing analysis in depth, with data computation. He mentioned work on four specific problems: residual ground forces, radar characteristics determination, guided missile sensing, and railroad capabilities, describing the latter in some detail. Mr. Kullgren said ACSI plans to expand the railroad model to highways and inland waterways.

6. Switching hats, Dr. Gurk then discussed RCA's work on natural language processing, describing some of the problem areas as ambiguity, different forms of representation of the same information, organization of the information, loss through condensation or conversion to machine media, etc. He felt their earlier work in semantic analysis hadn't helped much in auto-indexing and auto-abstracting efforts. They have now worked up RCA 501 computer programs on syntax analysis, document condensation, and hierachical index generation.

7. The visitors were split into two groups to tour the lab facilities, particularly to see Mr. Bradbury's demonstration of the prototype analyst console for querying the files and outputs of the language analysis computer programs described by Dr. Gurk. Also seen was the first photography from TIROS III; monitoring equipment used with the weather satellite; an impressive bit of gear for doing PI work on videotape, providing resolution settings from 125 to 1000 lines and with hand dials for highlighting brightness/darkness or light/shadow areas on a pinpoint center or whole picture basis; TIROS IV, in the lab for testing; and a science-fiction-like assortment of models of "vehicles" to travel on the surface of the moon.

8. Following brief concluding remarks by Mr. Kullgren, and an expression of appreciation by Mr. Borel, the group departed for Washington at about 5:15 P.M.

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CODIB-D-87/1
26 July 1961
Attachment B - Final

RCA/ACSIMATIC Briefing, Hightstown, N.J.
Washington Attendees

DOD	: Mr. Lowell R. Dailey
ARMY	: Mr. John F. Kullgren Col. Frederick B. Keller, Jr.
NAVY	: Capt. Donald C. Higgins Capt. Jack O. Johnson Dr. Maurice H. Hellner Mr. Alfred Bodian Mr. George Kidd
AIR FORCE	: Dr. John H. Kennedy Mr. John H. Toler
25X1 NSA	: [redacted]
STATE:	: Mr. Eldon B. Smith Mr. Benjamin H. Fisher
AEC	: Mr. Martin Snyderman, Jr.
FBI	: Mr. Norman F. Stultz
CIA	: Mr. Paul A. Borel Dr. Otto E. Guthe
25X1 [redacted]	
ORO 25X1 (Operations Research Office, Johns Hopkins)	: Maj. Gen. James G. Christiansen, USA (Ret.)

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