

~~TOP SECRET. EIDER~~

TO BE KEPT UNDER LOCK AND KEY AND NEVER REMOVED FROM THE OFFICE UNLESS AUTHORIZED BY AGREEMENT WITH REGULATIONS.

Declassified by ASD - 2024  
National security and/or personal  
information removed.

Subject No. 15 - "COLOROB"

Ralph

*This is an extra copy of the APF brief, & may be useful as a guide to us! hrb 11/10*

BACKGROUND

In recent demi-official correspondence GCHQ (X Division) have stated that -

(a) the general plan is to make delivery of COLOROB piecemeal - during the period September, 1956 to June, 1957. If possible Racks first, Power supplies next and chassis and drum later. A word of warning was given to the effect, that although they intended to do most of the detailed work themselves and it would therefore be reasonably under their control, they would still be very much in the hands of contractors for certain major components, and so far, their experience of outside contractors is that delivery dates constantly tend to recede into the future.

(b) with the imminent return to Australia of Robinson and Watson, X Division emphasize their concern on the questions of installing and maintaining the equipment when it reaches DSB. Their reason for this worry is: the initial stage of installing and bringing into service complicated equipment of this type, is most important and difficult. They point out that this has always been recognised and it was the original intention that the Australian engineers should come back with the equipment. This will not now be possible and there will now be a one to two years delay after they return.

(c) it would be quite wrong to despatch the various components for DSB, as they are ready, and hope that DSB would have it running effectively in a short time after receipt, unless DSB make further definite arrangements to ensure that they have engineers to undertake the installation and initial bringing into service, who have current and detailed knowledge and operational experience of this type of equipment.

(d) It seems therefore essential to X Division that DSB should :

(i) select an engineer of at least experimental officer level, who should be attached to GCHQ from January, 1956, to gain direct experience. This man should then return to DSB in time to receive the equipment as it arrives and to assist in its installation. He will then also be a suitable Kingpin of the COLOROB maintenance staff and should be able to give material help to the programmers.

(ii) plan to send either Robinson or Watson back to GCHQ for the six months before the expected date of completion of deliveries to familiarise himself with developments and operations. There are bound to be changes in the equipment DSB will receive in one or two years time as a result of their own operational experience, and as DSB knows, neither has yet had the chance of seeing COLOROB in operation. MT has indicated informally that he would support this in principle.

*Am sure we must do this. Have spoken to DQ at length. Feel myself that MLE himself might be the chap to send.*

~~TOP SECRET. EIDER~~

~~TOP SECRET. EIDER~~

TO BE KEPT UNDER LOCK AND KEY AND NEVER REMOVED FROM THE OFFICE UNLESS TRANSMITTED IN ACCORDANCE WITH REGULATIONS.

Declassified by ASD - 2024  
National security and/or personal  
information removed.

2.

(e) the recommendations in d (i) and (ii) above were regarded by X as a minimum. At the first stage DSB would need not only one good and currently informed engineer, but also at least one good trained assistant fully familiar with the equipment, to hope to get good results out of it within any reasonable time. Once it is installed and running effectively, the needs can probably be reduced, but the initial period is the worrying one.

2. The above points, and COLOROB in general have been discussed with Mr. Strath of Salisbury and the conclusion reached, was, that before taking any concrete action we should await the return from the U.K. of Robinson and Watson, from whom we naturally hope to obtain much first hand information. However in the meantime, consideration is being given to GCHQ's strong recommendation mentioned in l, d(i). It is not yet clear where this engineer is going to come from; but DSB's view is that he should be a DSB (as opposed to a Supply) officer, of approximately Eng. Gr.II level, and that one of the applicants to the recent advertisement should be selected for this job.

(a MLE)

3. Other aspects of planning at present under consideration are :

(a) Ensuring that DSB has cryptanalytic staff sufficiently trained (mainly on the Hagelin problem - see notes on this under the review of [REDACTED]) to make use of COLOROB.

(b) The accommodation of the equipment. Two alternatives are being considered:

(i) the accommodation of all DSB machines, including COLOROB, in one building,

(ii) the accommodation of COLOROB by itself, together with workshop facilities.

In either case two further points require consideration:

(iii) It has proved a most successful arrangement at GCHQ to have the Hagelin research section (corresponding to MHI at DSB) in offices adjoining the High Speed Machine section, and we might well plan for a similar arrangement here.

(iv) Plans received from the Australian Liaison Officer at GCHQ show that it will be necessary to house a refrigeration plant which dissipates the heat generated by COLOROB. This should be near the equipment but not in the same room.

(c) Staffing requirements.

(d) The suggestion (received via Eastway) of fitting detachable plugboards to COLOROB, in order to reduce the time taken in switching from one programme to another, which is large compared with the time taken to run a programme.

MQ is doing  
a survey on  
this

~~TOP SECRET. EIDER~~

~~TOP SECRET. EIDER~~

TO BE KEPT UNDER LOCK AND KEY AND NEVER REMOVED FROM THE OFFICE UNLESS TRANSMITTED IN ACCORDANCE WITH REGULATIONS.

Declassified by ASD - 2024  
National security and/or personal  
information removed.

3.

In the case of Hagelin problems, changing from machine breaking to message setting is a definite requirement. Such a provision would undoubtedly entail extra cost, and much thought will be needed to decide this question.

4. Conclusion: since we have the Salisbury representatives returning very shortly, Mr. Eastway now under expert tuition on the application of this equipment to DSB tasks, the possibility of a visit to the U.K. by Mr. Bradley, and the standing offer by GCHQ of a visit to DSB by Dr. Morgan, it is considered, that at this stage, this difficult problem can be adequately coped with. Most of the decisions must be made shortly, when Robinson and Watson are available (at the end of October).

5. No questions.

*See also letter from  
SUKO to X Division (Sichae)*

~~TOP SECRET. EIDER~~