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STAND-BY TROL EQUIPMENT REQUIREMENTS: REPORT BY
THE WORKING GROUP OF NATIONAL COMMUNICATIONS EXPERTS

At its meeting on 22nd March 1966, the Committee "invited the Working Group to examine with the NATO Military Authorities, the question of the requirement for stand-by TROL equipment and to report recommendations" (AC/4-DS/531, Item I (7)). The Committee, it will be recalled, was concerned to find out what were the requirements for stand-by TROL machines so as to arrive at a total NATO requirement for TROL equipment.

The Working Group, at its meeting on 28th-30th March 1966, discussed this question with Representatives of SHAPE, which has been appointed to act as procurement agent for all NATO TROL equipment. SHAPE, basing itself on previous experience, requested that the total requirements previously recommended by the Working Group in AC/4-D/1795 and AC/4-D/1818 be increased by 20% to provide an adequate number of stand-by units. The Working Group was unable to accept this proposal which it considered would provide far more machines than would, in fact, be needed for the following reasons:

- (1) modern TROL machines, like any purely electronic equipment built employing solid state techniques, have a very low fault-rate, and do not require the amount of routine overhaul and maintenance typical, for instance, of teleprinters and previous cryptographic equipment, which are essentially electro-mechanical devices with a considerable amount of moving parts (for teleprinters a 20% factor for stand-by units has been accepted by NATO);

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- (2) the modern construction of the machines will, in most cases, make it possible to supply stocks of spare cards or sub-assemblies, rather than complete machines. The detection of a faulty card or sub-unit and its replacement should be quickly carried out by the operating personnel after a moderate training;
- (3) the Working Group's previous recommendations included a 20% allowance for contingencies and requirements of mobile units. This allowance could be sufficient to enable some provision for stand-by operational units to be obtained.

The Working Group considered that it was not possible to forecast with any degree of accuracy what the actual requirements for stand-by units would be until the selection of equipment had been made (the different makes of equipment which have been evaluated for NATO having different technical characteristics) and it had been presented with the Command's final proposals for the location of equipment (which the Working Group had recommended in AC/4-D/1795, paragraphs 5 and 11D, and paragraph 7 of AC/4-D/1818 be presented to it prior to the equipment being installed). For the purpose of selecting equipment, the Working Group recommended that the Committee leave out of account the requirements for operational stand-by equipment on the understanding that the requirement should not be significant, and will be assessed once procurement has started.

(Signed) G. CIONI

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