

REPORT TO THE BRITISH CHIEFS OF STAFF AND THE US CHIEFS OF STAFF  
OF THE UK/US COMMUNICATIONS SECURITY EXPLORATORY CONFERENCE  
HELD AT WASHINGTON, D.C. COMMENCING 21 SEPTEMBER 1950

1. As agreed by the British and the U.S. Chiefs of Staff\*, a UK/US conference for the reciprocal exchange of cryptographic information was opened in Washington on 21 September 1950, and considered the following subjects:

- a. Low Echelon (including Minor War Vessels) Telegraphic Systems including Combined Assault Codes and tactical systems for all military purposes.
- b. Merchant Ships Telegraphic Systems.
- c. Meteorological Security Systems, including Facsimile, Teleprinter and Telegraph.
- d. Voice Security Systems for Tactical Purposes.
- e. Teleprinter systems for the exchange of Communication Intelligence material.

2. Summaries of the proceedings of the meetings which followed have been prepared and these are held both by the Director, Armed Forces Security Agency, Washington, and the Secretary, Cypher Policy Board, London. This conference has been of unquestioned value not only in the field of Combined Communications Security but also in the field of U.S. Intra- and British Intra-Communications Security.

\*US Reference: JCS 2074/2 - 27 December 1949.  
British Reference: COS(W)831 - 26 July 1950.

3. It is recommended:

a. That immediately and on a continuing basis, there be complete interchange of the technical details of the systems discussed in this conference. This should include technical visits.

b. That there be discussion and interchange of technical information on certain other items of combined interest, such as the security aspects of IFF, authentication systems, key tape generators, and wrapping of documents.

c. That security evaluations be made and exchanged on all items discussed.

d. That the U.S.-U.K. JCEC consider and resolve as a matter of urgency the combined operational requirements in the fields covered by this conference and those included in item 3b above.

e. That there be annual conferences on these subjects for the next four years, to be held alternately in London and in Washington, the first of these to take place in London in approximately nine months' time.

4. The general recommendations in paragraph 3 above, together with the detailed conclusions of the Conference which are attached as Appendix A to this report, are submitted for the approval of the British Chiefs of Staff and the U.S. Chiefs of Staff.

PL 86-36/50 USC 3605

Chairman, U.K. Delegation

EARL E. STONE  
Rear Admiral, U.S. Navy  
Chairman, U.S. Delegation

at Washington, D.C.  
27 October 1950

~~TOP SECRET~~APPENDIX ACONCLUSIONS

A. Low Echelon (including Minor War Vessels) Telegraphic Systems including Combined Assault Codes and Tactical Systems for all Military Services

(1) No machine system is likely to be available for general combined use before 1954.

(2) If combined systems are required for any of the foregoing purposes in the interim period, some possible systems are:

Strip

Linex

Cursex

Playfex

Running Key Cipher

(3) To meet the long term requirements for low echelon combined systems selections should be made within the next 12 months. Some possible devices are:

DUP 1

AFSAM 7

"PCM"

AFSAM 9

MCM

Concert

Rollick

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~~TOP SECRET~~**B. Merchant Ship Telegraphic Systems**

A machine system of at least equivalent security but faster than Cursex, which is under consideration, should replace it, when available, and that such a system should be selected within the next 12 months. Some possible devices are:

"PCM"

DUP 1

AFSAM 7

MCM

**C. Meteorological Security Systems, Including Facsimile, Teleprinter and Telegraph**

(1) No machine crypto system for meteorological purposes is likely to be available for general combined use before 1954.

(2) If combined systems are required for meteorological purposes in the interim period, some possible devices are:

(a) Air-Ground - ASAD 1

Otmotco

Alametco

(b) Telegraph - CCM (modified for weather encipherment) Pencil and paper system for very low echelon purposes.

(c) Teleprinter - ASAM 2-1

(d) Facsimile - None available

(3) To meet the long term requirements for encipherment of meteorological data, selection should be made within the next 12 months. Some possible devices are:

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~~TOP SECRET~~**(a) Air-Ground - ASAD 1**

Otmeco

Alameco

Any available ciphony system

**(b) Telegraph - 7 rotor BCM with provision for  
weather encipherment**

AFSAM 7

"PCM"

Singlet

Pendragon

DUP 1 - designed for weather  
encipherment

Pencil and paper systems

**(c) Teleprinter - AFSAM 9**

ASAM 2-1

Concert

Rollick

Mercury

**(d) Cifax - ASAX 2**

NRL Cifax

METFAX

**NOTE:** Selection in category (d) may not be possible until an agreement is reached in the UK-US JCEC on the requirements and characteristics for plain text facsimile equipment and associated transmission systems for meteorological use.

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~~TOP SECRET~~**D. Voice Security Systems for Tactical Purposes**

(1) No ciphony system is likely to be available for general combined use before 1954.

(2) There are no possibilities for suitable devices in the interim period.

(3) To meet the long term requirements for combined ciphony systems selection should be made within the next 12 months. Some possible devices are:

- (a) ASAY 4 (primarily designed as a low echelon ciphony attachment; can be used only over circuits of normal band width)
- (b) ASAY 8 (designed primarily for airborne use; possibly suitable for general low echelon use; can be used with VHF transmission only and is capable of group working)
- (c) Hallmark (primarily designed for tactical point to point circuits using VHF or wide-band circuits; could be used to provide secure point to point teletype and facsimile transmissions)
- (d) Sorcerer (primarily designed for point to point ciphony over long and short distance circuits of normal band width)

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- (e) AN/TRA 16 (primarily designed for microwave point to point radio relay links, carrying 8 voice channels; can handle teleprinter with frequency multiplex)
- (f) D-70 (primarily designed for microwave point to point radio relay links, carrying 12 voice channels; can carry facsimile or teleprinter with frequency multiplex)
- (g) TSS (primarily designed for air-to-air and air-to-ground voice privacy system with minimum security of 20 minutes. Will operate with any existing U.S. aircraft voice transmitter or receiver, on frequencies as low as 175 KCS)

E. Teleprinter Systems for the Exchange of Communication Intelligence Material

- (1) If there is to be an immediate substitution for ROCKEX a selection can be made from the following machines:
- ASAM 2-1  
5 U.C.O.
- (2) Either machine is available in sufficient quantity to meet current requirements in the exchange of intelligence material.

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