

ASPECTS OF NATO

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Air Defence

The early warning system

The signatories to the North Atlantic Treaty agreed to maintain and develop their individual and collective capacity to resist armed attack, and the need for air defence stems directly from this agreement. Thus, quite early in the history of the Alliance, a number of initiatives were launched to establish multinational cooperative ventures in air defence, but there was no single coordinated system throughout NATO. The need for such a system was recognised by all members of the Alliance by the beginning of the fifties.

Various activities related to air defence culminated in 1954 in the proposal that a system should be established to provide for coordination of air defence capabilities in Europe. In December 1955, the Military Committee approved the concept of a coordinated system for air defence, which was based on four air defence regions, with coordinating authority being assigned to SACEUR. It was also agreed to establish an air defence component within SHAPE, and an air defence technical centre at The Hague.

A first step towards integration was taken in March 1957, when the North Atlantic Council agreed the requirement for an Early Warning System covering the approaches to Allied Command Europe. This led to the establishment of a chain of eighteen radar stations linked by a communications system to provide the necessary information on air activity in the airspace adjacent to NATO Europe. This system was completed early in 1962, and was financed in common through the infrastructure programme. Establishment of the Early Warning System was thus the first common effort in Alliance air defence, and was to provide the cornerstone for the future development of a NATO air defence ground environment.

NADGE – The NATO Air Defence Ground Environment

By the end of 1960, the North Atlantic Council had approved the creation of an integrated air defence system for Allied Command Europe under the command and control of SACEUR and invited the governments concerned to assign their air defence forces in Europe to the operational command of SACEUR. The need to adequately link individual national elements of the air defence ground environment and much of the Early Warning System was soon recognised. In 1962, preparations therefore began for the implementation of an integrated air defence in Europe, and the NADGE Improvement Plan was born.

Initial planning for the NADGE system saw the preparation of system requirements which were to be used as the basis for system design. Financing of the

NADGE Improvement Plan was programmed in Infrastructure Slices XII to XX , at a level of IAU 110 million, and in 1966 a NATO Production and Logistics Organisation called the NADGE Management Office was established under a NADGE Policy Board to manage the programme. The NADGE contracts were finally signed in December 1966, and covered a programme which involved 84 sites from the North Cape to Eastern Turkey.

With the last sites completed in the summer of 1973, SACEUR at last had an integrated air defence command and control system. Unfortunately, the air threat had increased significantly in the latter part of the sixties and it was recognised that further improvements were needed. Thus, in Infrastructure Slices XXI to XXIV, an additional ten radar sites in Greece, Italy and Turkey were updated through the Radar Improvement Plan (Mediterranean). Since that time, there have been a number of relatively minor improvements to the air defence ground environment, in the main resulting from the need to replace some of the older equipment.

Airborne Early Warning and Control

In the mid-seventies, the growing capability for aircraft to operate effectively at low and very low levels brought with it the need to detect and track aircraft at such levels. Although the ground radar sites provided excellent coverage of the Alliance airspace at medium and high levels, its coverage of the lower altitudes was poor. It was clear from topographical considerations that adequate surveillance of all altitudes would require an extremely large number of ground stations, which would be prohibitively expensive; attention was therefore drawn to possibilities of elevating the surveillance system, and thus the Airborne Early Warning and Control System (AWACS) concept came under consideration by the Alliance.

Towards the end of 1978, Defence Ministers agreed to procure collectively an AWACS force to provide low level radar cover over NATO territory and the approaches to it. The AWACS fleet will comprise two interoperable elements, the NATO E-3A and the United Kingdom NIMROD, and by the end of the eighties will be capable of operating over sea and land and will be fully integrated with the existing ground environment system.

The E-3A element and the interface for both elements of the AWACS fleet with the ground environment are being procured by the NATO Airborne Early Warning and Control System Programme Management Organisation. Manning of the E-3A element will be through a multinational force, operating under the command of SACEUR on behalf of all three Major NATO Commanders. The NIMROD element is being produced by and operated by the United Kingdom, and will be assigned to NATO.

Air defence programme development

Prior to 1977, a coordinated approach towards satisfying the air defence needs of the Alliance had largely focussed on the ground environment system, although there had been numerous examples of cooperation in the procurement of air defence weapons. The development of a programme for air defence formed one part of the Long-Term Defence Programme, resulting from directives given at the Summit Meeting held in London in 1977. By the end of 1979, an air defence programme for the period 1980–1994 had been prepared. It dealt with weapons requirements, as well as the air command and control system.

Early in 1980, it was recognised that the existing machinery was not adequate to allow all members of the Alliance to play their part in developing the air defence programme. Thus, in November 1980, it was agreed to establish a new committee structure, headed by the NATO Air Defence Committee, which would advise on all aspects of air defence programme development for NATO Europe and the adjacent sea areas. Two panels are subordinate to the Air Defence Committee. One panel, the Panel on the Airspace Management and Control System, is responsible for advising and assisting in the planning and co-ordination of the air command and control aspects of the overall air defence programme. A second Panel on Air Defence Weapons will be concerned with weapon mixes and the development of a long-term weapons programme, a major objective being the harmonisation of complementary national weapons programmes with a view to ensuring the best use of available resources.

When the NATO Air Defence Committee was established, it was also agreed that the NATO Air Defence Electronic Environment Committee should be disbanded and that its activities would be subsumed into the new committee structure. Hence those activities directly in support of the existing air defence ground environment, the Air Defence Software Committee and the Air Defence Hardware Committee, were moved to the Panel on the Airspace Management and Control System. In addition, the review of information on national air defence concepts and doctrines, which had been one of the major activities within the Tri-Service Group on Air Defence, became one of the general responsibilities of the NATO Air Defence Committee, and the Panel on Air Defence Weapons in particular.

