

1984

AEROSPACE INDUSTRIES ASSOCIATION

ANNUAL REPORT

A I A



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Calendar Year 1984

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A STATEMENT OF POLICY

The aerospace industry shall continually foster the advancement of those aeronautical, astronautical and related sciences, arts, technologies and industries which shall be consistent with and contribute to the public and private welfare of local communities, this nation, and the international community of which this nation is a part.

Specifically, the continuing goal of the industry shall be: to fulfill its responsibility for the development and improvement of those deterrent and defense capabilities deemed by the government to be requisite for our continued national security; to promote those technological achievements necessary to assure the peaceful conquest of space for the benefit of all mankind; to foster the advancement of economic commercial and private air transport; and to press for and contribute to significant improvements in those scientific, management and manufacturing skills and techniques that will benefit the social, cultural and economic well being of the nation. In pursuing this goal, the industry shall maintain a commitment to high standards of excellence, integrity and reliability.

Fulfillment of these responsibilities imposes requirements on this industry for far-ranging and innovative contributions in science and technology. To this end, the industry shall relentlessly explore those horizons of science most likely to hold the key to future advances, and shall vigorously and efficiently improve the foundations of this nation's industrial creativity, productivity, technology and facilities.

Attainment of such goals requires the most effective possible use of all of the resources of a pioneering and progressive industry, directed by experienced, flexible and imaginative management, and incorporating:

- The highest levels of scientific investigation
- Technological facilities adequate to provide continuity in advanced research, development and production
- Coordinated teams of managers, scientists, technicians and skilled labor
- Economic stability to assure the fullest contributions by each element to national security, prosperity and progress
- Adherence to high quality and reliability in services provided and products delivered
- Commitment to truth, accuracy, fairness and compliance with law in all matters and in all communications with the public, customers, suppliers and employees.

The aerospace industry pledges the fullest application of its resources and abilities to the task of accomplishing these goals.

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INTRODUCTION



The Aerospace Industries Association of America, Inc. (AIA) is the national trade association that represents U.S. companies engaged in research, development and manufacture of such aerospace systems as aircraft, missiles, spacecraft and space launch vehicles; propulsion, guidance and control systems for the flight vehicles; and a variety of airborne and ground-based equipment essential to the operation of the flight vehicles. A secondary area of industry effort, grouped under the heading non-aerospace products, consists of a broad range of systems and equipment generally derived from the industry's aerospace technological expertise but intended for applications other than flight.

The industry AIA represents is one of the nation's largest. Its sales in 1984 amounted to \$83.1 billion, including \$71 billion in aerospace products and services and \$12.1 billion in non-aerospace sales. Export sales totaled \$15 billion and, although exports were below the previous year's level, the industry nonetheless recorded an important positive contribution to the U.S. trade balance of \$10.2 billion.

The industry's backlog at year-end 1984 was \$132.5 billion. Orders from the U.S. government—\$81.4 billion—accounted for more than 61 percent of the total backlog; non-government orders amounted to \$51.1 billion. Industry employment at the end of 1984 was 1,242,000, up more than 50,000 above the previous year's level; by year-end 1985 it was expected to increase to 1,280,000.

Aerospace Industries Association functions on national and international levels, representing its membership in a wide range of technological and other relationships with government agencies and the public. To facilitate its work at the national level, AIA is a member of the Council of Defense and Space Industry Associations (CODSIA), a coordination medium of six industry associations with mutual interests related to federal government procurement policies. In international activities, AIA cooperates as practical with trade associations in other countries, individually and through the International Coordinating Council of Aerospace Industry Associations (ICCAIA), an informal body of the free world's national aerospace associations. AIA also serves as secretariat for TC 20, the aircraft/space group of the International Organization for Standardization (ISO).

AIA's policies are determined by a Board of Governors composed of senior executives of member companies plus the AIA president, who is the association's senior professional employee and who also

EXECUTIVE COMMITTEE 1984



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serves as its general manager. A key element is the Executive Committee—made up of members elected from the Board of Governors—which exercises the powers of the Board between Board meetings.

AIA's primary services to its membership are conducted by nine Councils, Services and Offices whose heads report to the AIA president. Within this structure, AIA's professional staff coordinates and supports the work of an array of committees, sub-committees, task groups, *ad hoc* groups and project groups whose membership is made up of key specialists from AIA member companies. In 1984, the association continued its increased emphasis on issues specifically affecting commercial aviation—transport/business aircraft and civil helicopters—and also continued its efforts to improve the competitive posture of U.S. industry in international aerospace markets. In the latter connection, the AIA Board of Governors developed a proposal for revivifying American trade through establishment of new national policies on trade and R&D; the association initiated an extensive program of briefings to Administration officials and the Congress on the content of the AIA plan. The 1984 activities of the Councils, Services and Offices and their associated working groups are summarized in the following pages.

AEROSPACE OPERATIONS SERVICE



The Aerospace Operations Service represents the functional and management areas reflected in the charters of the Manufacturing, Quality Assurance and Product Support Committees, their working committees, subcommittees, liaison panels and Manufacturing Technology Advisory Groups (MTAGs). Prime areas of interest and activity include advanced manufacturing technology; improvement of production processes and management toward greater quality and productivity; advanced quality assurance technology and management systems; logistics planning and technology; spare parts acquisition and management; post-delivery product support and services; and technical publications and training.

During 1984, the committees and their working elements were involved in numerous projects and tasks of interest to the association membership and its customers (the Department of Defense, the National Aeronautics and Space Administration, the Federal Aviation Administration and other government agencies) and maintained active interface and liaison with management officials in both government and industry. Among the service's activities in 1984 were:

Quality Conferences

The Quality Assurance Committee, in conjunction with NSIA's Quality and Reliability Assurance Committee, held its annual industry-government conference at Lancaster, Pennsylvania in early October. It featured four panels addressing the theme "In Search of Design Excellence, Foundation for Quality and Productivity". The Department of Defense, NASA and FAA were strongly represented on the panels, in addition to representation from pertinent industry functional areas.

The QAC also lent support and assistance to an FAA Quality Assurance Conference at Dallas/Fort Worth, Texas in September and to NASA's Productivity-Quality Conference in Washington, D.C. held later the same month. In October, six QAC members attended the Fourth NATO Quality Assurance Symposium in Paris, France as designated U.S. delegates.

Productivity Activities

Several productivity projects were initiated or continued under AIA Management Coordinating Board (MCB) Project 83-8, to assure full coordination of AIA council and committee productivity activities.

Productivity Workshop V, addressing "white col-



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Manufacturing Committee



R. K. (DICK) MAY
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Chairman, 1983/84
Manufacturing Committee



D. J. TALLEY
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Chairman, 1984
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Manpower, Personnel &
Training Committee



ALEC J. NEIBAUER
Lockheed Corporation
Chairman, 1984
Field Support Committee



HARRY A. HALL
LTV Aerospace and Defense Company
Chairman, 1984
Service Publications Committee

lar," indirect productivity measurement, was conducted by an element of the Manufacturing Committee in Denver, Colorado in June. NASA, TRW, American Productivity Center of Houston, Texas, Honeywell Aerospace and Defense, and Price, Waterhouse and Company speakers presented and discussed approaches developed in their respective productivity improvement and tracking programs, particularly those relating to white collar measurement.

In addition, a special Productivity Panel was established by the Manufacturing Committee to follow up on the recommendations made in the defense sector's report to the previous year's White House Conference on Productivity. At year-end, this project was being broadened to include studies relating to other pertinent AIA councils and committees and the Aerospace Research Center.

Quality Requirements

AIA's review and response to a number of proposed military standards involving quality assurance were invited during the year. They included Proposed MIL-STD-XXX (Navy), *Product Assurance Program Requirement for Contractors* and its companion, Proposed MIL-HDBK-XXX (Navy), *Guidelines for the*

Development of Contractor Product Assurance Program Requirements; Proposed MIL-STD-2164 (EC), *Workmanship/Manufacturing Process Assurance Test for Electronic Equipment*; and revised draft *Software Quality Requirements for Software Systems and Development and Production (Army)*. AIA comments on these and other standards were provided to the DoD elements concerned, either directly or through CODSIA.

Member responses generally reflected that proposed DoD standards and specifications provide too much "how-to" direction rather than setting forth the basic requirements to be met and not usurping contractor management prerogatives. It was also pointed out that there is obvious violation of DoD Directive 4120.3, *Development of Cost Effective Contract Requirements for Defense Materiel Acquisition* and other DoD guidance, such as DoD Initiative #14, *Streamlining Initiative*, which was being stressed by DoD in several December conferences attended and supported by industry and the Deputy Secretary of Defense.

Additionally, a major DoD initiative on improving quality was awaiting the signature of the Deputy Secretary of Defense at year-end. Its tentative provisions were distributed to QAC membership.

Exchange Program (GIDEP)

Several Government-Industry Data Exchange Program (GIDEP) alerts published during 1984 reflected inadequate test procedures at microelectronic suppliers' facilities that directly impacted and, in many cases, delayed government acceptances of electronic microcircuit components, subsystems and systems.

The military services and the Defense Logistic Agency (DLA) apprised their respective contract administration activities and system program offices of the apparent potential for nonconforming material, and directed that government acceptances of products containing them *not* be made until pertinent data confirmed that product degradation had not occurred or would not occur. However, the waiver process involved significant administrative time and costs. Excessive warranties against future failures were requested by some government elements.

To reduce this impact, AIA— together with EIA and NSIA— formed a tri-association/industry panel to expedite processing of future cases, gather data and recommend to DoD means of preventing non-acceptance problems. The panel, comprised of representatives of a number of directly-affected member companies, reported its findings and recommendations to the Defense Logistics Agency and other DoD elements in November.

At year-end, a report containing industry recommendations was being coordinated within AIA and the other associations prior to its delivery to government agencies concerned. Meanwhile, several additional cases of microcircuit nonconformance with nonstandard parts specifications were anticipated in additional GIDEP alerts, and more extensive control of vendors' quality of product was being advocated by the DoD, DLA and the military services.

Manufacturing Committee Reports

Among Manufacturing Committee project reports completed, published and circulated to member com-

panies during 1984 were: *Impact of Major DoD Regulations and Standards* (MC 82.10); *Future Manufacturing in Aerospace* (MC 83.2); *Near Net Shape Parts Survey* (MC 83.13); *Advanced Assembly Systems, Phase II* (MC 83.7); *Joining and Assembly Techniques* (MC 83.12); *Metal Removal Methods* (MC 83.16); and *Export Packaging* (MC 80.24).

New projects and surveys approved by the Manufacturing Executive Committee and initiated during 1984 for completion in 1985 included: *Flexible Manufacturing Systems* (MC 84.2); *Computer Assisted Planning* (MC 84.3); *Robotics Applications Survey, Phase II* (MC 84.4); *Composites Survey* (MC 84.5); *MANTECH Program Cost Effectiveness* (MC 84.10); *Survey on Micro and Personal Computers Usage* (MC 84.13). Final reports will be distributed through Manufacturing Committee members.

Manufacturing Technology

The value of the DoD manufacturing technology program to the aerospace industry and national defense was outlined in an AIA panel discussion at the DoD Annual Tri-Services MANTECH Conference, held at Seattle, Washington in November. Some 800 government and industry representatives attended.

The AIA panel, comprised of four member company representatives, addressed the DoD MANTECH Program – Three Points of View, offering data on previous projects from a prime contractor's viewpoint, from two subcontractors' viewpoints and from a broad national perspective. All firmly endorsed the principles and philosophy of the program and agreed that more action should be taken to make the Congress and the public more aware of the paybacks already received as well as those to be achieved in future projects. Several other government/industry panels at this conference addressed the Industrial Modernization Incentives Program, the Factory of Today – In Place and In Fact, and the Factory of Tomorrow – Developing and Emerging. The Manufacturing Committee had earlier initiated a project, still active at year-end, aimed at developing specific cost effectiveness data to assist in support of MANTECH.

Non-Recurring Cost Recoupment

AIA members provided recommendations from a logistics support sales viewpoint to the Department of Defense for a proposed revision to its Directive 2140.2, which pertains to recoupment of non-recurring costs on sales of U.S. products and technology. The AIA recommendations noted that the thrust of the directive could be accommodated by recoupment only on major equipment or systems sales without application to components, modification kits, technical data packages, etc. It was also noted that implementation of the current requirements in the revision would have a detrimental impact by slowing down the proposed cycle and increasing administrative time and effort for both government and contractor. It would also tend to create ill will in dealing with foreign government representatives because of the delays resulting from increased requirements. Moreover, it would make U.S. industry less competitive with those companies that are owned or directly subsidized by foreign governments.

Spare Parts Acquisition

Activity in the spare parts arena can best be described

as hectic, as a result of an escalating barrage of new attitudes, policies, draft legislation and directives from the Department of Defense, the military services, the Congress and elsewhere. Secretary of Defense Weinberger's key edicts of August 1983 resulted in diverse actions by DoD and the military services. These actions included the establishment of Service Competition Advocates, substantial augmentation of Service Breakout Review Teams and a number of implementing directives demanding much closer scrutiny of spare parts acquisition, from management down to the lowest levels both in the services and in industry.

In response to Secretary Weinberger's action, an AIA *ad hoc* panel on competition in spares procurement developed and coordinated recommendations that would support the Secretary's initiatives to improve spares acquisition and maintain an optimal state of weapon systems readiness. Panel members also conducted a series of briefings on positive industry actions being taken to alleviate future allegations of improprieties in spares pricing and acquisition areas. Command officers and their staffs in the Navy Aviation Supply Offices, Army Headquarters Materiel Command and Logistics Management Center, and Air Force Logistics Command were among the recipients of this briefing. Additional briefings are planned.

Logistics Requirements

Air Force concerns with existing difficulties in expressing logistics requirements in quantifiable terms in RFPs for source selection documents prompted an AIA study to ensure that logistics requirements can be accurately stated and measured against definitive standards. The work of the AIA study panel resulted in a number of recommendations for Air Force consideration. Among the most significant were the establishment of a permanent Air Force organization chartered to research, establish and maintain objective-oriented, scientific measurement criteria for use in the source selection process; the establishment and maintenance of a glossary of standard logistics terms and definitions, together with the development of a compendium of logistics source selection criteria; the implementation of improvements in current bidders conferences and the establishment of a Post Contract-Award Debriefing Conference. In addition, the RFP must be standardized—to the degree possible—to treat each major logistics element on a capsule basis, while providing clear, concise reference to other RFP sections or volumes upon which the element is dependent. A number of these recommended actions lend themselves to further AIA involvement and the study group will be available to lend further assistance.

Spares Pricing

AIA members commented on a proposed Air Force approach to a policy statement requiring mandatory separate contract line item pricing of program management and support/sustaining engineering efforts on major weapon system contracts. This approach is being considered as a means of eliminating the distortion being experienced in the prices of low value spares and support equipment when compared with the intrinsic value of the items. The AIA comments noted that this Air Force approach would create more

problems than it could resolve because the separate line item requirement would, in effect, require the allocation of such costs to contracts as direct costs. A number of AIA companies allocate such costs to cost objectives as indirect costs. therefore any changes in their practices would cause them to be in non-compliance with Cost Accounting Standards requirements.

Since contractors must bid, segregate and price in accordance with their approved accounting systems, directing one means of allocation without considering the effect on other obligations could result in increased administrative costs, and any major change in current allocation guidelines could result in overbid/underbid distortions. In view of this situation, it was recommended that separate line item pricing for program management, sustaining engineering or other such costs not be implemented and that action be taken to adapt present accounting systems to allocate fair and reasonable costs to spare parts, thus avoiding the appearance of substantial overpricing on small dollar value orders. In response to this industry reaction, the Air Force planned to test this concept with two industry companies. AIA members will monitor this activity during 1985.

Field Service Representatives

Concern by senior DoD officials about the dependence of the military services on contractor technical representatives overseas during periods of hostility prompted preliminary development efforts on a DoD directive to control this situation. An AIA report, based on historical performance of these representatives, was prepared in rebuttal. At the center of the problem is the growing dependence on civilians to support important military systems and concern about the services' ability to retain civilians during times of increased tension and hostilities. Current law does not allow the services to require civilians to remain at their jobs until war is formally declared by the Congress. Although contractor and DoD civilian personnel have historically been willing to go into a war zone to work and have proven reliable in that circumstance, there is concern that essential civilians hired and serving in peacetime will not be willing to remain in a potential war zone if the likelihood of war increases or if a conflict actually starts.

The AIA report, which covers conflicts from World War II to the recent Grenada operation, cited the thousands of man-months of service by member company Contractor Technical Field Representatives. It was noted that no one left before his assignment rotation was due; in fact, a number of representatives in Vietnam volunteered to remain after they had completed their assignment. Copies of the report were submitted to DoD officials with the hope that it will close the issue. Additionally, AIA requested an opportunity to comment on the proposed directive.

Automated Data Exchange

AIA and the Air Transport Association (ATA) have established a common goal to develop specifications and standards that will facilitate an automated technical data exchange between manufacturers and customers. The reason for this approach is that the cur-

rent ATA Spec 100 specifications, which are used by the airlines and airline-oriented manufacturers, call for technical data and documents to be supplied on paper, microfilm and/or microfiche. Often these methods do not take advantage of current computer technology, e.g., magnetic tape handoff between systems. Planned new methods such as magnetic tape transfer, video disc and optical disc are not currently included in ATA specifications. Common digitized media between users or between manufacturers would reduce costs of future hardware/software systems. A joint AIA/ATA working group completed a comprehensive survey of the members of both organizations which indicates that this data interface is technically feasible and that significant economic benefits can result from its use. During 1985, the working group will be involved in a study and evaluation of data classification and data use requirements, and it expects to have data interface standards available by 1987.

AEROSPACE PROCUREMENT SERVICE



The Aerospace Procurement Service supports the business management activities of member companies in the fields of accounting and financial management, contract administration, procurement law, industrial relations, industrial security, materiel management, patents, proprietary information and small minority business. The Procurement and Finance Council and the Industrial Relations, Industrial Security, Materiel Management and Patent Committees, each composed of senior executives of member companies, provide experts to initiate actions seeking to improve business relationships or to resolve problems of mutual concern to government and industry. The Service was engaged in these major 1984 activities:

Lump Sum Wage Payments

Starting in 1983, a number of AIA member companies included in their union wage agreements lump sum wage payments (LSWP), made annually in lieu of a general percentage wage increase. The Bureau of Labor Statistics (BLS) refused to recognize such LSWP in its published wage indexes, thereby creating a problem in instances where such indexes are used as the basis for making economic price adjustments in both government and commercial type contracts. An AIA *ad hoc* group, established in early 1984 to resolve this issue with regard to current contracts, continued to meet with the Commissioner and the BLS staff looking to a satisfactory resolution of this problem.

A second *ad hoc* group was chartered to look into the development of a new and unique Employment Cost Index, which would be specifically tailored for use in aerospace industry government and commercial contracts providing for economic price adjustments. This group also met with BLS staff personnel on several occasions. The BLS was asked to submit to AIA its proposal for developing and maintaining such an index series; it was to be submitted early in 1985. It was planned to invite airline representatives and appropriate DoD staff representatives to participate in this effort prior to making any formal commitments to BLS. Industry funding for such an index series will probably be required.

Cost Accounting Standards

The Department of Defense has begun the process to establish, under the DAR Council, an organization to deal with the Cost Accounting Standards (CAS) function. A CAS Policy Group was established to provide the DAR Council with suggested coverage regarding revisions to existing standards and language for new standards, and to be responsible for



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waivers and exemptions to the standards. In response to a DAR Council request for comments on the DoD proposal to institute such an organization, AIA opposed DoD takeover of the CAS function on the basis that the entity performing the CAS function must be independent of those government activities involved in the procurement process. Further, constitutional questions clouded the assumption by DoD of the CAS function. Notwithstanding the views of AIA and other associations, DoD was proceeding at year-end to establish the CAS organization under the DAR Council.

Congressman LaFalce (Subcommittee on Economic Stabilization, Committee on Banking, Finance and Urban Affairs) held hearings in 1984 on the reactivation of the Cost Accounting Standards Board. No legislation resulted from these hearings; however, additional hearings are likely to be held in 1985 on this subject and legislation may result from such hearings. AIA member companies were unable to agree on a CAS legislative position in time for the 1984 hearings, thus AIA did not participate. In view of the likelihood of CAS hearings in 1985, an AIA position on CAS legislation has been formulated and AIA should be able to participate in such hearings.

Automated Security Clearances

In order to reduce the time and effort necessary for DoD to grant security clearances, AIA, along with the Defense Investigative Service Clearance Operation (DISCO), will be conducting a pilot study seeking to provide on-line security information access between contractors and DISCO. It is anticipated that ensuing direct access programs will allow contractors to obtain *Secret* clearances in a matter of days rather than months.

Computer Security

The AIA/DoD Joint Task Group's revision of the Industrial Security Manual (ISM) Chapter XIII dealing with computer security was held up pending Presi-

dential approval of National Security Division Directive No. 145. Approved in October, the directive assigns overall computer security policy responsibility to the National Security Agency. At year-end, AIA's Computer Security Task Group was working with NSA to get approval and early implementation of the AIA/DoD revision.

Communication Security

AIA worked with the National Security Agency to obtain NSA approval for contractors to encrypt classified communications. DoD will continue to require that Data Encryption Standard be used only on certain "sensitive but unclassified" transmissions and will make available to contractors some "off shelf" *Top Secret* equipment to transmit COMSEC commercial and classified. At year-end, NSA was in process of developing new high grade COMSEC encryption devices that will be licensed for manufacture and approved for transmitting classified data.

Automated Access Controls

Technological advances in the field of positive identification systems provide major cost saving opportunities for employers wishing to control access to their premises, restricted facilities or other controlled areas. Through its Security Technology Subcommittee, AIA was instrumental in forming a CODSIA task group that will be working with DoD's National Industrial Security Advisory Committee to develop standards for new access control equipment and systems.

Electronic Emanation Suppression

As a result of AIA efforts to call attention to the high costs of indiscriminately applying TEMPEST to unclassified or *Confidential* contracts, DoD now requires that a qualified threat assessment be conducted before TEMPEST can be imposed and then only on contracts classified *Secret* or above.

Hazardous Materials Information System

AIA continued to work with the Department of Defense and its contractors on updating the Hazardous Materials Information System (HMIS). Originally designed to exchange only health and safety work place and transportation information, the HMIS is being modified to encompass environmental and disposal information, including pertinent federal and state laws and regulations. Additionally, system improvements will include establishing an on-line capability and developing a simplified user's guide.

Personal Compensation

Responding to DoD's request for industry comments and suggestions on how to improve DAR 15-205.6, which concerns the allowability of personal compensation, AIA proposed to the DAR Council revisions that would restore "Total Compensation" as the reasonableness criterion; define an "Individual Compensation Element"; preclude disallowance of a compensation element; and recognize the propriety of offsetting costs.

Dialogues were established with the Office of the Deputy Under Secretary of Defense (AM) and Headquarters Defense Contract Audit Service (DCAS) to explain industry's compensation practices, methods and techniques of evaluation and the use of wage and benefit cost surveys in determining proper and competitive compensation programs. As part of this

ongoing program, AIA planned to meet with staff members of the House Subcommittee on Legislation and National Security in order to correct some misconceptions regarding contractors' compensation practices stemming from the October 1984 GAO report *Compensation by 12 Aerospace Contractors*.

Competition In Subcontracting

Responding to Congressional direction, the Office of Federal Procurement Policy (OFPP) prepared and issued a report on *Competition in Subcontracting*. AIA contributed informally to the study leading to the report. In general, the report stated that present practices and procedures were adequate to provide appropriate competition. DoD also examined this subject and AIA contributed to the DoD study, recommending acceptance and adoption of the OFPP report.

Foreign Selling Costs

Under the Continuing Resolution for DoD, Fiscal Year 1985, if the Secretary of Defense certifies that the allocation of foreign selling costs to domestic DoD contracts is cost effective, Congress will reconsider the law prohibiting such cost allocation at the time the supplemental appropriations are considered. AIA wrote to the Secretary of Defense setting forth cogent reasons why the allocation of foreign sales costs to domestic defense contracts is cost effective and has urged the Secretary to so advise Congress.

SBA/Industry Issues

The Small Business Administration (SBA) and industry identified several key issues in the small business field, including incentives, subcontracting plans, and reporting requirements. AIA continued to work with SBA in seeking to resolve these issues.

Property Accounting Standard

Regulations to implement DoD Property Accounting Standards were still in development at year-end. In informal discussions with cognizant DoD personnel, AIA indicated that regulations being developed are not cost-effective. AIA planned to continue these discussions to seek more equitable regulations.

Federal Procurement Policy

The Competition in Contracting Act (P.L. 98-369), part of the Deficit Reduction Act, became effective on July 18, 1984. The Act incorporates many provisions from the *Proposal for a Uniform Federal Procurement System* and substantially changes the basic statutes underlying the federal procurement system. The Armed Services Procurement Act (ASPA) is amended by adding a statement of Congressional policy that requires advance procurement planning, simplifying and streamlining the procurement process, promoting use of commercial products, and use of functional specifications. To implement these broad objectives, the ASPA was changed to require agencies to achieve full and open competition unless a statutory exception is met to use other than competitive procedures. Among its major provisions, the Act imposes new justification, approval, and notice requirements for contracts employing other than full and open competition; requires appointment of a competition advocate in each procuring activity; and codifies the General Accounting Office bid protest process. It also places sealed bids and competitive proposals on

par. AIA commented on the proposed implementation of these requirements.

The Office of Federal Procurement Policy completed two reports required by Public Law 98-191. One report, dealing with the DoD spares program, recommends that Congress continue oversight of DoD initiated reforms but refrain from immediate legislative action. It further recommends that DoD consider spare parts in acquisition strategies and source selection procedures. As to industry, the report recommends warranted conformance to contractual requirements, complete cost or pricing data, and increased competition among vendors. The second report deals with competition in award of subcontracts by prime contractors. This report recommended early subcontractor participation in the acquisition process, improvements in contractor purchasing systems, component breakout, use of award fees where appropriate, second sources, and emphasis on the importance of subcontract competition.

The Federal Acquisition Regulation (FAR), which governs procurement in all federal agencies, became effective on April 1, 1984. The FAR replaced all other federal procurement regulations, but may be supplemented by those agencies having peculiar needs. DoD, NASA, and GSA have elected to issue supplements. AIA closely monitored development of the FAR, particularly agency supplements, and the effect on the government/industry contractual relationship.

Air Travel Compensation Act

AIA continued to press for legislation to provide appropriate protection for the traveling public as well as all those engaged in commercial air transportation. Introduced in the 98th Congress, H.R. 4497 would carry forward into legislation AIA's proposed concept of providing prompt compensation for the damaged public and assuring full recovery of damages. It would also simplify the allocation of liability among parties jointly contributing to any catastrophic incident. AIA will continue to seek Air Travel Compensation Act legislation in the 99th Congress.

Technical Data

The difficulties encountered by the Department of Defense (DoD) in connection with spares acquisitions led to several bills dealing with technical data and the rights to technical data under government contracts. After extensive hearings, two bills were passed: P.L. 98-577, which governs all federal agencies other than DoD and NASA, and P.L. 98-525, which deals specifically with DoD and NASA. The principal requirements of the bills are to define in the implementing regulations the allocation of rights to data developed 100 percent with government funds, 100 percent at private expense, and data developed with a mixture of government funds and private expense. The laws require that the regulations define what comprises "a legitimate proprietary interest". Also the laws require that, for items or processes sold or to be offered for sale to the public, a contractor need furnish only that data required to maintain and operate the item or process.

In December, through the Office of the Assistant Secretary for Productivity, Technology and Innova-

tion in the Department of Commerce, a draft policy statement for the Administration was developed and at year-end was being processed through the various concerned agencies. The draft appears to be a well balanced approach to the allocation of rights to data under government contracts and, in addition to providing adequate protection, seeks to take maximum advantage of the incentives inherent in the ownership of technical data. At year-end, draft regulations implementing the laws had not yet been received for industry review and comment as required by law.

Patents

Legislation enacted by the 98th Congress to improve the U.S. patent system included protecting semiconductor chips. Defensive patents authorize arbitration in patent cases and combine the Patent and Trade Mark Office's Boards of Appeals and Patent Interferences. Although legislation was introduced that would authorize retention by all contractors of the rights to inventions made in the performance of research and development contracts, it was not enacted; (at present only small businesses, universities and non-for-profit organizations have such authorization). AIA will continue to seek such legislation in the 99th Congress.

Indemnification

The Fiscal Year 1985 Appropriations Act for the Department of Energy contains provisions under which actions for damages against government contractors engaged in nuclear weapons testing activities must be brought against the government, thus, in effect, indemnifying such contractors. AIA had sought broader coverage of indemnification but the law is a step in the right direction. AIA also continued to press the DoD and the military services, especially the Air Force, for broader application of P.L. 95-804 to grant appropriate indemnification to contractors as to catastrophic losses resulting from the performance of government contracts.

Tax Matters

At year-end, regulations implementing the Economic Recovery Tax Act of 1981 (ERTA) and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) were in process within the Treasury Department. AIA continued its close liaison with the Department pending issuance of the regulations.

In November the Treasury Department issued a report to the President suggesting a *Tax Reform For Fairness, Simplicity and Economic Growth*. The proposal was under study by the Tax Matters Task Group. Initial impressions caused concern that the Accelerated Cost Recovery System (ACRS) and the Investment Tax Credit (ITC) would be eliminated. There was additional concern about continuation of the Completed Contract Method of Tax Accounting.

AEROSPACE RESEARCH CENTER



The Aerospace Research Center is engaged in research, analyses and studies designed to bring perspective to the issues, problems and policies that affect the industry and the nation. Its studies contribute to a broader understanding of the complex economic, social and political issues that bear on the nation's technological and economic status.

During 1984, the Center published a major report on the U.S. private, business/corporate and light transport industry, and completed an internal AIA study of the possibilities for technical collaboration in the aerospace industry. Work continued on a study focusing on space commercialization and the need to address a variety of issues that could, if not satisfactorily resolved, present barriers to space enterprise. A new project was directed toward examining the movement of technology between aerospace and other industries.

The Center began automation of a number of its continuing Economic Data Service functions. Related to this was a study project undertaken in an effort to improve AIA's employment forecasting processes.

Work began, in cooperation with the Office of Public Affairs, to develop a helicopter data base.

Center staff assisted in revision of AIA's Trade and R&D Policies paper for a Congressional audience. A brochure complementary to the Trade and R&D paper, *U.S. International Trade and Aerospace Exports*, was developed and published.

Assistance was provided to a number of AIA data gathering and analysis efforts in support of association projects: among them a survey examining the impact of Bureau of Labor Statistics hourly earnings indexes on aerospace contract escalation clauses.

Private, Business, Light Transport Industry

A Center-published report on *The U.S. Private, Business and Light Transport Aircraft Industry—Its Development, World Market and Foreign Competition* was developed with the cooperation of the General Aviation Manufacturers Association; it was the third in a series of studies looking at segments of the industry in terms of the impact of foreign competition. General aviation, the study pointed out, did not share in the business recovery underway in 1984 for the rest of the U.S. economy. Sales peaked at 17,811 aircraft in 1978, dropped to 2,691 units in 1983, and sales growth overall was slow. Despite some positives for the U.S. industry, including heavy investment in new technology, a large domestic market and the trend toward increasing corporate profits and capital

spending, there are serious competitive threats from foreign manufacturers.

Technical Collaboration

An internal AIA study, *Technical Collaboration in Industry: Opportunities and Constraints*, originated in the Technical Council and was conducted by the Research Center. The study evaluated the need for and potential benefits of R&D collaboration in the aerospace industry. It included reviews of the international competitive position of the industry, the U.S. antitrust environment for collaborative R&D, collaborative R&D efforts conducted by other U.S. industry groups and an assessment of industry attitudes toward R&D collaboration.

Space Commercialization

The Commercialization of Space: Removing Barriers to Opportunity was the subject of an Aerospace Center study underway in 1984. The purpose of the study is to summarize for industry some of the potential and the pitfalls of space commercialization, educate Congress and other decision makers on important space-related issues, and provide AIA and others with assistance in the development of consistent, timely policy fostering space commercialization. The project involves a look at the development and status of the various commercial space sectors—communications satellites, expendable launch vehicles, materials processing and remote sensing—and at barriers in these areas. It explores major national concerns, including the public perception of space accomplishments and space commercialization, lack of organized political support, and financial and insurance issues. Major international issues examined included the development of capabilities among foreign competitors, international cooperation in space, and political and legal issues.

Technology Diffusion

In cooperation with the Civil Aviation Advisory Group (CAAG), Aerospace Technical Council, the Aerospace Research Center began a study, *Technology Diffusion - The Movement of Technology Between Aerospace and Other Industries*. The importance of high precision, high performance, high strength and low weight requirements in aerospace systems forces the aerospace industry and its suppliers to develop improved techniques to meet those needs at an earlier stage than in other industries where there is no premium on these factors. After new techniques have been proven and become common practice in aerospace, their applicability and cost-effectiveness in non-aerospace applications is often recognized and put to use. This characteristic of aerospace has attracted many other countries to invest in indigenous aerospace capabilities. The ARC/CAAG study will explore and document technology linkages between aerospace and other industries, describe the mechanisms of technology diffusion, and attempt in a number of case studies to quantify benefits of aerospace technology diffusion.

Employment Forecasts

A 1984 study project involved examination of AIA's employment forecasting processes with an eye to future automation of forecasts in the *AIA Semi-Annual Survey of Aerospace Employment*. The project

included an analysis of the relationship of aerospace employment to other key aerospace indicators such as orders, defense budgets, sales backlog, profits and investment, and the relationship of aerospace employment to general economic indicators and to trends in these indicators.

Economic Data Service

AIA's statistical research and publication activities are centered in the Economic Data Service (EDS), which collects and distributes data on various aspects of the aerospace industry and its relationship to the national economy.

Compiled by EDS and published in October of 1984 was the 32nd edition of *Aerospace Facts and Figures*, the industry's statistical yearbook. The book presented data, charts and text in chapters on aircraft production, missile and space programs, air transportation, helicopter usage, research and development, foreign trade, employment, and finance, as well as a summary chapter profiling the industry in total and relating it to the national economy and the federal budget. Time series tables were updated throughout the book with 1983, or latest available, data. New in the 1984/85 edition is a series of tables on industry orders by product and customer. Another major change involved replacement in industry sales tables of the customarily-used Gross National Product (GNP) deflator with a government-developed aerospace deflator which better reflects the industry's rate of inflation. Other additions included expansion of air transportation data to include world airline traffic and financial data, as well as world fleet data by region and age of aircraft; R&D data comparing aerospace expenditures with those of other industries; and construction of a 35-year time series relating aerospace industry sales to GNP, the federal budget, and defense outlays.

Stocks of the 1983/84 edition of *Facts and Figures* were depleted by the middle of 1984, and printing of the latest edition was increased to the largest run ever, in response to heavy demand from industry analysts and planners, government staff, the press, consultants and academic researchers.

Interim reports of data collected by EDS were released throughout the year in more than two dozen statistical series distributed to six separate mailing lists, addressing general industry activity, employment, aircraft production, foreign trade, and DoD and NASA contracts, obligations and outlays. Added to the general economic grouping was a quarterly financial series presenting aggregated income statements and balance sheets for companies classified by the U.S. Bureau of the Census as aerospace manufacturers. EDS also distributed several reports from other data sources which examined aerospace-related subjects in depth beyond that available through its regular statistical series.

Selected DoD budget documents were publicized and made available in limited quantities on a first-come basis.

EDS became more involved in 1984 in industry/government working groups seeking to construct or improve aerospace-related data bases. At the request of the FAA, EDS was coordinating an industry effort, with the Office of Public Affairs, to develop the AIA

Directory of Helicopter Operators into a data base on the size, composition, and distribution of the U.S. civil helicopter fleet. Related to this project was EDS participation in a data base subcommittee working under the auspices of the Transportation Research Board, which was working towards the sharing of historical records, forecasts, and methodology in the development of production and fleet data bases and consensus forecasts for helicopters, business jets, and turboprop aircraft.

Eleven AIA member companies complied with annual federal reporting requirements on energy consumption by submitting data and narrative to EDS, which, acting as a registered sponsor for the Industrial Reporting Program, filed an aggregated report with the Department of Energy.

EDS continued to work with the Bureau of the Census to improve federal statistics on the aerospace industry through better coverage and more precise survey definitions. A decision was made by Census in 1984 to discontinue a quarterly series on orders, sales, and backlog of aerospace manufacturers, in view of the voluntary nature of the survey and the poor participation rate. As a result of a positive response to an EDS survey querying data users on the value of the series, an arrangement was reached between AIA and Census for association sponsorship of a successor survey, with similar format providing continuity of data, and annual mandatory reporting requirements promising greater timeliness and reliability of results.

AEROSPACE TECHNICAL COUNCIL



The Aerospace Technical Council, the industry's senior technical body, is chartered to focus on the realities, complexities and uncertainties relating to high technology systems development. It acts to detect changes in a fast-paced environment and to communicate the industry perspective to key policy levels. Its responsibilities cover the research, engineering, development, test and safety aspects of aircraft, missiles and space vehicles. The Council directs the activities of two divisions, which manage 13 committees and oversee a large number of working level technical project groups. Major Technical Council activities of 1984 included:

Aerospace Technology for the 1990s

Early in the year, AIA released a major study conducted by the Aerospace Technical Council entitled *Aerospace Technology for the 1990s*. Fostered by the decline in competitiveness of U.S. aerospace products in the international marketplace, the study considered how to reverse the trend. It focused on advanced technology and the potential gains that can be realized in the 1990s generation of aerospace products through bolder national efforts. The study was widely distributed throughout industry, to government policymakers and to universities. AIA produced and distributed a 22-minute color video tape in which Aerospace Technical Council members discuss the issues and study recommendations.

The main thrust of the "Tech '90s" study was to identify those emerging technologies that offer potential for large improvements in the cost and performance of future aerospace systems—in other words, those that promise the highest payoff for national defense and aerospace industry competitiveness. The bottom line of the report is that a stronger focused national effort on the key technologies for the 1990s must be aggressively pursued *now* to insure that the United States will maintain a position of product superiority in the worldwide aerospace marketplace, and that without such effort, the U.S. position will continue to erode.

R&D Collaboration

A second thrust of the "Tech '90s" program was to examine whether and how technical collaboration among aerospace companies might be advantageous. By mid-year, there seemed to be a consensus that the time had come for R&D collaboration, particularly at the basic "tools of the trade" level. By fall, a major effort was underway to identify key candidates for



DONALD J. GROMMESH
Gates Learjet Corporation

Chairman
Aerospace Technical Council



JAMES B. FELLER
RCA Corporation

Chairman
Technical Specifications Division



MARVIN D. MARKS
McDonnell Douglas Corporation

Chairman
Aviation Division



W. P. MAHER
The Raytheon Company

Chairman
Technical Management Committee



JOSE R. ELFALON
The Boeing Company

Chairman
International Standardization
Advisory Committee



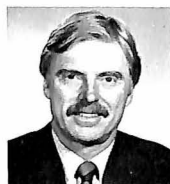
KENNETH I. GRINA
The Boeing Company

Chairman
Rotorcraft Advisory Committee



AL PETERSON
The Boeing Company

Chairman
Aerospace Sector Committee



HAROLD T. CLARK
Rohr Industries, Inc.

Chairman
Materials & Structures Committee



JOHN C. KENNEDY
Gates Learjet Corporation

Chairman
Transport Airworthiness
Requirements Committee



JAMES N. HOWELL
The Boeing Company

Chairman
National Aerospace
Standards Committee



DEAN C. THOMAS
LTV Aerospace and Defense Company

Chairman
Electronic Systems Committee



TED E. DUMONT
United Technologies Corporation

Chairman
Rotorcraft Airworthiness
Requirements Committee



AUSTIN J. MAHER
The Singer Company

Chairman
Embedded Computer
Software Committee



WILLIAM D. WISE
The Raytheon Company

Chairman
Civil Aviation Advisory Group



FREDERICK J. HUGHES
Westinghouse Electric Corporation

Chairman
Flight Test & Operations Committee



NOEL A. PEART
The Boeing Company

Chairman
Airplane Noise Control
Committee



ALLEN W. OBERG
United Technologies Corporation

Chairman
Propulsion Committee



RONALD G. SCHLEGEL
United Technologies Corporation

Chairman
Helicopter Noise Control Committee

collaboration and a basic concept for approaching the subject was formulated. It was agreed that AIA would act as a catalyst to identify opportunities and needs and to serve as an information source, but would not act in an operating role, and that the business format and technical approach of particular projects would be determined outside of AIA. At year-end, about a dozen potential projects were being refined in the materials, aeromechanics and electronics disciplines.

Space Station Study

A team composed of members of the AT Council Ad Hoc Space Group and the International Council Space Committee was chartered to determine how best to achieve international participation while meeting U.S. objectives in the development and deployment of the space station. The group, through a study, identified major issues needing resolution, including the character of international participation in development, operation and use of the space station; the extent of international participation in space station system definition studies; the protection of proprietary information, processes and material; common practices for design, development, quality and safety requirements, and configuration control. The impact of technology transfer on international participation was recognized as a potential problem.

The AIA study acknowledged the need for international participation and established industry positions and recommendations for subsequent discussion with NASA. In particular, AIA urged the early resolution of the character and specifics of international participation and the establishment of mechanisms to address such decisions. A primary objective must be the negotiation of acceptable roles for foreign participants while at the same time effectively augmenting a basic U.S. program with minimum adverse impact on the technological and resource investments by NASA and the supporting U.S. aerospace industries. The study was approved by the AIA Executive Committee in September 1984 and forwarded to NASA.

DoD Computer Standards

The Joint Logistics Commanders of the military acquisition commands noted that numerous computer standards and data item descriptions were conflicting and initiated a joint effort to develop a complete, consistent tri-service set of computer standards. The standards were issued for industry review, resulting in an extraordinarily large number of comments. The government plans to issue the standards in early 1985 while industry will seek a commitment by the government to address eight primary issues which need resolution. These issues include requirements for a software development file, recognition of tailorability in the standard, and the mismatch with Ada, the DoD computer language program. Secondary issues also needing to be addressed in the revision include the interrelationship between the embedded computer software standard and the software quality assurance standard, and the need for computer security measures. To assure proper implementation of the standards, industry suggested that DoD establish an appropriate training program for procurement officers located at contractor plants since

they will be responsible for the review of embedded computer programs.

Streamlining Acquisition Requirements

Through a series of briefings given between mid-1983 and the end of 1984, industry convinced the Office of the Secretary of Defense to institute several contracting reforms. These reforms, which centered around excessive and premature application of specifications, were incorporated in a DepSecDef memo dated January 11, 1984. The Revamped Acquisition Improvement Program (AIP) Initiative No. 14, a streamlining measure, could prove to be the most beneficial defense acquisition improvement in two decades, since it eliminates unnecessary and counterproductive requirements imposed on solicitations or contracts.

DepSecDef William H. Taft IV called AIP No. 14 a "revolutionary initiative," adding that in the past DoD prematurely imposed thousands of detailed specifications, meaning that DoD either had to modify the specifications or constrain the contractor's design flexibility; both alternatives added to the cost and neither improved the quality. Taft said: "We plan to . . . no longer tell the contractor how to build a weapon system; we tell him what the equipment must do . . . while the final decision on requirements will be made by the DoD program manager, we have freed the contractor to draw on the full technical ingenuity and productivity of his company."

The military services selected 12 major programs to provide the leadership necessary to apply the initiative to all new defense programs. DoD Directives, DoD FAR Supplements and MIL-HDBK-248B have been drafted in harmony. These documents will provide strengthened policy, regulations and guidelines.

Airport/Airways Improvement Program

The National Airport System (NAS) Plan is a comprehensive plan for modernizing and improving air traffic control and airway facilities services through the year 2000. First published in 1981 and updated in 1983 and 1984, the plan is directly linked to the funding authorizations in the Airport and Airway Improvement Act of 1982. Fiscal Year 1985 authorizations are at the \$2 billion level. The NAS plan will provide gains in safety, capacity, productivity and economy through higher levels of automation, consolidations of major facilities, and applications of new and lower cost technologies in telecommunications. Monitoring the NAS plan implementation is the responsibility of the Civil Aviation Advisory Group (CAAG) of the ATC's Aviation Division.

Transport Cabin Safety Legislation

The subject of passenger safety and survival in transport airplane cabins received considerable attention on the part of several Congressional committees, the National Transportation Safety Board, air-crew union groups and consumer advocates. Congress was highly critical of the Federal Aviation Administration's lack of progress in implementing what Congress considered to be necessary improvements in cabin safety standards. The FAA reported monthly progress to the House Subcommittee on Aviation, Committee on Public Works and Transportation, on child restraints, flammability for aircraft seat

cushions, floor proximity emergency escape path marking, airplane cabin fire protection, class D cargo compartment/improved liners, protective breathing equipment, cabin materials flammability standard, upgraded medical kits, anti-misting kerosene, passenger seat safety standards, improved flight cabin crew emergency communication, fire protection system with total flood concept, evacuation of smoke from cabin and improved life vest. New rules were published on aircraft seat cushions and emergency escape path marking. AIA member companies and specialist groups supported NASA and FAA research programs in these areas, and provided industry positions on regulatory changes as a result of these activities.

New Helicopter Engine Ratings

An AIA project group from the turbine engine and helicopter industries developed more realistic power ratings for use in multi-engine helicopters when operating under one-engine-inoperative conditions. The new rating structure will better match the engine capabilities with the helicopter short-field aerodynamic needs. The current Federal Aviation Regulations ratings severely limit the engine power available, and hence the allowable gross weight of the helicopter.

The revised rating system recommended by AIA will permit increased productivity in helicopters and will encourage their use at smaller heliports without degradation of overall safety or reliability. AIA submitted a petition for rulemaking to the Federal Aviation Administration and requested revisions to the Federal Aviation Regulations to permit engine and aircraft certification to these new ratings as an alternative to the current requirements.

Metal Parts Painting

California South Coast Air Quality Management District (SCAQMD) for air pollution regulations mandated that manufacturers in California reduce organic emissions during the painting of metal parts, whether for general or aerospace hardware. Since no paints exist that meet both DoD specifications for painting military or aerospace hardware and SCAQMD rules, no aerospace hardware can be primed or top-coated in Southern California after January 1, 1985. At least two companies worked to develop water-reduced coatings, while other companies attempted to solve the problem by using so-called "exempt" solvents. The Department of Defense has not moved rapidly enough to revise existing specifications or develop new ones to meet the timetable. The Environmental Protection Agency began enforcing federal air pollution regulations regarding painting of manufactured parts in New York State; expected federal and state enforcement in other areas of the country will affect many AIA companies, their suppliers and subcontractors.

AIA has worked to review the problems, develop new or revised specifications and coordinate with manufacturers and military services for release of suitable specifications that meet DoD corrosion requirements and air pollution regulations. An AIA project group tested candidate primer samples, but until a technical solution can be found companies are exposed to individual negotiations with regulatory bodies.

Microelectronics

AIA compiled a semi-annual Minimum List of Microcircuits for Standardization. Prepared for the Defense Electronics Supply Center, the list represented AIA recommendations of microcircuits that should be made standard for new military electronic equipment designs. Such standardization was accomplished by including the microcircuits in MIL-STD-1562.

Aircraft Structures

AIA structures specialists completed review of two documents that will be combined into a MIL-PRIME *Specification for Aircraft Structures*. The first, an Air Force draft, addressed damage tolerance and durability requirements for metallic primary structures. The second, a Boeing/Northrop draft report developed under Air Force study contract, defined damage tolerance design requirements for composite structures. In addition to a series of workshops held with the Air Force, at which AIA offered advice and guidance, extensive comments and recommendations were formally submitted and they will be incorporated into the specification. The resulting MIL-PRIME document will replace a number of existing aircraft metallic structure specifications, include composites and define requirements for design, performance, development, quality assurance and verification necessary to achieve needed structural integrity in one tailorable specification. It will also bring structural integrity requirements up to date, since many of the specifications being replaced have not been revised in years.

Technology Export Controls

The Aerospace Technical Council and the International Council, working through the Industry Coalition on Technology Transfer, continued to provide aerospace industry comments and recommendations to the Congress and Departments of Commerce and Defense regarding export control regulations proposals and the proposed Export Administration Act. AIA participated in a classified joint government/industry panel which discussed the spectrum of technology transfer issues as part of the Institute of Electrical and Electronics Engineers Eascon 84 Conference.

AIA Standardization Initiatives

In response to the AIA Board of Governors' standardization policy resolution, which called for improved coordination nationally and enhanced U.S. leadership internationally, AIA prepared a draft plan of objectives and tasks to implement the Board's directive. The thrust of the plan was to identify key standardization areas of concern to industry and to establish mechanisms for improved communications and cooperation toward achieving stated industry goals. In addition to review by AIA management committees and Corporate Standardization Interface (CSI) representatives from AIA companies, the plan will be coordinated with selected U.S. organizations involved in aerospace standardization.

A key element toward achieving improved communications and coordination on industry standardization issues was a directory, completed in 1984, containing more than 2 000 identified representatives from AIA member companies serving on more than 250 committees. All CSI representatives contributed to this effort.

AIA's standards development activities included publication of 71 new and revised National Aerospace Standards on such products as numerically controlled drilling machines, electric wire splices, aluminum coatings and numerous types of aerospace fasteners.

A National Aerospace Standards Committee (NASC) project identified and prioritized more than 100 metric standards for typical parts that will be required to support future metric aerospace systems. Development of these parts standards has been backlogged pending availability of NASC resources.

International Standardization

In the international standardization area, AIA concluded an agreement with AECMA, the association of European aerospace manufacturers, to harmonize future standards. Benefits of this cooperation included avoidance of potential technical barriers to trade and enhanced influence in ISO and NATO. Initially, the joint review of AIA and AECMA standards focused on fastener standards. The NASC reviewed nearly 20 AECMA standards under the reciprocal agreement. The program will be reviewed for possible expansion into other areas of mutual interest.

As a further step towards international communication, AIA hosted a five person delegation of aerospace standardization experts from the Peoples Republic of China. The group included the director and staff members of the China Aviation Research and Standardization Institute (CARIS) and a representative of the Ministry of Aviation Industry. During their visit with AIA and subsequently with three member companies, the Chinese gained an understanding of the U.S. aerospace standardization system and the role played by AIA nationally and internationally.

The 27th plenary meeting of the international committee for aerospace standardization, Technical Committee 20 of the International Organization for Standardization (ISO/TC 20), was scheduled for April 1985 in Ottawa, Canada. Standardization managers and technical experts from the major aerospace producing nations of the world are expected to participate.

U.S. Aerospace Metrication

An AIA survey assessed the aerospace industry's readiness to design and produce metric aerospace systems and the appropriateness of the industry's non-advocacy "informed readiness" posture. Among survey findings to be analyzed by AIA for possible association action are: members generally supported a non-advocacy position and favored voluntary metric transition paced by product requirements; members' experience in producing all-metric and hybrid aerospace products continued to grow; members anticipated relatively minor delays and cost increases associated with metric systems production; and members identified the insufficiency of metric standards to support design and production as the most significant aerospace metrication problem.

INTERNATIONAL SERVICE



The International Service is the AIA staff arm that functions with the International Council to provide guidance, coordination and policy recommendations on international issues affecting the commercial and military interests of the industry.

The year 1984 was marked by disparate Congressional and Administration actions on trade issues. Of 30 principal issues which the International Council identified in 1984 as warranting prime attention, 13 showed significant progress to the advantage of the aerospace industry while 17 will remain in 1985, in addition to any new issues that develop. The issues can be divided into four main categories: export promotion, export controls, defense trade and export financing.

Export Promotion

The area of greatest progress was clearly export promotion, marked particularly by Congressional passage of the Foreign Sales Corporation (FSC) as a substitute for the Domestic International Sales Corporation. Late in the year, the Internal Revenue Service formulated temporary regulations covering the formation of FSC's. Endorsed by the U.S. Treasury as a positive element in U.S. export trade, the FSC bill embodied provisions with positive financial implications for many companies.

The Council joined the Department of Commerce in sponsoring, for the first time, seminars on marketing in India and the Peoples Republic of China. The seminars were warmly received by the aerospace industry. AIA and Commerce planned to stage a third seminar in April 1985 on marketing in Indonesia and the Pacific Basin.

AIA supported the trade reciprocity provisions initiated by Senator Danforth and the Generalized System of Preferences, which facilitates trade for less developed countries. AIA opposed proposals to legislate percentage thresholds for the incorporation of American-made parts in foreign-built automobiles sold in the United States, since such a protectionist move could lead to trade retaliation by foreign countries. The provision failed in the 98th Congress.

The International Council undertook joint efforts with the Aerospace Technical Council to map out recommendations to the National Aeronautics and Space Administration on international participation in the development of a space station. It also expanded communications between the Department of Commerce and industry by providing a channel for regular distribution to member companies of information



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from U.S. missions abroad that is of direct interest to the industry.

A foreign assistance bill and a foreign corrupt practices act must await action in 1985. Also expected in 1985 are increased efforts to reorganize the trade functions of the government under the umbrella of the Department of Commerce. Additionally, there are prospects of initiatives to launch a new round of talks on the General Agreement on Tariffs and Trade and to give substance to free trade arrangements with Israel and Canada.

Export Controls

After seven years of work and debate, a revised version of the International Traffic in Arms Regulations (ITAR) was released to the public by the Department of State late in 1984. Over the years, AIA has submitted recommendations on ITAR to the State Department and reviewed the proposed final document line by line with a senior official of the Office of Munitions Control. Many of AIA's proposals were accepted and incorporated in the regulations, effective January 1, 1985.

Similarly, AIA reviewed the changes proposed by the Department of Commerce in the regulations governing distribution licenses. The first version of the revised regulations, released in early 1984, caused industry concern because of its expanded scope. Subsequent efforts by AIA and other associations, individually and jointly through the Industry Coalition on Technology Transfer, resulted in substantial changes and a much improved document. AIA also addressed proposed Department of Commerce changes in regulations on the control of technical data, again working through the Industry Coalition on Technology Transfer.

Failure to renew the Export Administration Act was a distinct disappointment. Despite efforts by AIA and other industry elements to fashion an act acceptable to industry, Congress was unable at the end of the 98th Congress to muster sufficient support to pass a compromise. The version of the act drafted at the end of 1984 would have met industry's aims: it is likely to be a model for renewed industry efforts to obtain a replacement. Two disparate issues proved the most troublesome in last year's Congressional debate over the renewal: a proposal to legislate a larger role for the Department of Defense in export license approvals and proposed constraints on transactions with South Africa.

The matter of technology transfer again demonstrated its complexity and scope. AIA worked with other industry representatives to persuade the Department of Defense that a special DoD effort to secure the reverse flow of technology from Europe was not necessary since American companies carry on daily efforts through commercial channels to obtain technologies from Europe. DoD's interest in this subject appeared to be blunted at year-end.

AIA recognized the U.S. government's concerns about technology flows, not only to the United States but more importantly out of the country, but AIA contended that such flows cannot be stopped, merely slowed. AIA sought to convince the government that, in its efforts to control presumed critical technologies, it should concentrate on controlling the emerging

technologies and, in turn, release controls on products and older technologies. AIA sought to impress upon the government that sophisticated technologies are available abroad and their availability should be weighed in the processing of U.S. export licenses.

AIA continued its efforts to effect two structural changes in the government: the establishment of a Technical Advisory Committee (TAC) on Trade for the transportation sector and the improvement of the government's systems and staffing in order to accelerate the processing of export license applications. The establishment of the TAC was stalled by the absence of the necessary legal underpinning previously found in the expired Export Administration Act.

Defense Trade

The year ended without indication that Congressional elements would again seek to reinstate "Buy America" provisions which in the past had caused so much resentment among NATO allies. AIA opposed such provisions with respect to specialty metals because of the damage they could do to the U.S. defense trade with allies. In another arena of NATO cooperation, the NATO Industrial Advisory Group, the U.S. succeeded in installing a U.S. industry representative as vice chairman for the first time.

The United States engaged in discussions with its NATO allies to spur cooperation linked to 11 so-called "emerging technologies" around which the U.S. hoped to wrap additional cooperative efforts. The NATO Committee of National Armaments Directors adopted the 11 technologies, but the Independent European Program Group developed an expanded list to which the U.S. offered countersuggestions. The discussions continue and the U.S. government is anxious to give them a positive tone in order to encourage alliance cooperation.

Both defense and commercial trade became entangled in the issues of offsets, barter and countertrade. An amendment to the Defense Production Act by Congressman Bruce F. Vento requires the President to submit to the Congress—within 18 months after April 17, 1984—a report on the impact of offsets on defense preparedness, industrial competitiveness, employment and trade. In a parallel action, the International Trade Commission (ITC) proposed a second study to assess the effects of barter and countertrade transactions on U.S. industry. The thrust of the Vento amendment is military, but the ITC proposal covers both military and civil transactions.

The Defense Policy Advisory Committee on Trade took a leading role in reviewing these two surveys, presenting to the government industry's concerns over the scope, the overlap and the nature of the questions asked. AIA recommended to the Office of Management and Budget (OMB) that the government effort focus on the statutory requirement of the Vento Amendment, after which a determination could be made whether a second survey would be needed. AIA pointed out not only the administrative burdens inherent in a double reporting requirement but the amount of time that would be necessary to assemble the information desired. OMB finally decided to combine the two proposals in an ITC model, which was published in the Federal Register in December 1984. Ultimately, such surveys can stimulate additional hear-

ings and debate in Congress on the issues of offsets, barter and countertrade.

AIA sought better arrangements for consultation between industry and government on the formulation of memoranda of understanding with foreign governments and the easing of a government requirement for mandatory advisory opinions before companies undertake arms sales discussions with foreign governments or industry representatives. In neither case did 1984 produce substantive changes.

Export Financing

There was little progress during the year toward an international agreement to regulate the financing of export sales in commercial transport aircraft. The U.S. supports an agreement that will embrace market rate and market term as the bases for arranging financing and remove export subsidies as an element in the determination of a sale. On the European side, the negotiating participants were expanded to include the European community rather than just the principal manufacturing countries. The outlook for an agreement remained clouded at year-end.

For the first time, the Export-Import Bank guaranteed the lease of transport aircraft to a foreign nation.

AIA conducted explorations during the year on the possibilities of arranging financing for the export of aerospace defense products, but the results were inconclusive.

OFFICE OF CIVIL AVIATION



The Office of Civil Aviation coordinates AIA efforts related to problems that have significant effect on the civil aviation community. It works closely with domestic and international agencies and other elements of the aviation community on common interest issues, and serves as a focal point for matters pertaining to manufacture of civil aircraft, including commercial transports, business jets and helicopters.

In early 1984, AIA outlined a full program for revitalization of U.S. market competitiveness in a paper entitled *Trade and R&D Policies: An Aerospace Industries Association Proposal*. This paper recognizes the problems facing the United States in international competition with foreign government-supported manufacturers, eschews approaches to the problem that mimic those of other nations or are protectionist and proposes long-term policies encouraging exports and investment in R&D. The Office of Civil Aviation spearheaded the effort to communicate this position to the Executive Branch of the government including the Departments of Commerce, Defense, Treasury, State and Transportation as well as the Office of the U.S. Trade Representative.

Late in 1984, the Office of Civil Aviation updated the trade and R&D policies studies to acknowledge actions taken on specific recommendations during the year. With the help of the AIA Office of Legislative Counsel and member companies, it initiated a program to communicate AIA's position to the 99th Congress.

The Office of Civil Aviation coordinated AIA activities in many other areas affecting civil aviation, including the transfer of certain CAB functions to the Department of Transportation after sunset; continued negotiations on the GATT Aircraft Agreement and the OECD Standstill and Commonline agreements, and matters related to FAA assistance of industry abroad.

OFFICE OF LEGISLATIVE COUNSEL



The Office of Legislative Counsel is responsible for communicating to AIA members the status of legislative matters directly affecting the industry, while at the same time transmitting industry's views to members of Congress.

In 1984, AIA worked with several industry coalitions addressing such issues as Department of Defense procurement reforms, amendments to the False Claims Act, contracting-out of government commercial activities to the private sector, and re-authorizing and amending the Export Administration Act. On behalf of the association, the Legislative Office worked with AIA staff and member companies to prepare testimony on DoD contractor warranties, indemnification of government contractors, reform in DoD's acquisition of spare parts, and NASA's Fiscal Year 1985 aeronautical research and technology budget.

In addition, letters or position papers were submitted for the record of Congressional hearings on increasing competition in government procurement, enactment of the Foreign Sales Corporation (as a replacement for the Domestic International Sales Corporation), the reauthorization of the Defense Production Act, extension of the 25 percent incremental research and development tax credit, continuation of aviation statistic collection after sunset of the Civil Aeronautics Board, and the FY 1985 security assistance budget.

OFFICE OF PUBLIC AFFAIRS



The Office of Public Affairs is responsible for informing the public of the goals and accomplishments of the aerospace industry in support of national security, space research, technological leadership, civil aviation, commerce, international trade and other matters. In fulfilling these responsibilities, the Office maintains liaison with and provides support for the Public Affairs Council, composed of public affairs executives of AIA member companies, and provides support as required for the public affairs activities of member companies' Washington offices. The Office also maintains liaison with public affairs offices of government agencies and trade associations that have responsibilities in aviation and space matters.

Publications

AIA's principal public affairs outlet, the quarterly publication *Aerospace*, continued to cover diverse subjects concerning industry activity and the activities of government agencies involved in aerospace matters. Among major articles published in 1984 were the annual aerospace industry review and forecast; a special report on the readiness of the U.S. armed forces; a summary of AIA's proposal on trade/research and development policies and the associated *Aerospace Technology for the 1990s* plan; and a definitive report on the outlook for commercialization of space. *Aerospace* also featured signed articles by General James P. Mullins, then commander of the Air Force Logistics Command, on the need for greater public support of the military-defense industry complex; by Mallinckrodt Professor of Economics Dr. Murray P. Weidenbaum, who offered a strategy for reasserting American leadership in free trade; by Dr. Roland W. Schmitt, senior vice president for corporate research and development, General Electric Company, on technology transfer and national security; and by Malcolm T. Stamper, president, The Boeing Company, on productivity initiatives essential to renewed U.S. competitiveness in the international trade arena.

Continued as public affairs projects were the publications *AIA Quarterly Digest*, the *AIA Annual Report* and *Key Speeches*, a reprint service calling attention to speeches of particular importance or special interest made by government officials and industry executives. *Key Speeches* published in 1984 included one on *East West Relations*, by Max M. Kampelman, Ambassador and Chairman of the U.S. Delegation to the Madrid Conference on Security and Cooperation



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Chairman, Public Affairs Council

in Europe, and *A Partnership for Defense*, a discussion of the military/industry relationship in defense production, by General James P. Mullins.

The Office of Public Affairs also published and distributed the *1984 AIA Directory of Heliports and Helistops*, which details the types, numbers and locations of rotary wing facilities available in the United States, Canada and Puerto Rico, and the *1984 Directory of VTOL Aircraft*, which lists specifications and status of helicopters and other VTOL aircraft in operation, in production or in research and development.

Editorial assistance was provided to the Aerospace Research Center for the 1984/85 edition of *Aerospace Facts and Figures*, the economic reference book of the aerospace industry. It was published under a long-standing agreement with *Aviation Week and Space Technology*, which handles promotion and commercial distribution.

The Office also provided editorial assistance to the Aerospace Technical Council and the Aerospace Research Center in dissemination and promotion of the Aerospace Industries Association position paper on *Trade and R&D Policy* and the companion publication, *Aerospace Technology for the 1990s*.

Special Projects

The Office arranged and coordinated two meetings of the AIA Public Affairs Council, the spring meeting in Washington, D.C. and the fall meeting in Los Angeles, California.

The Office also hosted on a regular basis a series of meetings with Washington representatives of AIA member companies to discuss industry public affairs activities and problems and, at some of the meetings, to introduce key government public affairs officials and media executives.

Additionally, the Office arranged a number of background interviews with senior AIA officials for reporters from major publications to broaden their understanding of industry's concerns and its positive efforts in the area of government procurement. The Office also initiated a program of informal discussions on issues of mutual concern between members of the Public Affairs Council and the staff of the Assistant Secretary of Defense for Public Affairs.

A December luncheon sponsored by the Mid-East Region of the Aviation Space Writers Association featured AIA President Harr and his annual industry review and forecast. The luncheon drew some 250 attendees, including more than 100 Washington editors and correspondents, and resulted in substantial media coverage.

TRAFFIC AND TRANSPORTATION SERVICE



The Traffic and Transportation Service is a guidance and coordinating point for the transportation management segment of the aerospace industry. As such, it serves as a medium for exchange of views on government regulation of military and commercial transportation. The service provides staff representation before government agencies and carrier organizations concerned with both domestic and international transportation issues. Providing specific direction for these representations is the responsibility of the Traffic and Transportation Committee, aided by the Rate and Classification Subcommittee and select task groups concerned with export and import regulation, the transportation of hazardous material and toxic waste, business travel, Department of Defense transportation regulations and carrier liability issues.

Of principal concern during 1984 were new U.S. Customs procedures related to the export of critical technology and the harmonization of U.S. tariff schedules with the provisions of the Civil Aircraft Agreement. The Committee maintained an active dialogue with Customs and the International Trade Commission concerning these issues.

Legislation to extend antitrust immunity to the travel industry was actively opposed by the Service working in conjunction with the National Industrial Transportation League and the National Passenger Traffic Association. The legislation, if enacted, would have continued the practice of barring business travel interests from receiving compensation for providing services to airlines to offset administrative expenses.

Working through the task group structure, the Committee continued surveillance of regulatory proposals and changes related to transportation of hazardous materials.

The Rates and Classification Subcommittee, the permanent subcommittee of the Traffic and Transportation Committee, continued its surveillance of carrier rate and rule changes considered detrimental to aerospace interests. The subcommittee is primarily concerned with Interstate Commerce Commission rulemaking proceedings involving surface transportation. When AIA action was warranted, this subcommittee assembled the necessary facts and data to permit appropriate representation. During 1984, the Interstate Commerce Commission conducted a series of rulemaking proceedings concerning operating authority and performance, carrier liability and freight classification. These proceedings were continually under review by the Traffic and Transportation Committee.



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Chairman, Traffic and
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Treasurer	429-4631
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Aerospace Procurement Service	429-4625
Aerospace Research Center	429-4683
Aerospace Technical Council	429-4685
Civil Aviation	429-4626
International Service	429-4644
Office of Legislative Counsel	429-4669
Office of Public Affairs	429-4656
Traffic and Transportation Service	429-4652
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