

DTIC FILE COPY

1

AD-A200 095

AGARD
HANDBOOK

S DTIC
ELECTE **D**
OCT 28 1988
CD

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited



NORTH ATLANTIC TREATY ORGANIZATION
ADVISORY GROUP FOR AEROSPACE RESEARCH & DEVELOPMENT

88 1027 054

**NORTH ATLANTIC TREATY ORGANIZATION
ADVISORY GROUP FOR AEROSPACE
RESEARCH AND DEVELOPMENT**

**AGARD
HANDBOOK**

**REVISED
June 1988**

**7 rue Ancelle
92200 Neuilly sur Seine
France**

Telephone (1) 47.38.57.95

Telex 610176



Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

Published September 1988

Copyright © AGARD 1988



Set and Printed by Specialised Printing Services Limited
40 Chigwell Lane, Loughton, Essex IG10 3TZ

↳ *Part II* CONTENTS :

PREFACE	1
FORMATION OF AGARD ;	2
AGARD MISSION <i>and</i>	3
AGARD ORGANIZATION ;	4
NATIONAL DELEGATES BOARD ;	5
ADVISORY COMMITTEE	6
STEERING COMMITTEE	7
NATIONAL COORDINATORS ;	7
AEROSPACE APPLICATIONS STUDIES COMMITTEE	8
VON KARMAN MEDAL COMMITTEE	8
AGARD STAFF – Composition ;	9
AGARD PANELS – Organization and Operation ;	11
INDIVIDUAL PANELS – Missions ;	15
CONSULTANT & EXCHANGE PROGRAMME ;	19
PROGRAMME OF SUPPORT TO GREECE, PORTUGAL AND TURKEY ;	21
MILITARY COMMITTEE STUDIES PROGRAMME ;	21
AGARD MEETINGS ;	23
AGARD PUBLICATIONS ;	25
AGARD AWARDS ;	27
AGARD CHARTER <i>and</i>	28
AGARD BY-LAWS	38
ORGANIZATION.	48

PREFACE

This Handbook is intended as an introduction to AGARD and its activities for:

- new members of the AGARD community, including newly-appointed members of AGARD Panels and Working Groups and new members of AGARD staff;
- present members of the AGARD community who may wish to have available a brief reference booklet on the Agency and its organization and operations;
- scientists, engineers, service officers and administrators in NATO Member-Nations who are asked by AGARD to participate in its activities as authors, consultants, lecturers or contributors to symposia, or who would like to gain an understanding of AGARD's mission and organization.

Though intended as a general guide to AGARD, the Handbook includes the official texts of the AGARD Charter and the AGARD By-Laws. A complete history of the Agency from 1951 to 1968 was edited by Dr Frank Wattendorf. It has been revised twice since, the latest edition, *The AGARD History 1952-1981*, being published in 1982. A further revision is expected to be published in 1988. Additional detailed information, particularly on technical programmes and publications in specific years, and names and addresses of AGARD members and officers, may be found in such periodical publications as the *AGARD Bulletin* and the triennial *AGARD Index of Publications*. Information on these and other AGARD publications will be found on Page 25. Details concerning attendance at AGARD meetings are on Page 23.

FORMATION OF AGARD

In February 1951 Dr Theodore von Kármán, then Chairman of the United States Air Force Scientific Advisory Board, organized and chaired a conference of NATO Aeronautical Research Directors in Washington, D.C. At this conference it was unanimously agreed that there was an urgent need to mobilize, for the mutual advantage of NATO Member-Nations, their scientific and technical skills, manpower and facilities. To this end it was agreed that an organization called the Advisory Group for Aeronautical Research and Development should be formed.

After a trial period of two years, during which the new organization was supported by the United States Air Force, the NATO Member-Nations agreed in April 1954 that AGARD should become an Agency under the Standing Group of NATO and be supported from NATO funds. On 15 February 1965 the name of the Agency was changed to the Advisory Group for Aerospace Research and Development (AGARD).

When the Standing Group was disbanded in 1966, AGARD became an Agency of the North Atlantic Military Committee, which approved the Charter under which AGARD operates.

AGARD MISSION

According to its Charter (see page 28), the mission of AGARD is to bring together the leading personalities of the *NATO Member-Nations in the fields of sciences and technology relating to aerospace for the following purposes:

- Recommending effective ways for the member nations to use their research and development capabilities for the common benefit of the NATO community;
- Providing scientific and technical advice and assistance to the Military Committee in the field of aerospace research and development (with particular regard to its military application);
- Continuously stimulating advances in the aerospace sciences relevant to strengthening the common defence posture;
- Improving the cooperation among member nations in aerospace research and development;
- Exchanging scientific/technical information;
- Providing assistance to member nations for the purpose of increasing their scientific and technical potential;
- Rendering scientific and technical assistance, as requested, to other NATO bodies and to member nations in connection with research and development problems in the aerospace field.

*The Member-Nations of NATO are: Belgium, Canada, Denmark, France, Federal Republic of Germany, Greece, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Turkey, United Kingdom and United States of America.

AGARD ORGANIZATION

AGARD is organized around three main elements:

- the National Delegates Board, the *governing* body, assisted by a Steering Committee and an Advisory Committee;
- the AGARD staff, the *executive* body of the Agency;
- the Scientific and Technical Panels and the Aerospace Applications Studies Committee (AASC), which together constitute the *expert* bodies of the Agency.

These elements carry out the AGARD mission through a number of different and specialized activities, including:

- Panel programmes of conferences, symposia, specialists' meetings and Lecture Series, and meetings of sub-committees and working groups;
- Consultant and Exchange programmes under which individual consultants are provided to NATO Member-Nations, and personnel exchanges and contacts arranged;
- a programme of Lecture Series and Special Courses;
- a programme of Military Committee Studies, consisting of aerospace applications and technology studies initiated at the request of the NATO Military Committee;
- a publications programme resulting from the above activities or initiated by them;
- a programme of support to the Southern Flank nations (Greece, Portugal and Turkey).

NATO funds provide for AGARD's logistical and staff support, for consultants, and for the preparation and printing of AGARD publications; NATO funds also provide for a limited number of the staff members at AGARD Headquarters. However, the main support for AGARD's activities derives directly from the Member-Nations, who make available their own nationals to serve as members of Panels, Committees, Sub-Committees and Working Groups, assign national officers and officials to the AGARD staff, and act as hosts to AGARD meetings. The AGARD headquarters building is located in Neuilly sur Seine near Paris.

THE NATIONAL DELEGATES BOARD

The National Delegates Board is the highest authority within AGARD; its members are leading personalities in the field of aerospace research and development. They are appointed by and represent the Governments of the following NATO Member-Nations: Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Italy, Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom and the United States. Luxembourg is represented on the National Delegates Board by the Delegates from Belgium and receives copies of AGARD publications. Each government appoints one, two or three members of the Board, as it wishes, but each country has only one vote. The first Chairman of the Board was Dr von Kármán, who served from February 1952 until his death on 7 May 1963. Since then the Chairman has been elected from amongst the National Delegates for a three-year term.

The National Delegates Board meets twice a year, in the Spring and on the occasion of the AGARD Annual Meeting, in the Fall. (The original AGARD annual meetings between 1952 and 1965, were known as General Assemblies; they were held each year in a different NATO country and brought together as many AGARD personalities as possible in a variety of scientific and business meetings. After 1965, these General Assemblies were replaced by smaller Annual Meetings, which continued to rotate amongst the NATO Nations. Each Spring the National Delegates Board reviews the technical programme and budget for the following year and receives the Director's Report for the previous year. Each Fall, the Board takes the opportunity offered by attendance at the AGARD Annual Meeting to review progress and provide general scientific and administrative guidance. The Fall Meetings rotate around the member countries and thus provide an opportunity for the host nation to demonstrate its current progress in aerospace research and development. Meetings of the Panel Chairmen take place at the time of each National Delegates Board meeting.

The formal duties of the National Delegates Board are given in detail in Section V of the AGARD Charter (page 30), and the detailed By-Laws for the operation of AGARD which have been approved by the Board commence on page 38. From the point of

view of AGARD's operations, the Board Members' most important duties, which they carry out in consultation with appropriate national agencies, include:

- appointing scientists and engineers from the aerospace communities of their respective countries to AGARD Panels, working groups, study teams and the other AGARD activities;
- requesting and approving the appointments of consultants, specialists and others invited to take part in AGARD activities;
- arranging for invitations for Panel and other AGARD meetings to be held in their respective countries;
- assisting with and monitoring the appointment of personnel (civilian and military) as Voluntary National Contributions from their nations to AGARD staff;
- providing guidance for and approving the AGARD Technical Programme, as presented by AGARD activities through AGARD Headquarters.

The diagram on Page 48 shows the organization of AGARD in relation to the North Atlantic Council and the Military Committee.

ADVISORY COMMITTEE

The National Delegates Board has established an Advisory Committee, consisting of one National Delegate from each country, to deal with urgent business arising in the intervals between the two annual meetings of the full board.

STEERING COMMITTEE

The Steering Committee was established in 1964 to advise the National Delegates Board (NDB) with the object of ensuring that the activities of AGARD are directed towards ends most useful to the NATO military. It serves as a forum in which military requirements for studies and advice in aerospace research and development are put forward and discussed by representatives of the NDB and the NATO staff. The Steering Committee has authority to approve up to two new Aerospace Applications Studies each year. Such approval requires a majority of the AGARD members of the Steering Committee to be present and voting. Deliberations on other military-related activities become recommendations to the AGARD NDB, whose approval is necessary prior to implementation.

The Steering Committee routinely meets once or twice a year, in conjunction with an NDB Meeting. It is chaired by the Chairman of the AGARD NDB. Membership includes several National Delegates; a senior officer from each of the NATO International Military Staff, SHAPE and SACLANT; the Assistant Secretary General for Defence Support or his representative; and the Director of AGARD.

AGARD NATIONAL COORDINATORS

In order to coordinate within their countries the various actions to be taken in relation to AGARD activities, most NATO Member-Nations have appointed National Coordinators. The duties assigned by the National Delegates to the National Coordinators vary from one Nation to another, but in general they concern coordination within the Nations and liaison with the AGARD Director and Staff on matters agreed upon by their National Delegates.

The National Coordinators meet once a year during the Spring Meeting of the National Delegates Board to compare their methods of operation, and to discuss with the AGARD staff matters of common interest. They are kept fully informed of all AGARD activities. Their assistance and advice are often requested by the AGARD staff for the implementation of AGARD activities within their countries.

AEROSPACE APPLICATIONS STUDIES COMMITTEE

The Aerospace Applications Studies Committee (AASC) was established in 1971. It is responsible to the Steering Committee for the organization, management and technical review of Aerospace Applications Studies — that is, systems-oriented studies which cross the boundaries of the disciplines of individual AGARD Panels and often deal with the military applications of emerging technologies.

The AASC is a permanent AGARD committee. Meetings are normally held twice a year. The Committee's membership consists of a Chairman, appointed for a three-year term by the NDB, representatives from nations participating in Aerospace Applications Studies, the NATO International Staff, the NATO International Military Staff and SHAPE.

Since the AASC organizes, manages and reviews studies approved by the Steering Committee on behalf of the National Delegates Board, it functions in most respects like an AGARD Panel, except that it is responsible to the Steering Committee and not directly to the National Delegates Board.

VON KÁRMÁN MEDAL COMMITTEE

The von Kármán Medal Committee is composed of the Chairman of AGARD and three members selected from among the National Delegates and approved by the National Delegates Board. Members of the Committee are each appointed for three years, one member being replaced every year. The Director of AGARD is the Secretary of the Committee. Information about the Medal and the requirements for its award is given on page 27.

AGARD STAFF – Composition

The staff of AGARD is headed by a Director, appointed by the North Atlantic Military Committee on the advice of the National Delegates Board for a period of three years. The Director acts as the chief executive officer of AGARD, and his general terms of reference are defined in Section VI of the AGARD Charter (Page 32). He is assisted by a staff consisting on the one hand of permanent NATO International Staff members, and on the other of national military and civilian personnel assigned to AGARD staff by their governments for periods of two or three years as Voluntary National Contributions.

An organization chart of AGARD headquarters is on Page 49. The staff includes:

- Chief Plans and Programmes, who is responsible for planning the AGARD programme after its approval by the National Delegates. In liaison with member nations and in coordination with AGARD Panels and activities he ensures that AGARD activities such as meetings, sub-committees, working groups and lecture series are properly coordinated as regards locations and dates. The Chief, Plans and Programmes is also responsible for the planning and execution of the AGARD Consultant and Exchange Programmes and for the administrative support of the Lecture Series planned by the Panels. He is also responsible for the coordination of the Support Programme to Greece, Portugal and Turkey. Interpretation and translation services are organized and coordinated through his office. He is assisted by a Deputy.
- Chief, Administration and Finance, who is responsible for coordinating the inputs to prepare the proposed programme and budget. He also has responsibilities for automatic data processing (ADP), procurement, travel, security and general services. He is assisted by a Deputy specifically in charge of budgetary and financial matters.
- Chief Military Committee Studies, who is assisted by two Deputy Study Directors, responsible for the

implementation of the programme of Aerospace Applications Studies requested by the AGARD Steering Committee.

- Panel Executives (nine in number), most of whom are scientists or engineers serving as Voluntary National Contributions, who act as links between the Director of AGARD and the Panels. A Panel Executive Council, consisting only of the Panel Executives, exists to discuss and find solutions to problems common to all the panels and to promote informal coordination of Panel programmes.
- Chief, Budget and Finance Branch, who is responsible for the commitment and disbursement of funds under the current year's approved programme, and who reports directly to the Director on such matters.
- Executive for External Relations, who conducts external coordination and liaison.
- Scientific Publications Executive, who is responsible for the management of the AGARD publications printing and distribution programme, as well as for press and public relations and similar activities.

The total staff comprises about fifty persons. From 1952 until 1960 they were housed in the Palais de Chaillot in Paris. From 1960 until 1968, the headquarters was at 64 rue de Varenne, Paris, and since 1968 the offices have been at 7 rue Ancelle, 92200 Neuilly sur Seine, one of the inner suburbs of Paris.

AGARD PANELS – Organization and Operation

Panel Organization

There are nine AGARD Panels composed of a total of about 450 members, who are experts actively engaged in research, development or management in academic institutions, government establishments or industrial enterprises related to the aerospace field. Panel members are appointed by their respective National Delegates, normally for a term of three years. Reappointment is permissible, but National Delegates review Panel memberships regularly to ensure that the composition of the Panels continues to reflect current activity and interests in the scientific speciality concerned.

Each Panel defines a programme of meetings, lectures and publications in its own speciality, within the general constraints of AGARD policy as determined by the National Delegates Board. Panel members are responsible for enlisting the necessary support and participation from their own countries. In all these activities, Panels can call upon the resources of the AGARD staff; in particular, each Panel is supported by a full-time Panel Executive, who acts as the AGARD Director's representative.

Panel Operations

Panels operate in accordance with the AGARD Charter and By-Laws. Each Panel elects from among its members a Chairman and Deputy Chairman in accordance with By-Law No. 17 (page 43), establishing its own quorum for this purpose. These Panel officers normally serve for a two-year term, and the Deputy Chairman usually succeeds to the post of Chairman.

The following procedural points concern the relations between the AGARD Panel Chairmen and the National Delegates Board:

Panel Chairmen ordinarily take up with the Director of AGARD matters concerning the execution of the AGARD programme approved by the National Delegates Board, and consult him on any matters not requiring approval by the Board. When matters require action by the National Delegates Board, Panel Chairmen may directly address the Chairman of AGARD, informing AGARD headquarters. In exceptional cases, Panel

Chairmen may communicate with the AGARD Chairman alone, and they are also free to communicate with individual Board members on any AGARD matter.

Panel officers, assisted by the Panel Executive and by such committees as the Panel thinks appropriate, are responsible for drawing up the Panel technical programme. These programmes are prepared in outline at Panel business meetings 15 to 24 months before the beginning of the year in which they are to be carried out, reviewed by the National Delegates Board at a Spring meeting and subsequently reviewed for final approval by the North Atlantic Military Committee. The necessary budget is approved or revised by the Military Budget Committee a few months later. The results of these reviews are presented in final form to the National Delegates Board at a Fall meeting.

Thus, AGARD's planning and operations are concerned at any one time with a three-year cycle of activity: the current year's programme, being carried out; that for the following year, being planned in detail; and that for two years ahead, being planned in outline. In these circumstances, the maintenance of continuity through the overlapping terms of the Panel officers, and the advice of the AGARD Director and his staff, are clearly of great importance.

Generally Panels hold two major meetings each year, and these, like the AGARD Annual Meetings, are rotated among the NATO Member-Nations. Thus, each country in turn has the privilege and duty of acting as host to each of the Panels. Potential participants from all NATO countries have equal opportunities of attending AGARD meetings. AGARD tries to arrange the subjects of meetings in each country so that they are suited to the special needs of that country, but naturally this requirement cannot always be observed in view of the other criteria which must often determine choices. Business meetings, Committee and Sub-Committee meetings, and often Working Group meetings, are held in conjunction with these major meetings. However, Working Groups are sometimes convened at other locations, such as AGARD Headquarters, and at other times in order to meet their special requirements and interests. This is done frequently enough to warrant mention and is considered an acceptable alternative, since in many instances the Working Group Members have no interest in the topic of the major Panel meeting.

Panels may also hold workshops, either as individual events or within other meetings. The purpose of these is to facilitate intensive discussion of a topic on a semi-formal basis; the format may range from an activity which approaches a mini-specialists' meeting to one comprising a number of small groups which consider different aspects of the topic and report the discussion and conclusions back to the Panel as a whole.

Twice a year, immediately before the NDB meetings, the Panel Chairmen meet among themselves to discuss matters which are of common interest and for which co-ordination among Panels is required. These meetings also provide an opportunity for interface with the AGARD Chairman, Director and staff. The Chairman and Director of AGARD participate in such meetings together with such AGARD staff as are concerned with the matters under discussion. A Chairman for each meeting is elected by the Panel Chairmen from among themselves. The position is normally rotated among the Panels on an annual basis.

Panel Committees, etc.

To facilitate their activities Panels may establish or make use of committees or procedures as follows:

Permanent Committees

Planning, Policy or Programme Committees, composed of Panel members, may be responsible for the coordination of Panel programmes and policies, and for short- and long-term planning of the Panel's work. Similarly Publication and Editorial Committees may be responsible for reviewing and, where necessary, editing publications sponsored by the Panel. Some Panels appoint a Committee to review proposals for Support Projects and to monitor the status of these activities.

Sub-Committees

Panels may establish Sub-Committees to perform specific tasks. Each Sub-Committee has a precise objective and is composed exclusively of Panel members, but may in special circumstances call upon AGARD consultants for limited

participation. Sub-Committee meetings are conducted in conjunction with Panel meetings unless exceptional circumstances make other arrangements necessary.

Working Groups

Working Groups may be established if Panels feel that expertise that does not exist within its membership is required for a specific project. Working Groups have specific tasks and limited durations. Their establishment is reviewed and formally approved by the National Delegates Board. At least the Chairman of a Working Group must be a Panel Member, but other members of a Working Group may be Panel Members or non-panel members. Non-panel members proposed for Working Group membership are appointed by the National Delegates of their respective countries. Participation of non-NATO nationals in AGARD Working Groups is permitted in rare cases, for which special guidelines exist.

Author-Editor Contacts

Individual Panel Members may be asked to act as direct contacts between Panels and authors or editors under contract to AGARD in order to assist the author or editor and to report on progress to the Panel in question.

INDIVIDUAL PANELS – Missions

The detailed areas of interest of each Panel vary fairly rapidly as the field of aerospace science and technology expands and as interactions between specialist areas become more or less relevant. In very general terms, the mission of each Panel is to fulfil the AGARD mission within its own area of scientific and technical interest and competence. Each Panel has Terms of Reference that have been approved by the National Delegates Board and are printed in a separate publication, AGARD-TOR 38, 'Terms of Reference and Topics Lists for AGARD Panels and Aerospace Applications Studies Committee'. The following paragraphs briefly outline the histories and the current areas of interest of each Panel.

Aerospace Medical Panel

This is one of the four original Panels, established as the Aeromedical Panel as a result of the first AGARD General Assembly, in May 1952.

Since then the Panel has widened its range of activities to include biological, psychological and medical requirements in space and thus became, in September 1959, the Aerospace Medical Panel. Basically concerned with the effects of aerospace environment factors on pilot performance, the Panel has stimulated research activities in the field of aircrew medical standards, human factors related to accident prevention, ergonomics and human engineering in equipment design. The Aerospace Medical Panel keeps abreast of scientific and technological progress by maintaining committees concerned specifically with behavioural sciences, biodynamics, special clinical and physiological problems in military aviation, and special senses.

Avionics Panel

The Avionics Panel was established in 1957 as an outgrowth of the original Ionospheric Research Committee. The Panel is concerned with all aspects of avionics and continuously reviews all relevant technical areas to select subjects for Panel activities. These areas include advanced avionic materials and devices, aerospace equipment, data handling and computers, human factors in avionics design, optoelectronics, radar and radio navigation, and telecommunications.

Electromagnetic Wave Propagation Panel

The Electromagnetic Wave Propagation Panel was established in 1969. Early AGARD activity in this area was conducted under the Ionospheric Research Committee which later became the Electromagnetic Wave Propagation Committee under the Avionics Panel. The Panel is concerned with propagation problems and with propagation prediction techniques, for civil and military applications, of all electromagnetic waves, from long wavelength radio waves to optical waves.

Flight Mechanics Panel

This is another of the four original Panels. It was established in 1952 as the Flight Test and Instrumentation Panel. The Panel is concerned with all aspects of the flight mechanics of aerospace vehicles, including flight testing, performance, stability and control including handling qualities, simulation and operational problems. In addition the Panel plays a unique role among the Technical Panels of AGARD by addressing the overall design and management problem and taking responsibility for coordinating the inputs of contributing Panels to such considerations as flight vehicle preliminary design, optimisation and systems integration, and has primary responsibility for the associated man-machine interfaces.

Fluid Dynamics Panel

Originally the Wind Tunnel and Model Testing Panel, this was also one of the four original Panels formed in 1952. The Fluid Dynamics Panel concentrates on theoretical and practical problems in fluid dynamics related to the design and operation of aerospace vehicles. Its work ranges from the study of the fundamental physics of airflows to the development and use of advanced testing facilities and equipment. The Panel places strong emphasis on the development of Computational Fluid Dynamics (CFD) methods which play an increasingly important role in the aerodynamic design of flight vehicles.

Guidance and Control Panel

In response to the rapid growth of and interest in guidance and control technology in government, industry and the universities, the Guidance and Control Panel was established in 1965 as an *ad hoc* Panel for a trial period of two years; it was permanently constituted in

September 1967. The Panel is concerned with the theory and technology involved in control dynamics and elements for three principal mission functions which are navigation, guidance and control. The scope of applications addressed by the Panel comprises ground command and control, air-traffic control, global and local navigation, inertial and relative guidance, weapons delivery, terrain-following guidance and navigation and their impact on aerospace vehicle design and mission.

Propulsion and Energetics Panel

The Propulsion and Energetics Panel was among the four original Panels established in 1952 as the Combustion Panel. During the early years of its existence the Panel was primarily concerned with stimulating research in combustion processes. In 1956 the Panel widened its scope to include problems of propulsion systems, and its name was changed to the Combustion and Propulsion Panel. The increasing interest in processes of energy production and conversion and their application to propulsion systems led to a further broadening of the scope of the Panel and in 1965 the present name was adopted. The extension of Panel activities to engine development and system operation problems still left room for exchanges on and stimulation of basic research in the fields of both combustion and the aerodynamics of turbomachines, rockets and ramjets.

Structures and Materials Panel

The Structures and Materials Panel was formed in 1955. Initial panel efforts were in the areas of structural heating, structural material developments and structural loading and response problems. During the years, the Panel has expanded the scope of its activities to encompass a very wide range of topics within the fields of structural research and development for aerospace vehicles and of engineering for all aerospace systems. These are studied from the twin standpoints of Concepts and Technology and Life-cost factors and availability; typical areas of discussion would be optimum structural design methodology, materials processing, structural reliability and maintainability.

Technical Information Panel

The Documentation Committee was the first group formed in AGARD after the four original Panels. Its title was changed in 1962 to the Technical Information and Documentation Committee, and subsequently in 1965 to Technical Information Panel. The Panel is concerned with all aspects of scientific and technical information as an integral part of the aerospace and defence research and development process, in the belief that effective scientific and technical information systems enhance the quality and quantity of the R & D effort in the NATO Community. The Panel has three specific objectives: to assist the aerospace and defence R & D efforts in the NATO nations by promoting effective handling and transfer of scientific and technical information; to improve cooperation among member nations in the management of scientific and technical information and to foster and improve the exchange of such information; and to provide advice and support to AGARD and the NATO Community, particularly AGARD, in the development and implementation of information services. The Panel also provides support to AGARD, e.g. by producing indexes to AGARD publications and preparing bibliographies in support of Lecture Series and conferences of special note. In addition, the Panel provides a forum for the exchange of ideas and techniques concerned with aerospace documentation generally.

CONSULTANT AND EXCHANGE PROGRAMME

The Consultant and Exchange Programme was established in 1953 in order to respond to requests made by National Delegates and to complement Panel activities in establishing and maintaining contacts between aerospace scientists and engineers from government agencies, research organizations, universities and private laboratories of the NATO nations. AGARD, through its many contacts in the aerospace field, is able to respond quickly and efficiently to requests for consultant services. The Consultant and Exchange Programme uses five main methods to carry out its mission.

1. Individual Consultants

Individual consultants are experts made available through the facilities of AGARD upon the request of the National Delegates, or of the Chairmen of Technical Panels and the AASC, or of the International Military Staff on behalf of other NATO bodies. Consultants advise and often present lectures on particular topics of interest to the requesters. The missions are usually planned with the assistance of the appropriate Panels and the durations may vary from a day to a week, depending upon their nature.

2. Lecture Series

The AGARD programme of Lecture Series is addressed to wider and sometimes less specialized audiences than AGARD Specialists' Meetings, and is intended to present state-of-the-art reviews of a variety of technical and scientific fields.

Lecture Series are proposed to the NDB by the Technical Panels and are included in the Panel Programmes in response to expressions of interest from representatives of Nations on these Panels. The Panels also propose a Lecture Series Director. After approval by the NDB, the Chief, Plans and Programmes negotiates the dates and locations with the interested Nations and with the Lecture Series Director. The Panel monitors the technical programme proposed by the Director of the Lecture Series, and the Plans and Programmes Division issues the contracts to the Lecture Series speakers and assures appropriate administrative support from AGARD and the Host Nation at each of the presentation sites.

AGARD organizes a limited number of Lecture Series each year, and each series is given for two days, usually in three NATO Member-Nations, as requested by the nations. The texts of lectures presented in this programme are published and distributed by AGARD to member Nations through the National Distribution Centres.

3. Special Courses

The Special Courses are similar to the Lecture Series except that they usually address a narrower scope of subject and have a smaller team of speakers. Administratively they are supported by AGARD Headquarters in a similar manner to the Lecture Series.

A team of experts (normally not more than seven) presents lectures in one, and rarely in two or three, nations on a specific topic. Some members of the team may be supported by non-AGARD organisations. The programme is arranged with the assistance of the appropriate Panel or Panels, and the Course Director as in the case of Lecture Series.

Proposed by the Panels, Special Courses are included in Panel programmes and are presented to the National Delegates Board for approval. An AGARD publication is usually prepared by the Panel based on the course material.

4. Short Courses

A team of experts (normally not more than four) gives lectures to one or several nations on a specific topic. There is no AGARD publication. Short Courses are not presented to the National Delegates Board for approval. Sometimes they are requested by nations and sometimes the themes are proposed by the Panels.

5. Exchanges

The Exchange Programme facilitates arrangements for the exchange of scientists and technical personnel between research establishments. These assignments are of short duration and are organized at the request of Member-Nations. This programme also covers exchanges of equipment between laboratories.

PROGRAMME OF SUPPORT TO GREECE, PORTUGAL AND TURKEY

Following a general initiative begun by the NATO Council to increase the support given to Greece, Portugal and Turkey to enhance their position in, and ability to contribute to, the alliance, AGARD has started a special programme to provide additional support to these countries in strengthening the scientific and technological base of their defence efforts in aerospace.

The objective of the Programme is to support a) the attendance at AGARD Panel Meetings of Panel Members from Greece, Portugal and Turkey and b) projects between the Southern Flank Nations and Supporting Nations. This Programme is coordinated by the Chief, Plans and Programmes and technical monitoring of each Support Project is the responsibility of the sponsoring Technical Panel.

MILITARY COMMITTEE STUDIES PROGRAMME

Aerospace Applications Studies (also known as Military Committee Studies) may be proposed by NATO Member-Nations, by other NATO agencies or by AGARD. Since AGARD is a NATO agency under the North Atlantic Military Committee, proposals are forwarded to the Military Committee through the NATO International Military Staff. The resulting Military Committee Memorandum is then forwarded to AGARD's Military Committee Studies (MCS) Division for distribution to the Steering Committee and the AASC for their consideration.

The Steering Committee, with advice from the AASC, has authority to approve up to two topics from the Military Committee Memorandum as Aerospace Applications Studies each year. The selected topics are announced to the National Delegates Board and referred to the AASC for their execution. The AASC prepares detailed terms of reference for each study for review and approval by the Steering Committee and the National Delegates. The AASC at the same time identifies qualified Study Directors, Study Team members, potential consultants and sources of data. Individual

nations are solicited for prospective Study Team members, as is SHAPE, which provides the necessary threat and operational expertise.

Studies usually commence in January and July each year. Each Study Team conducts its study in accordance with schedules and guidance given by the AASC, meeting five or six times in the course of the study period, which is usually twelve months but may occasionally be extended. The AASC, which is responsible for the content of each study, periodically reviews the progress and plans of each Study Team, and reviews the final Advisory Report.

In all these activities, the AASC and the Study Team Directors can call upon the resources of AGARD Staff. In particular, the Military Committee Studies (MCS) Division of AGARD provides a Deputy Director for each Study Team, and is responsible for the organization and secretarial functions of all AASC and Aerospace Applications Study Team meetings. The Chief MCS Division acts as the AGARD Director's representative. The MCS Division is also responsible for the organization and secretarial functions of Steering Committee meetings.

Military Committee Technology Studies

Certain studies with particular military technological significance are requested by the Military Committee through the Steering Committee, and carried out directly by one or more of the AGARD Panels. The Technical Panels decide on the appropriate activity to respond to the request, e.g. a meeting, a Working Group, or a Workshop, and, after approval by the NDB, it becomes a part of the Panel's normal Technical Programme.

AGARD MEETINGS

General Information

All AGARD meetings are conducted in English and/or French, the official NATO languages. Simultaneous interpretation facilities between these languages are usually available.

In special circumstances highly-qualified non-NATO nationals may be invited to participate in unclassified AGARD meetings or lecture series. Any such attendance is based on the principle that it must be of interest and value to AGARD. Invitations to non-NATO nationals are extended by the Director of AGARD following requests and recommendations from AGARD National Delegates and the approval of the NATO Military Committee.

Symposia

AGARD Symposia are technical meetings concerned with subjects of relatively general interest within specific fields. Attendance is by invitation only and is normally limited to citizens of NATO Member-Nations. Generally application for attendance must be made to an AGARD National Delegate or Panel Member from the applicant's country. Some countries, however, have established special internal procedures for the coordination of invitations.

Specialists' Meetings

As their name implies, Specialists' Meetings are addressed to narrower and more specialized areas of interest, aimed at a more limited audience, the participants being invited by name through the National Delegates or Panel Members of their own Nation.

Workshops

Allow less formal, more intensive, discussion of a particular topic. The format will be arranged to suit the circumstances in which the individual topic is addressed. As in the case of Specialists' Meetings, participants are invited by name through the National Delegates or Panel Members of their own Nation.

Lecture Series, Short Courses and Special Courses

Attendance at these instructional-type meetings does not require a specific personal invitation, although participants are generally citizens of NATO Member-Nations.

Working Groups and Study Team Meetings

Participants in these meetings are nominated or invited by name through the National Delegates, Panel Members or AASC Members of their own nation.

AGARD PUBLICATIONS

The most tangible form of output resulting from AGARD activities is that represented by AGARD publications. About eighty or ninety of these are issued each year, in categories which constitute a simple and easily recognizable set of aerospace technical literature. The categories are as follows:

1. **AGARDOGRAPHS** constitute the principal formal category of publications for work prepared by, or on behalf of, AGARD's Panels. An AGARDograph must pertain to a single, clearly-defined subject and comprise material generally agreed to be of lasting interest. This material may be the work of a single author or be the coordinated and edited contributions of several authors. Often the preparation time for AGARDographs is measured in years rather than months.
2. **REPORTS** are publications which deal, generally not at any great length, with subjects of more limited scope (such as a specific item of research work) and which are expected to be of relatively short-term interest. They may consist of a single paper or be a collection of papers on a common subject.
3. **ADVISORY REPORTS** are distinguished from **REPORTS** by the fact that they also contain advice and/or recommendations for action, such as the initiation of further research on a particular subject. This being so, they are usually addressed primarily to a specific readership.

Technical Evaluation Reports (that is, reports evaluating the papers presented, discussions held, and the outcome of a Conference, Symposium, etc.) may be published as Advisory Reports. Alternatively, when appropriate, they may be included in the relevant Conference Proceedings publication.

4. **CONFERENCE PROCEEDINGS** are reports of Panels' Technical Meetings, generally including the full text of the papers that were presented at the Meeting and an account or summary of the discussions which followed.

5. **CONFERENCE PREPRINTS**, when required, are published before a Meeting; they include such of the papers as are available for printing by that time and are distributed to the participants at the Meeting.
6. **LECTURE SERIES** publications consist of the full texts of the presentations at Lecture Series. They are normally published in full and made available to persons attending the lectures and to others concerned.
7. **MISCELLANEOUS** publications include AGARD Bulletins (which describe Panel and AASC programmes and list meetings and publications), AGARD Highlights, semi-annual calendars of aeronautical and space meetings, triennial Indexes of AGARD publications, the AGARD History and this Handbook.

AGARD publications are prepared for distribution only within NATO Member-Nations. They are initially distributed free of charge to National Distribution Centres in each NATO nation, and are similarly redistributed by these Centres. The Centres are not part of AGARD, but are national agencies (often the national scientific information unit) which redistribute AGARD publications in accordance with their own procedures.

Most National Distribution Centres (but not the United States Centre) maintain small stocks of AGARD publications to satisfy later authorized requests for copies. If the publications are not available from Centres, microfiches or photocopies can be obtained from certain authorized sources on payment. Addresses of National Distribution Centres and Purchase Agencies are given on the back cover of this Handbook. Special arrangements are made for the distribution of classified AGARD publications to authorized recipients.

AGARD AWARDS

In order to recognize the services provided or contributions made to AGARD, the National Delegates Board has established two specific distinctions or awards: the von Kármán Medal, and AGARD Certificates.

The von Kármán Medal

The von Kármán Medal consists of a silver copy of the gold medal presented to Dr von Kármán at NATO Headquarters in Paris in July 1962, on the occasion of the Tenth Anniversary of the formation of AGARD. The medal bears the following inscription on the reverse side: "To..... in recognition of outstanding contributions to AGARD-NATO" and the year of award. It is awarded for outstanding contributions to aerospace science and technology and to the enhancement of progress in scientific and technological cooperation among the NATO Nations carried out in conjunction with AGARD activities. Only persons who have participated in, or been associated with, AGARD activities are eligible for the award, either for repeated outstanding contributions or for a single exceptional achievement. Normally, one medal is awarded each year though awards will be made only when the Board considers that appropriate candidates have been recommended. Nominations for the award of the von Kármán Medal may be made by National Delegates, Panel Chairmen, the Chairman of the Aerospace Applications Studies Committee and the AGARD Director. The Medal is normally presented during the AGARD Annual Meeting with a citation signed by the AGARD Chairman. The von Kármán Medal Committee is composed of three National Delegates who serve on a rotating basis, one being replaced each year. The Committee meets annually, at the time of the March NDB Meeting.

AGARD Certificates

AGARD Certificates (of two types, signed as appropriate by members of the Board and the AGARD Director or the AGARD Chairman and the AGARD Director) are awarded to AGARD members and staff on their departure from AGARD. In addition, certificates may be awarded to individuals outside AGARD who have served AGARD for a long time or have contributed to AGARD in a significant manner.

**CHARTER FOR THE ADVISORY GROUP
FOR AEROSPACE RESEARCH AND DEVELOPMENT
(AGARD)**

Effective 1 March 1985

**As authorised by North Atlantic Military Committee
Document MC 143/2 (Final), dated 1 March 1985 and amended
by Corrigendum No.1, dated 26 July 1988.**

Section I

LEGAL STATUS

1. The Advisory Group for Aerospace Research and Development (herein referred to as AGARD), located in Neuilly-sur-Seine, France, is a NATO subsidiary body established under the provisions of the Agreement on the status of the North Atlantic Treaty Organization, National Representatives and International Staff, signed in Ottawa on 20 September 1951 (herein referred to as the Agreement).
2. Subject to the provisions of the present Charter, the Agreement shall apply to AGARD. Consequently, AGARD, acting in the name of NATO, shall be entitled to perform such legal actions as are essential to its operation. Within these limits it shall have the capacity to:
 - (a) Conclude contracts;
 - (b) Institute legal proceedings and engage in administrative procedures;
 - (c) Acquire and dispose of property.

Section II

DEFINITION

3. AGARD is a NATO Agency under the authority of the Military Committee consisting of:
 - (a) A Board of National Delegates. The National Delegates Board (NDB) is composed of representatives of member nations;
 - (b) A number of Panels and Committees approved by the Military Committee and composed of experts appointed by the National Delegates;
 - (c) A technical and administrative staff whose number and composition is approved by the Military Committee.

Section III

MISSION

4. The mission of AGARD is to bring together the leading personalities of the NATO nations in the field of science and technology relating to aerospace for the following purposes:
 - (a) Recommending effective ways for the member nations to use their research and development capabilities for the common benefit of the NATO community;
 - (b) Providing scientific and technical advice and assistance to the Military Committee in the field of aerospace research and development (with particular regard to its military application);
 - (c) Continuously stimulating advances in the aerospace sciences relevant to strengthening the common defence posture;
 - (d) Improving the cooperation among member nations in aerospace research and development;

- (e) Exchanging scientific/technical information;
- (f) Providing assistance to member nations for the purpose of increasing their scientific and technical potential;
- (g) Rendering scientific and technical assistance, as requested, to other NATO bodies and to member nations in connection with research and development problems in the aerospace field as stipulated in Article 20 below.

Section IV

MILITARY COMMITTEE

- 5. AGARD will operate under the policy and guidance promulgated by the Military Committee. The general outline and scope of its annual Programme of Work, including the magnitude of the effort in different areas, will be recommended by the National Delegates Board and approved by the Military Committee.
- 6. Within the framework of this Charter, and in conformity with NATO policies and procedures, the Military Committee will be responsible for issuing guidance for the operation of AGARD. The National Delegates Board may propose changes in the guidance to the Military Committee.

Section V

AGARD NATIONAL DELEGATES BOARD (NDB)

- 7. The AGARD National Delegates Board constitutes the highest authority within AGARD. It is composed of one to three representatives from each member nation, officially appointed by their respective governments. The members of the National Delegates Board shall normally be highly qualified scientists or engineers having knowledge of defence research and development in the aerospace field in their respective countries. Each nation will have only one vote, regardless of the number of delegates. The Secretary General of NATO shall designate a

representative to attend meetings of the National Delegates Board and other meetings as appropriate, as an ex-officio member. The Military Committee will be represented at all NDB Meetings.

8. The Chairman will be elected by the National Delegates Board for a term of three years with no extension possible. The AGARD Chairman conducts the work of the National Delegates Board. He takes all necessary measures to implement decisions taken by the National Delegates Board, initiates actions as required to fulfil the AGARD mission, and issues appropriate instructions to the Director of AGARD.
9. The National Delegates Board shall meet twice a year, or more frequently if necessary at the request of the Chairman.
10. The National Delegates Board shall in particular:
 - (a) Elect its Chairman from among its members;
 - (b) Establish guidelines for future programmes;
 - (c) Review the current and projected work programmes, including the Consultant and Exchange Programme, in accordance with the provisions of Articles 18, 19 and 20 below;
 - (d) Propose to the Military Committee the establishment, as appropriate, of Panels, Committees and Ad Hoc Groups;
 - (e) Provide the AGARD Panels, Committees, Ad Hoc Groups and Staff with policy guidance;
 - (f) Ensure that all knowledge and information in the possession of NATO nations relevant to the work of AGARD are made available to AGARD to the maximum extent acceptable to those nations;
 - (g) Examine AGARD's annual report to the Military Committee;

- (h) Designate, subject to Military Committee approval, the Director of AGARD;
 - (i) Assist the Director of AGARD in the recruitment of a qualified technical and administrative staff;
 - (j) Approve the AGARD By-Laws.
11. Special Committees as required for efficient operation of AGARD activities may be established as prescribed by Military Committee and National Delegates Board policy. Membership of these Special Committees and the Terms of Reference will be contained in the By-Laws to this Charter.

Section VI

AGARD DIRECTOR

12. The Director of AGARD is designated by the National Delegates Board, subject to Military Committee approval. He shall be appointed for a term specified by the National Delegates Board and which must be consistent with NATO contractual policy. His term may be renewed at the option of the National Delegates Board. His contract shall be signed, at the request of the AGARD Chairman, by the Chairman of the Military Committee.
13. The Director will normally attend all meetings of the National Delegates Board and Special Committees without vote.
14. The Director supervises and directs the AGARD staff and, in particular, is responsible for:
- (a) Planning and conducting the activities of AGARD within the framework of the general policy and/or programme;
 - (b) Carrying out the decisions of the National Delegates Board;
 - (c) Approving the release of reports and studies promulgated in the name of AGARD;

- (d) Engaging the necessary personnel to fill positions within the approved ceiling;
- (e) Exercising either personally or through appropriate delegation the authority granted to him.

Section VII

PERSONNEL

15. The AGARD Technical and Administrative Staff will implement or support the approved programmes of AGARD. The AGARD staff will be drawn from NATO nations. It shall be composed of:
 - (a) Personnel occupying established posts, who by virtue of Article 17 of the Ottawa Agreement constitute NATO International Personnel;
 - (b) Military or civilian personnel assigned to AGARD by NATO nations on a non-reimbursable basis at the request of the AGARD Chairman with the approval of the Military Committee.
16. The personnel included in the categories defined in Article 15 above will benefit from the applicable provisions of the Ottawa Agreement.
17. The NATO Civilian Personnel Regulations shall apply to AGARD.

Section VIII

PROGRAMMES

18. AGARD's annual programme for the period 1st January to 31st December shall be established during the preceding year according to the following procedures:
 - (a) The Director of AGARD will forward a comprehensive written statement of the projected AGARD work programme, including any proposals of the individual nations or NATO bodies, to the National Delegates Board; the Director will add to this statement his personal comments and suggestions;
 - (b) The National Delegates Board will review and approve the work programme and will submit its recommendations to the Military Committee for its approval from a military viewpoint.
19. In framing its recommendations, the National Delegates Board will take into account, *inter alia*, the following considerations:
 - (a) Whether the existing and proposed programmes are within the mission and capability of AGARD;
 - (b) Whether AGARD is the appropriate body to conduct each part of the proposed programme;
 - (c) Whether certain countries possess information on subjects of the proposed programme that may be available to AGARD within national security constraints;
 - (d) Whether estimated item costs and the total programme cost of AGARD are reasonable. However, the recommendations of the National Delegates Board as a whole, or of certain members, shall not prejudice the responsibility of the Military Budget Committee (MBC) for the examination of AGARD's budget.

20. AGARD may, in accordance with the guidance referred to in Article 6 above, give scientific and technical assistance and provide consulting services in connection with national or NATO coordinated research and development programmes. Such actions are subject to Military Committee approval.

Section IX

FINANCIAL RULES

21. The budget of AGARD shall be financed in accordance with the cost-sharing formula appropriate to NATO peacetime military budgets.
22. The NATO Financial Regulations shall apply to AGARD.
23. In the framework of the NATO Financial Regulations:
 - (a) The budget is prepared by the AGARD staff, reviewed by the National Delegates Board, and presented to the NATO Council (Military Budget Committee) through and by the NATO Financial Controller by 1st September, for the following calendar year, in the absence of such other date as may be set by the Finance Committee;
 - (b) At the same time the AGARD budget will be transmitted to the Military Committee for examination from a military point of view prior to NATO Council approval;
 - (c) The Military Budget Committee will report its recommendations on the AGARD budget to the North Atlantic Council for approval.
24. Financial control of AGARD will be exercised in conformity with the NATO Financial Regulations.
25. The external audit of the accounts of AGARD shall be carried out by the NATO Board of Auditors according to the NATO Financial Regulations.

Section X

SECURITY

26. In the framework of NATO Security Regulations:

- (a) When dealing with classified material, AGARD shall be bound by the NATO Security Regulations as set out in C-M(55)15 reissued 31 July 1972, including all current and future Supplements and Amendments thereto, and by such other security rules approved or authorised by the North Atlantic Council as may apply;
- (b) In meeting his responsibility for the maintenance of security at AGARD, the Director will be guided by the current rules, regulations and instructions issued by the NATO Security Committee for the implementation of the NATO security system set forth in the document C-M(55)15, referred to in paragraph (a) above.

Section XI

COPYRIGHTS AND INFORMATION DISCLOSURE

27. Proprietary rights (including patent rights, copyrights and proprietary technical information) in any work carried out by a member of the AGARD Staff in the performance of his official duties shall be vested in NATO. As to the proprietary rights which might be developed by consultants and/or authors in the performance of their work, the Director of AGARD will ensure that contractual provisions similar to those used for members of the Staff are applied as far as practical. AGARD shall, on request, authorise any member nation to obtain patent or other protection as trustee for NATO on any of those proprietary rights vested in NATO under this article. Each member nation shall be entitled to a free licence to use any proprietary rights vested in NATO under this provision.
28. Proprietary technical information, including information concerning inventions belonging to NATO nations which has been disclosed to AGARD, or in the framework of meetings

held under AGARD aegis, will be protected. Rules and procedures set up for NATO Committees and Working Groups, such as "General Guidance for NATO Armaments Committee Groups" (AC/74-D/860(Revised) Part VIII, dated 30th June, 1964), and the "Council Resolution on Provisions for Setting Up an Ad Hoc Committee in the Event of Damage from Disclosure or Use of Inventions or Technical Information within the Framework of the North Atlantic Treaty Organization" (C-M(60)60, dated 2nd June, 1960) will apply, including all current and future Supplements and Amendments thereto, and such other rules approved or authorised by the North Atlantic Council.

Section XII

IMPLEMENTING MEASURES

29. Each NATO Government will, to the extent that its existing capabilities in the field of aerospace research and development permit, support the work of AGARD. In particular they will make available to AGARD:
 - (a) Such information as may be necessary to carry out the objectives of AGARD, consistent with its own national laws, regulations and practices with regard to the disclosure of such information;
 - (b) Qualified personnel to serve as National Delegates, Panel, Committee and Ad Hoc Group Members and Experts;
 - (c) Qualified personnel who are prepared to accept employment within the AGARD Staff.
30. This Charter entered into force on 1 March 1985, on which date the previous Charter MC 143/1 (Final) dated 5 April 1971 was superseded, and has since been amended by Corrigendum No.1, dated 26 July 1988.

AGARD BY-LAWS

**Approved by AGARD National Delegates Board
Effective March 1988**

The fundamental principles governing the Status and Mission of AGARD are stated in the AGARD Charter as approved by the North Atlantic Council. The AGARD By-Laws as agreed by the National Delegates Board define the procedures through which the mission objectives are achieved.

National Delegates Board

1. Within the policy established by the Military Committee, the National Delegates Board has the following duties in addition to those particularly specified in the AGARD Charter:
 - (a) to propose changes in the AGARD Charter whenever the necessity becomes apparent;
 - (b) to approve Ad Hoc activities as required.
2. The National Delegates Board may recommend to the Military Committee the establishment of special posts and concurrently the appointment of a specific person to fill each post. The Military Committee approval for each such special post will terminate at the time the specific person appointed vacates.
3. Members of the Board as individual National Delegates:
 - (a) shall select and appoint the Panel and Committee Members from their respective countries and provide them reasonable support and guidance to enable them to carry out their duties;
 - (b) may designate organizations to be invited to lend the services of their members to the National Delegates Board. Such members shall not have voting rights.

Special Committees

4. AGARD Special Committees are the Advisory Committee, the Steering Committee, and the Aerospace Applications Studies Committee.
5. The Advisory Committee shall:
 - (a) be composed as follows:
 - (1) the Chairman of AGARD;
 - (2) one National Delegate from each member nation so designated by their respective governments.
 - (b) meet at the request of the Chairman to give its assistance and advice to the Chairman of AGARD and shall otherwise be available to the Chairman for preliminary or informal consultation between meetings of the National Delegates Board;
 - (c) normally be attended without vote by the Director of AGARD, the Representative of the Military Committee, and the members of the AGARD staff specially designated.
6. The Steering Committee shall:
 - (a) be composed as follows:
 - (1) the Chairman of AGARD;
 - (2) AGARD National Delegates so designated by the National Delegates Board*;
 - (3) a senior member of the North Atlantic Military Committee International Military Staff;
 - (4) a senior member of SHAPE;
 - (5) a senior member of SACLANT;

* At present six National Delegates are so designated, and the Steering Committee includes National Delegates from four NATO Member-Nations as permanent members, plus National Delegates from two other Member-Nations who rotate in two-year terms.

(6) the NATO Assistant Secretary General for Defence Support;

(b) meet at the request of the Chairman to provide a forum to discuss NATO military needs and serve as an advisory body to the AGARD Chairman on items of direct interest to the NATO Military Authorities.

(c) normally be attended without vote by the Director of AGARD and members of the AGARD staff specifically designated.

7. The Aerospace Applications Studies Committee shall:

(a) be composed as follows:

(1) a Chairman appointed by the National Delegates Board for a period of three years;

(2) members selected for their broad experience in systems design or systems and operational analysis;

(3) a representative from the NATO International Military Staff;

(4) a representative from the NATO IS Armaments and Defence Research Directorate;

(5) a representative of SHAPE.

(b) meet twice yearly for the purpose of organization, management and technical review of Aerospace Applications Studies;

(c) report to the Steering Committee on the status and substance of studies under its supervision.

National Delegates Board Meetings

8. One of the regular twice-yearly meetings of the National Delegates Board shall be held in March, with the primary purpose of reviewing the AGARD Technical Programme proposed for the subsequent calendar year. The Chairmen and/or Deputy Chairmen of Panels and of the Special Committees are expected to participate in the Open Session of this Meeting.
9. The other meeting of the National Delegates Board shall be held in September, and will usually form the basis of the AGARD Annual Meeting. The locations of these meetings rotate amongst NATO Nations and, thus, provide an opportunity for each country in turn to inform the other NATO nations of its aerospace research and development programmes. Other purposes of this meeting of the National Delegates Board shall be to review progress made during the current year, to provide guidance for the future, and to decide on other matters proper to the attention of the Board. The Chairmen and/or Deputy Chairmen of Panels and Committees are expected to participate in the Open Session of this Meeting.

Panel Operations

10. Technical Panels of AGARD shall be set up according to the Charter after approval by the National Delegates Board of the proposed mission of each. AGARD Staff support to the Panels is assigned by the AGARD Director within the framework of the general policy and programme of AGARD.

Panel Meetings

11. Panels shall normally hold two Meetings a year, each Meeting including a Technical Meeting (Specialists' Meeting, Symposium etc.) and a Business Meeting. The latter shall be conducted for the purposes of reviewing the status of the current year's activities, planning detailed implementation of the programme for the next calendar year, and developing a specific Technical Programme for the year after that. This recommended Technical Programme shall include a listing of expected final products and be detailed enough to justify the funding to be requested in the Panel budget. The Technical

Programme proposal of the Panel, with an outline of the associated budget request, shall be forwarded to the AGARD Director for review and consolidation into the AGARD Technical Programme proposal by the first week of November.

12. Business Meetings are conducted according to parliamentary procedures, but are sufficiently informal to encourage free and open discussion of all problems and to arrive at mutually agreeable solutions. In general, if voting is considered necessary, each Panel Member present has one vote. When a matter arises which requires Members to express national positions, and for the election of Panel Officers, the Business Meeting shall become formal. A quorum as defined by the Panel Guidelines or Panel practice shall then be mandatory and, on any matter put formally to the vote, each nation represented shall exercise a single vote.
13. The location of Panel Meetings is determined in each case by consideration of proposals made by the Panels and invitations received from National Delegates of prospective host countries. In general, it is envisaged that the meetings will be rotated through the various NATO countries, providing each, in turn, the advantage of acting as host country, as well as providing Panel members and invited guests the opportunity to visit various aerospace facilities.
14. Joint meetings with other AGARD Panels may be held from time to time for the discussion and consideration of problems of mutual interest.

Members and Officers of Panels

15. Members of Panels shall be highly qualified persons, actively engaged in aerospace research and development activities relevant to the fields of interest of the Panel. It is highly desirable that the Members occupy similar positions on a national basis.
16. Every member of a Panel shall be specifically appointed by the National Delegate(s) of his own country. Appointment should be for a period of three years. Re-appointment is admissible, but should be based on the same principles as the appointment of a new member.

17. The Panel Chairman and Panel Deputy Chairman shall be elected by the Panel from among its Members during a Business Meeting, each by means of a secret ballot in which each nation has a single vote. When a quorum is not present or when the ballot does not yield a majority, the presiding Chairman will seek postal votes from the nations not represented at the Business Meeting. The Panel Chairman shall be elected for a term of two years and shall not normally be re-elected. The Panel Deputy Chairman shall be elected for a term of one year or two years to accord with the practice of the Panel concerned. If the office of Chairman becomes vacant between elections, the Deputy Chairman shall succeed. If the office of Deputy Chairman becomes vacant, it shall be filled by election at the next Business Meeting. Normally the Chairman and Deputy Chairman of a Panel will not be concurrently from the same country. For the purpose of continuity, it is desirable that there should be some overlap in the tenure of the Chairman and Deputy Chairman.
18. Members of Panel Committees and Sub-Committees shall all be members of the corresponding Panel. Members of Working Groups, other than the Chairmen, may be non-Panel members. They should be solicited in cooperation between the Panels and the Nations concerned and submitted by the National Coordinator of the individual's nation to his National Delegate(s), for approval and appointment.

Duties of the Panel Chairman

19. The Panel Chairman is the senior Panel Officer and as such is responsible to the National Delegates Board. He presides at all Business Meetings of the Panel. He is an ex-officio member of all Panel Sub-groups. He exercises general supervision of the affairs of the Panel as authorized by AGARD policy. He shall prepare the Panel's proposed Technical Programme and the outline of the budget requested for forwarding to the AGARD Director. He shall present his Panel's portion of the AGARD Technical Programme proposal to the March Meeting of the National Delegates Board for approval.
20. The Panel Chairman and/or Deputy Panel Chairman is expected to participate in the twice-yearly meetings of the Panel Chairmen. Generally, these take place during the week of and

just preceding the NDB meetings. The purpose of these meetings is to discuss matters of common interest to two or more Panels.

Duties of the Panel Deputy Chairman

21. The Panel Deputy Chairman assists the Panel Chairman as requested. In the absence or incapacity of the Panel Chairman, he performs the duties and exercises the authority of the Panel Chairman.

Duties of Panel Members

22. Panel Members shall assist the Panel Chairman in the drawing up and implementation of the Panel programme. They make the necessary contacts within their respective countries to enlist the optimum support for the Panel programme in general and for each particular Panel activity. Each Panel Member shall discharge these duties in accordance with the procedures operative within his country and the guidance provided him by his National Delegate(s).

Duties of the Panel Executive

23. The Panel Executive, who is a full-time member of the AGARD Staff responsible to the AGARD Director, provides the Panel to which he is assigned with necessary management and administrative assistance. He is responsible for keeping the Panel informed of other activities of AGARD and NATO which are pertinent to the Panel field of interest. He acts as the representative of the AGARD Director in Panel deliberations and as the representative of the Panel in Staff deliberations. He assists the AGARD Director in coordinating and budgeting that part of the AGARD Technical Programme relevant to his assigned Panel. He serves as adviser to the AGARD Director in the technical speciality related to his Panel assignment.

Military Committee Studies Programme

24. The Military Committee Studies Programme has as its goal the provision of technical advice and in-depth analyses for NATO military planners on new and more efficient uses of NATO aerospace resources. It includes specific studies of aerospace-

related systems or of applications of aerospace technologies in response to expressions of interest from the NATO Military Committee. It also provides AGARD panels with information and guidance for areas of particular military interest requiring consideration in their future planning. This Programme shall function under the guidance of the Steering Committee according to principles approved by the National Delegates Board.

Consultant and Exchange Programme

25. The Consultant and Exchange Programme acts as a complement to the activities of the Panels in establishing and maintaining contacts between scientists and engineers of NATO government agencies, research organizations, universities and private laboratories working in the fields in which AGARD is active. This is implemented by means of:

- (a) general coordination of the consultant programme in liaison with National Delegates;
- (b) organisation of courses, lecture series or individual consultant missions at the request of NATO nations and/or of AGARD Panels;
- (c) exchange of scientific or technical personnel;
- (d) exchange of equipment and joint use of certain installations;
- (e) organization of visits to laboratories and facilities involved in aerospace work.

26. The principles governing the operation of the Consultant and Exchange Programme shall be those approved by the National Delegates Board. Requests for consultants shall be made by:

- (a) National Delegates for missions in support of national requirements;
- (b) Panel Chairmen for missions in support of Panel activities approved by the National Delegates Board;
- (c) AGARD Director for missions in support of special activities of AGARD which span national and Panel boundaries.

Normally, lists of consultant missions, which are planned to be requested during the next calendar year, shall be forwarded to the AGARD Director by the end of November. Consideration of other requests will depend upon priorities and availability of funds.

Ad Hoc Groups

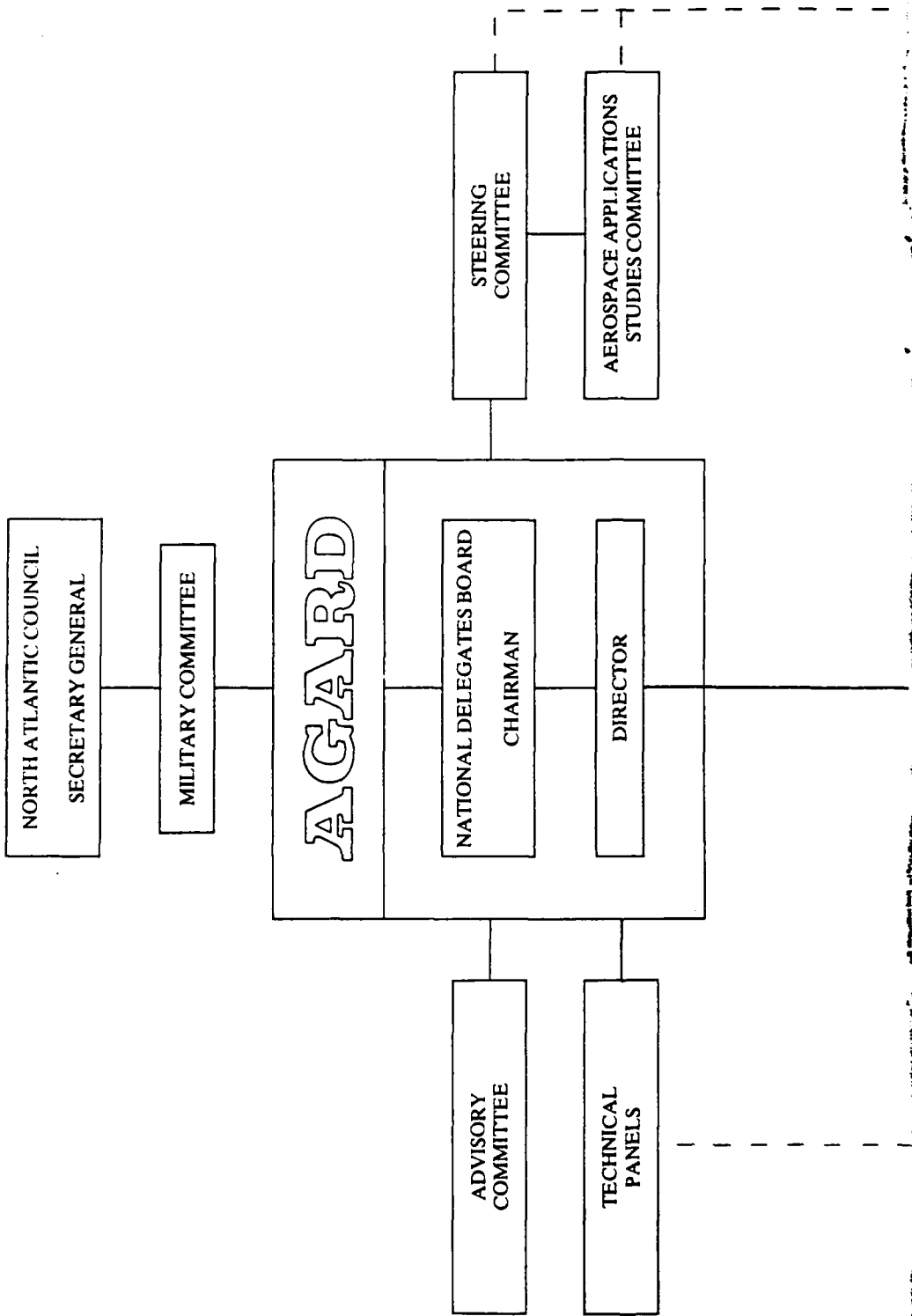
27. Ad Hoc Groups shall be set up with the approval of the National Delegates Board according to the need for the solution of specific problems. The Chairmen of Ad Hoc Groups shall be designated by the National Delegates Board. AGARD staff support to Ad Hoc Groups shall be assigned by the Director within the framework of the general policy and programme of AGARD.

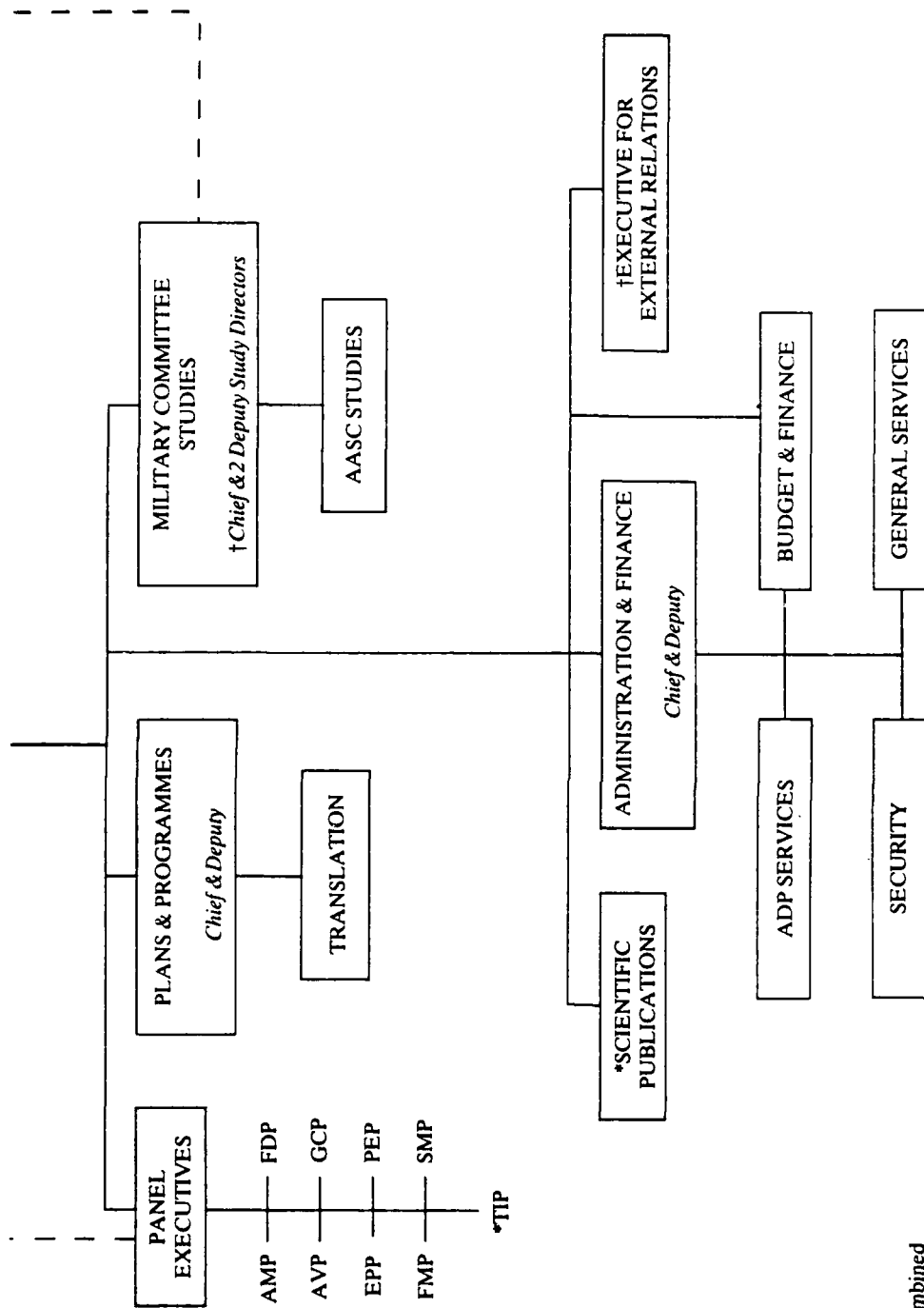
Office Procedures

28. In implementation of the duties outlined in the Charter, the AGARD Director promulgates office procedures and rules as necessary governing all aspects of AGARD activities and particularly the support to be given by the AGARD Staff to Panels, Ad Hoc Groups, the Military Committee Studies Programme, the Consultant and Exchange Programme, and the programme of publications.

Financial

29. The Charter states that the NATO Financial Regulations shall apply to AGARD. As described in these Regulations, only the AGARD Director is authorized to commit AGARD funds. To this end, he may avail himself of the services of the NATO Financial Controller who has delegated a large and detailed authority to AGARD's Budget and Finance Officer. The latter is therefore directly answerable to the AGARD Director and to the NATO Financial Controller. If financial support is required from AGARD for any AGARD activity performed by a Panel Member or other individual, such support shall be requested either by a National Delegate of his own country, or by the appropriate Panel Chairman, or by the AGARD Director, in accordance with the operative rulings of the National Delegates Board. In all cases, any request for financial support shall be submitted to the AGARD Director for approval before funding is committed.





*, †, Posts combined

AGARD

NATO  OTAN

7 rue Ancelle · 92200 NEUILLY-SUR-SEINE
FRANCE

Telephone (1)47.38.57.00 · Telex 610 178

DISTRIBUTION OF UNCLASSIFIED
AGARD PUBLICATIONS

AGARD does NOT hold stocks of AGARD publications at the above address for general distribution. Initial distribution of AGARD publications is made to AGARD Member Nations through the following National Distribution Centres. Further copies are sometimes available from these Centres, but if not may be purchased in Microfiche or Photocopy form from the Purchase Agencies listed below.

NATIONAL DISTRIBUTION CENTRES

BELGIUM

Coordonnateur AGARD - VSL
Etat-Major de la Force Aerienne
Quartier Reine Elisabeth
Rue d'Evere, 1140 Bruxelles

CANADA

Director Scientific Information Services
Dept of National Defence
Ottawa, Ontario K1A 0K2

DENMARK

Danish Defence Research Board
Ved Idraetsparken 4
2100 Copenhagen Ø

FRANCE

O.N.E.R.A. (Direction)
29 Avenue de la Division Leclerc
92320 Châtillon

GERMANY

Fachinformationszentrum Energie,
Physik, Mathematik GmbH
Karlsruhe
D-7514 Eggenstein-Leopoldshafen 2

GREECE

Hellenic Air Force General Staff
Aircraft Support Equipment Directorate
Department of Research and Development
Holargos, Athens, TGA 1010

ICELAND

Director of Aviation
c/o Flugrad
Reykjavik

ITALY

Aeronautica Militare
Ufficio del Delegato Nazionale all'AGARD
3 Piazzale Adenauer
00144 Roma/EUR

THE UNITED STATES NATIONAL DISTRIBUTION CENTRE (NASA) DOES NOT HOLD STOCKS OF AGARD PUBLICATIONS, AND APPLICATIONS FOR COPIES SHOULD BE MADE DIRECT TO THE NATIONAL TECHNICAL INFORMATION SERVICE (NTIS) AT THE ADDRESS BELOW.

PURCHASE AGENCIES

National Technical
Information Service (NTIS)
5285 Port Royal Road
Springfield
Virginia 22161, USA

ESA/Information Retrieval Service
European Space Agency
10, rue Mario Nikis
75015 Paris, France

The British Library
Document Supply Division
Boston Spa, Wetherby
West Yorkshire LS23 7BQ
England

Requests for microfiche or photocopies of AGARD documents should include the AGARD serial number, title, author or editor, and publication date. Requests to NTIS should include the NASA accession report number. Full bibliographical references and abstracts of AGARD publications are given in the following journals:

Scientific and Technical Aerospace Reports (STAR)
published by NASA Scientific and Technical
Information Branch
NASA Headquarters (NIT-40)
Washington D.C. 20546, USA

Government Reports Announcements (GRA)
published by the National Technical
Information Service, Springfield
Virginia 22161, USA



Printed by Specialised Printing Services Limited
40 Chigwell Lane, Loughton, Essex IG10 3TZ