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From: Berlin  
To: Kabul  
14 April 1944  
GEC

No number.

CITISSIME.

In reply to telegram of the 1st, #17<sup>a</sup>.

Below, the ELEFANT radio data are translated:

The radio version of the MARY-ELEFANT communication plan:

MARY calls daily at 1930 GMT on frequency A which is 5891 kilocycles, ELEFANT answers on frequency X which is 5945 kilocycles; at 1530 GMT, MARY on frequency B which is (7928?) 5 kilocycles, ELEFANT on frequency L which is 9241 kilocycles; at 5 GMT, MARY on C which is 14150 --G--<sup>b</sup>, ELEFANT on Z which 15035 --G--<sup>b</sup>.

Frequencies by QSA plus frequency letter.

Call-signs of MARY: MARY calls: Monday PLE, Tuesday OHL, Wednesday DQM, Thursday YGW, Friday HQU, Saturday NOZ<sup>c</sup>.

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Callsigns of ELEFANT: ELEFANT answers: Monday MZR, Tuesday CKS, Wednesday FLX, Thursday BJN, Friday DVA, Saturday BTU, Sunday ERY.

Key phrases:

MARY to ELEFANT:<sup>d</sup> When folk wed they need moor [sic] than a bed. ELEFANT to MARY:<sup>d</sup> The rarest thing in the world is truth.

Emergency phrases:

MARY to ELEFANT:<sup>d</sup> We often prefer the ideas of progress. ELEFANT to MARY:<sup>d</sup> He struggled for a better social liefe [sic].

The radio aspect of the MARY-ELEFANT cipher instructions:

A. The basis: a phrase 31 letters long, for example:<sup>d</sup> His troubles were rum and rheumatism.

B. Preparing the cipher material:

1. The phrase is diminished in such a manner that each letter appears only once, that is, of letters appearing more than once the first one reading from the left remains: HISTROUBLE WMAND. This diminished phrase is

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inscribed in a square consisting of 25 cells and the letters not appearing in the diminished phrase, omitting Q, are added in lexicographic order. Outside the square, on each side, those letters are to be written which appear on the opposite margin. The sides of the square are to be indicated by the figures 1 to 4 clockwise beginning at the top. The letters contained in the square, read from left to right, are: 1st line HISTR, 2nd line CUBLE, 3rd line WMAND, 4th line CFGJK, 5th line, PVXYZ. The letters outside the square on side 1, above, from left to right are PVXYZ. On side 2 (right) reading down are HOWCP. Below, on side 3, from left to right, are HISTR. Left, on side 4, reading down, are REDKZ.

2. From the undiminished phrase (see 4) a numerical sequence is formed by indicating from the left the first A with 1, the second A with 2, the third A with 3, etc. When there are no more A's, the first B is indicated with the following number, etc. The numerical sequence resulting under the phrase is: 9 11 23 26 19<sup>6/8</sup> 28 3 13 5 24 31 6 27 7 21 29 14 1 17 4 22 10 8 30 15 2 27 12 25 16.

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## C. Enciphering.

1. The plain-text is divided into groups of 5 letters each. At the beginning and end of the plain-text is placed an arbitrarily chosen word, which is different in each message and which is separated from the message proper by the letter Q. Besides, the last group is completed with arbitrarily chosen letters: EOOKQ THESE CONDB RITIS HAINQ UR<sup>2</sup>DDI VISIO NISIN QCALC UTDAQ FLOWE RYCLK. This plain-text is enciphered with the aid of the square obtained in accordance with paragraph B1. The first letter, B, is found and replaced by the S above it; the second letter, O, by the U to the right; the third, O, by the W under it; and the fourth, K, by the J to the left, while the fifth letter remains unchanged. The sixth letter, T, is treated like the first, etc. When the letter Q, which is not contained in the square, appears in the plain-text, it is to be taken over into the intermediate text unenciphered. The enciphering order of the other letters, however, is retained.

2. The intermediate text thus derived is written directly in lines under the numerical sequency obtained in

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accordance with paragraph B 2, beginning under number 1 in the sequence, if the message is to be sent on the first day of a month, beginning under number 2 in the sequence if it is to be sent on the second day of a month, etc., beginning therefore on 12 April under the 12. Accordingly under the last three numbers in the first line are the letters SUW; in the second line, beginning at the beginning, JQYIDIEWUJNBZSLKSPNEWOLHKNIFSBH; in the third line, beginning again at the beginning, OLSBHNQFGBCIRLMQMEWDEZ<sup>Z</sup>FBK. The last letter, K, is under the number 15.

3. This text is read out by columns following the numerical sequence, beginning under number 1, and is again written in lines under the numerical sequence, beginning under number 1 in the first month of the year, beginning under number 2 in the second month, etc., beginning therefore under number 4 on 12 April. Thus under the last 11 numbers in the first line are the letters NWIWFWEJBZR, in the second line; beginning at the beginning, LMHPJOIZQLSS-UGPENKWHEDINDHSLHQO; and in the third line, beginning again at the beginning, the letters ZYSNCUBIBFEQSMKBBI. The last letter, I, is under the number 14.

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4. This text is again read out as described in paragraph C3 and, with an arbitrarily chosen two-digit number and the group count prefixed, it is written out ready for transmission. The message then reads: NR47GR12-  
WESZI NELFU SPKWN LZIIM YHQOB KIWRH OHOUJ CGMEE WDHSS  
EZQPN JLIBN BFDSQ.

#### D. Deciphering.

1. The number of letters of the message is determined. A corresponding number of cells is marked off under the numerical sequence, beginning under the 1 in the first month, under the 2 in the second month, etc., beginning therefore on 12 April under the 4. In the example there are 60 letters, of which 11 are in the first line, 31 in the second and 18 in the third. In the marked-off cells the message is inscribed by columns beginning at the 1. Under the 1 is the letter W, under the 2 are the letters ES, under the 3 the letters Zi, etc.

2. The number of cells corresponding to the number of letters, 60 in the example, are to be marked off

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once more under the sequence, beginning under number 1 on the first of the month, under number 12 on 12 April. In these marked-off cells the text obtained under D1 and read out by lines is to be inscribed by columns following the sequence. Under number 1 are then NW, under number 2 I under 3 WF, etc.

3. The text thus obtained is divided into groups of 5 letters and deciphered with the aid of the square described in B1. Only the numbering of the sides of the square is changed: 1 becomes 3, 2 becomes 4, 3 becomes 1 and 4 becomes 2. The first letter, S, is replaced by the B below it, the second letter, U, by the O to the left, the third letter, W, by the O above it, the fourth letter by the K to the right, The fifth letter, Q, remains unchanged.

## E. Remarks:

1. Two messages with the same number of letters must not be enciphered on one day.
2. Every deviation from or alteration of this system endangers its security.

HOFFMANN.

- a. T 2777.
- b. Seems to be "GMT" instead of "kilocycles".
- c. Sunday omitted in text.
- d. The following phrase is in English.
- e. 18 omitted in text.
- f. So spelled in text.

Inter 18 Apr 45 (4)  
Rec'd 18 Apr 45

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