

SECRET

R
A
F
T

UNITED STATES INTELLIGENCE BOARD
COMMITTEE ON DOCUMENTATION

CODIB-D-85/1
Limited Distribution
9 June 1961

MEMORANDUM FOR: Chairman, United States Intelligence Board

SUBJECT: Machine-Language Producing Typewriter for Overseas Installations

REFERENCES: (a) USIB-D-39.5, 1 Mar 61; subject: CODIB Progress Report
(b) USIB-M-144, 7 Mar 61, item 9
(c) IBSEC-PR/2, 5 May 61 to USIB; subject: Report of the Security Committee in Implementing Recommendation No. 42 of the Joint Study Group Report re "Foreign Intelligence Activities of the United States Government" dated 15 December 1960

1. Your Committee on Documentation (CODIB) reported in reference (b) the steps it was taking to coordinate Service and departmental plans for using flexowriter-type equipment (i. e., typewriters producing a machine-language by-product) in overseas posts. The USIB-endorsed these steps (reference (a)) and conveyed its sense of urgency for resolution of the flexowriter security problem (viz. , line and air radiation) to the Communications Security Board in a memorandum from the Executive Secretary, USIB to the Executive Secretary, USCSB dated 13 March 1961. The security problem was also considered by the

SECRET

- 2 -

USIB Security Committee as reflected in reference (c), which states that the problem now rests with the USCSB's Committee on Compromising Emanations.

2. CODIB has proceeded as far as it can in developing compatible second-generation equipment requirements (the first generation being the Flexowriter machines now in use or on order). A statement of Intelligence Community requirements has been formulated by a CODIB working group and is enclosed as Attachment A; CODIB comments on the report are enclosed in an excerpt from the latest CODIB minutes as Attachment B. The basic issue to be resolved is the identification of the authority in the U. S. Government best able to act in the interest of the Intelligence Community as a whole in contracting for the development of a secure remote systems input device (typewriter) which meets agreed Community requirements as stipulated in Attachment A.

3. CODIB feels that the USIB is the proper authority and, with the NSA member abstaining, that the National Security Agency is the Community member best qualified to serve as the contract agency on USIB's behalf, to negotiate with industry for development of a secure device which also meets the systems requirements specified. CODIB recognizes that such common concern activity in the information processing field may be considered to be outside NSA's charter, but suggests USIB designation of NSA for this role in view of that agency's special competence.

~~SECRET~~

- 3 -

4. Some clarification might be helpful in view of certain (mainly semantic) problems that arose when CODIB considered Attachment A. These are concerned with:

a. The provision of a 5-channel paper tape medium to be used in communications equipment.

b. The stipulation that, upon development of the second-generation device, it alone will be used at diplomatic or other jointly used installations abroad.

c. Exclusive concentration on the development of a future device when there is an immediate need as well.

5. There is a Tri-Service Executive Agency agreement that the 8-channel Field Data code be used in Army, Navy, and Air Force equipment. Service interest in flexowriter-type equipment abroad is principally in preparation of a machine language input to information processing systems which incorporate scientific and technical information as well as military, and which, therefore, require maximum information carrying capability. The Field Data code provides this. In addition to the computer input need, the community also much increase the speed of its field reporting. This means that for a time in the future -- we do not know how long -- a 5-channel paper tape must be available. These requirements are technically compatible if appropriate code conversion is provided at both ends of the communications channel. The Statement of Requirements is worded to do this.

~~SECRET~~

~~SECRET~~

- 4 -

As to future communication equipment possibly not being 5-channel, two points are pertinent and money will be the determinant: a) big installations will get new communications equipment when developed and of whatever type, first. For some time, diplomatic and other jointly used installations (the facilities of principal concern to the CODIB group), particularly the smaller posts, will continue to rely on 5-channel commercially available equipment. b) Manufactures, to be realistic in designing a device to tie in with a communications system, must be given a specific idea of what that system will be, hence the 5-channel provision for planning purposes, rather than reliance on the generalized reference to "the then standard communications system". In brief, the coding structure must "carry the full range of information" and be transmittible through the telecommunication system.

6. The commitment sought in para. 5.f. of Attachment A that no other equipment will be used pertains again to diplomatic or other jointly used facilities abroad. This was developed to minimize cost, particularly the number of persons at overseas posts by a) avoiding multiple maintenance; b) simplifying security arrangements and inspections; c) facilitating mutual use of equipment when one's own equipment was inoperable. The Army CODIB member's substitute language to allow for continued use of presently held first-generation equipment until phased out was satisfactory to CODIB and is the only specific language change CODIB would make in passing the report to USIB.

~~SECRET~~

- 5 -

7. This CODIB effort was deliberately aimed at second-generation equipment because current Flexowriter use was well underway or in the advanced planning stages. It was determined a) that a community statement of requirements was desirable to determine compatibility needs in heretofore independent information systems development; b) that the communications problem contained elements of common interest; c) that the security problem was common to all. In identifying the extent of the security problem for second-generation equipment, its immediate implications for the current Flexowriter became more widely appreciated. A solution to the current problem is being actively pursued by the USCSB's Committee on Compromising Emanations -but this should be considered separate from the need for Community development of the 1965 device.

Recommendations

8. It is, therefore, recommended that

(a) the USIB approve the CODIB-developed statement of "USIB Equipment Requirements for Remote Systems Input Device";

(b) in view of the urgency and interest to the intelligence community as a whole, the USIB accept the central authority role in promoting development of the required device;

(c) the USIB designate NSA as the contract agency to negotiate with industry for development work for a secure device which meets the Community requirements, and direct NSA to keep CODIB and USIB advised on progress at frequent intervals;

~~SECRET~~

SECRET

- 6 -

(d) appropriate research and development funds be made available for the work involved;

(e) the USIB direct that work commence as soon as general security specifications can be developed in adequate depth;

(f) this device, when developed in as close accord as possible with the statement of community requirements, be the only input typewriter used by intelligence community members for typing classified information at diplomatic or jointly used installations abroad and that no other new input typewriter will be procured. Other equipment then in operation which adequately meets security standards may be used until phased out.

(g) the USIB acknowledge and reiterate its concern with USCSB efforts to resolve the security problems of the presently held Flexowriters.

PAUL A. BOREL
Chairman

Attachment A: Report by Working Group on Remote Systems Input

Attachment B: Excerpt from CODIB-M-32, 5 June 1961