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INFRASTRUCTURE COMMITTEE

PROCUREMENT OF TROL CRYPTOGRAPHIC EQUIPMENT

Note by the Secretary

Please find at Annex for consideration by the Committee, a copy of a report prepared by the International Staff on two SHAPE papers concerning TROL cryptographic equipment procurement (6550.2/23-37 of 27th December, 1967 and of 19th December, 1967), to be circulated as INFRASEC/68/5 and INFRASEC/68/4 respectively.

(Signed) L. LINTALL-SMITH

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ORIGINAL: ENGLISH
15th January 1968

- 3 -

~~NATO CONFIDENTIAL~~
ANNEX to
DP/4-D/1931

PROCUREMENT OF TROL EQUIPMENT

- References:
- (a) DPC/R(67)27, Item II (in reproduction)
 - (b) PO/67/869 dated 1st December, 1967
 - (c) AG/4(WG18)167
 - (d) SH.6550.2/23-37 of 27 December 1967
(reproduced as INFRASEC/68/5)
 - (e) SH.6550.2/23-37 of 19 December 1967
(reproduced as INFRASEC/68/4)

The United Kingdom proposal for meeting the TROL requirement in a Simplex mode, using ALVIS with VENDOR, was examined, on its technical and operational aspects, by a special meeting of the Working Group of National Communications Experts, complemented as needed.

As contained in the minutes of the meeting (reference (c)), and as reported by the Secretary General at the Defence Planning Committee meeting of 7th December, 1967 (reference (a)), the Group of Experts recommended:

1. that SHAPE undertake, on behalf of SACLANC and CINCHAN, an analysis of all circuits to be fitted with TROL in Simplex mode and report on the measures which will be necessary to permit the adoption of the proposed layout;
2. that tests of the actual switching unit proposed by the United Kingdom in conjunction with the ALVIS/VENDOR set-up be conducted by SHAPE and the International Staff as soon as a production model of the unit was available.

The Secretary General further reported that the Infrastructure Committee would take the necessary action to modify the original text of the invitation to producing countries to take into account recent developments and modifications (different quantities of equipment, new rates of exchange, etc.), so that the invitation would be ready for delivery as soon as the other problems had been settled.

- 3 -

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NATO CONFIDENTIAL

- 4 -

ANNEX to

DP/4-D/1931

The results of SHAPE's study on circuits (ref (d)) and SHAPE's proposals for modification of the invitations to countries (ref (e)) are being distributed concurrently with the present paper. In line with the statement made to the Defence Planning Committee (ref (a)), it is of the highest importance that the two matters be settled by the Infrastructure Committee before the tests on the switching unit - which are due to take place in the United Kingdom at the end of January or, at the latest, early in February - are completed.

1. Lines available to NATO commands for Simplex use.

SHAPE's report shows that, subject to minor additional works, amounting to Belgian francs-270,000, all Simplex circuits can be converted to 4-wire operation in compliance with the technical requirement of the British proposal. However, an additional annual expenditure of Belgian francs.-2,410,063 is needed in the rental from national PTT's of ACE circuits in order to obtain 4-wire, in lieu of 2-wire, lines. This corresponds to about 2.5% of the total annual cost of ACE telegraphic lines.

(The SHAPE report has been also put in the agenda of the Working Group of NTE's for review, as applicable, at the meeting of the 15th to 17th January, and their findings will be submitted to the Infrastructure Committee as appropriate).

The need for 4-wire lines and the consequent increase in capital and rental costs can have implication on the procurement procedure already agreed by the Defence Planning Committee. It is naturally up to the Infrastructure Committee to study the problem and make appropriate recommendations to the Defence Planning Committee. The Committee might, in this connection, wish to take into account that the use of 4-wire lines will permit, at small increase in cost, two important advantages, namely -

- (1) the capability of Traffic Flow Security (TFS) even in Simplex mode; this is one of the essential requirements of the point-to-point equipment as compared to the tactical one and is normally lost in Simplex configuration;

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- 4 -

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N.A.T.O. RESTRICTED

- 5 -

~~NATO CONFIDENTIAL~~
 ANNEX to
 DP/4-D/1931

- (11) the capability of higher traffic volume (contemporary two-way traffic), when the telegraphic terminal equipment is, as is frequently the case, of duplex configuration.

Conclusions

Having examined the above, the Committee might want to choose between :

1. considering the advantages an adequate compensation for the small increase in cost (both capital and annual) and recommending no change in the procedure agreed by the Defence Planning Committee, the additional cost being met by the Infrastructure Programme and the Military Budget Committee, as applicable;
2. deciding that the additional cost incurred by NATO, both in procurement and in the running cost for a period of perhaps ten years be added to the United Kingdom price submission when applying the formula containing the rating.

From SHAPE's study, the amount involved, on a ten-year basis, would be :

Capital cost	Belgian francs	270,539
Annual cost x 10		24,100,630
Total Belgian francs		24,370,169

(The exact figure of annual cost could vary as a result of the Group of Experts' review announced above).

2. Proposal for Modifications to Invitations

The International Staff is in agreement with SHAPE's proposal, for the reasons contained in SHAPE document. However as a consequence of recent difficulties encountered in follow-up contracts for electronic equipment, the International Staff suggests that the invitation contain a more binding obligation of the producing country to satisfy additional contracts provided these are placed within, for instance, five years from the initial one.

(Signed) G. CHIONI
 Head of Signals Section

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