

1982

AEROSPACE  
INDUSTRIES  
ASSOCIATION

ANNUAL REPORT



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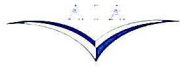
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# INTRODUCTION

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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 1982 amounted to \$63.3 billion, including \$52.8 billion in sales of aerospace products and services and \$10.5 billion in non-aerospace products. Export sales totaled \$15.2 billion and the industry recorded a very important positive contribution to the nation's trade balance of \$10.7 billion.

The industry's backlog at year-end 1982 was \$95.3 billion. Orders from the U.S. government (\$51.3 billion) topped orders from other customers (\$44 billion) for the first time since 1978. Industry employment at the end of 1982 was 1,162,000, down moderately from the previous year's level. The payroll reached an all-time high of \$33.2 billion.

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 for 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 30 member companies plus the AIA president, who is the association's senior professional employee and who also serves as its general manager. A key element is the Executive Committee—made up of eight members elected from the

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The Garrett Corporation

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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, subcommittees, task groups and *ad hoc* groups whose membership is made up of key specialists from AIA member companies. In 1982, the association continued its increased emphasis on issues specifically affecting commercial aviation—transport/business aircraft and civil helicopters—and began an *ad hoc* effort to improve the competitive posture of U.S. industry in international aerospace markets. The 1982 activities of the Councils, Services and Offices and their associated working groups are detailed in the following pages.

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# AEROSPACE OPERATIONS SERVICE

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The Aerospace Operations Service represents three main committees, Manufacturing, Quality Assurance and Product Support, as well as the Spare Parts, Service Publications, Logistics Operations, Personnel and Training, and Field Support Working Committees which report to the Product Support Committee; the latter three were authorized by the AIA Executive Committee in November 1982. Key areas of interest and activity include advanced manufacturing technology; improvement of production processes and management; greater productivity; advanced quality assurance technology and quality management systems; logistics planning and technology; post-delivery product support; and technical manuals and training. Working committees, subcommittees, liaison panels and manufacturing technology advisory groups (MTAGs) are engaged in projects involving the exploration of advanced management and operating techniques, equipment, management systems and procedures. They maintain working liaison with the Department of Defense, other government agencies and other organizations involved in aerospace activities. Among the service's activities during 1982 were:

## **NATO Quality Standard**

Following a number of AIA/CODSIA meetings and exchanges of correspondence with the Office of the Under Secretary of Defense, Research and Engineering, concerning AIA/CODSIA's objections to Allied Quality Assurance Publications (AQAP) 1 and 2, Edition 3 proposed revision drafts, DoD officials agreed to and processed a "hold" request to the NATO AC-250 Committee, National Directors of Quality Assurance, relative to that committee's contemplated approval of the draft. The NATO Industrial Advisory Group (NIAG) also fully supported AIA/CODSIA's reservations concerning this proposed standard revision, as did a number of NATO country industry representatives.

DoD's officials concurred that AIA/CODSIA AQAP-1&2 Edition 3 "required more work" before it could be considered as a potential successor to the basic MIL-Q-9858A, Quality Assurance System, required under DoD major system contracts. Earlier editions of AQAP-1&2 (Edition 2), currently in NATO program use, have proven adequate, in industry's view. Work on this project, toward ultimate development of an international quality standard will continue.

## **Productivity and Quality Seminars**

AIA sponsored and participated in several productivity/quality workshops and seminars during 1982. One, for senior company executives, was arranged by and held at Westinghouse Public Systems Company facilities at



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The Boeing Co.  
•  
Chairman, 1982/83  
Manufacturing Committee



FRANK J. MESSINA  
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A. D. MARTIN  
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Chairman, 1982  
Quality Assurance  
Committee



THOMAS J. BALL  
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•  
Chairman, 1982  
Product Support Committee



RICHARD C. MERRIKEN, Sr.  
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Chairman, 1982  
Spare Parts Committee



WILLIAM J. EVERETT  
Grumman Corp.  
•  
Chairman, 1982  
Service Publications  
Committee

Pittsburgh, Pennsylvania and Baltimore, Maryland in March. Another was the Annual Manufacturing Committee Industry-Government Conference in April at Atlanta, Georgia. AIA assisted the Defense Logistics Agency in preparing for its "Bottom Line" Conference in May at Fort McNair, Washington, D.C. A second seminar for productivity directors of member companies was held in September at the Westinghouse facilities, and a presentation on manufacturing technology was made at the DoD/Tri-Services Annual MANTECH Conference at Phoenix in October. Also in October was the Quality Assurance Committee's annual Industry/Government Conference, sponsored jointly with NSIA and held at the Marriott Hunt Valley Inn, Maryland. Additionally, AIA provided assistance to the new Office of Industrial Productivity (OUSD/R&E) in preparing for an industry/government workshop/seminar held in mid-December at the Defense Systems Management College, Fort Belvoir, Virginia.

At year-end, several seminars, workshops and conferences were being planned for 1983.

### Work Measurement

Several meetings and discussions were held with DoD (OUSD/R&E) and Headquarters Air Force Systems Command officials concerning proposed MIL SPEC 1567, *Work Measurement*, to which AIA and CODSIA restated serious objections. Based upon an earlier solicitation of member comments, this proposed document was seen as an attempt to regiment work measurement systems; it would impose certain unrealistic detailed measurement standards beyond those systems in use in contractor facilities; it would be more costly to implement beyond any anticipated returns; and it would duplicate and supplement requirements for cost/time estimating data already required under Cost Accounting Standards. Industry considered it counterproductive considering industry/DoD stress on the need for productivity-generating incentives rather than regulatory restrictions. At year-end, publication of the document was being held in

abeyance at the Under Secretary of Defense, Acquisition Management level. That office was seeking agreement with the advocating services for very selective and tailored use of the standard, if published. AIA/CODSIA will continue to monitor and participate in further developments.

### **Heavy Forging Press**

The Ad Hoc Panel on Heavy Forging Press Feasibility continued its work of reviewing the need for, and potential means of financing, two 200,000-plus ton presses to be used in producing future generations of aircraft and aerospace systems. The panel met several times during 1982 and coordinated operational data with a DoD Joint Logistics Commanders' committee.

The group explored general industry concern relative to the aging (25 years) of two 50,000-ton presses operated and only recently purchased from the government by ALCOA at Cleveland, Ohio, and Wyman-Gordon Company at North Grafton, Massachusetts, and the ability of these presses to support future generation aerospace production requirements. The long range investment requirement of more than half a billion dollars has limited industry interest in the 200,000-ton presses. The U.S. Air Force authorized preliminary work to prepare engineering drawings and design specifications for such facilities. The AIA panel study will continue in 1983.

### **National Aerospace Standards (Manufacturing)**

Several aerospace standards were completed during 1982, some representing several years of work by AIA project groups. Eight incorporated laser electro-optical system technology into earlier editions of NAS tooling standards (NAS 900-906 and 908). A new one, NAS 899, describes automatic wire harness assembly machines with computer numerical controls. Another, NAS 875, is the first National Aerospace Standard for robotics. It describes a drilling, reaming and countersinking numerically-controlled robot and covers the manufacture, performance, reliability, inspection and procurement of an industrial robot. The standard prescribes minimum requirements for this type of machine. At year-end, a number of others were in development, with particular attention being given to robotics and flexible manufacturing system requirements.

### **Comments to FAA**

In several communications to and meetings with senior FAA officials during 1982, AIA submitted comments and recommendations pertaining to Advisory Circular AC No. 21-BB, *Shipment of Replacement or Modification Parts from Suppliers to Users* and identification of designated Airworthiness Inspection Representative(s) in bilateral agreements with foreign governments, as covered in AC 21-AA, *Procedures Concerning Supplier Audits and Implementation of Bilateral Airworthiness Agreements*. After member company reviews, it was recommended in both of these cases that since current regulations were considered adequate—except for minor changes—they should be retained. Publication is expected early in 1983.

At year-end, AIA Quality Assurance representatives, along with those of several other associations, were scheduled to meet with FAA officials to consider sponsorship of a 1983 Quality Assurance Conference on FAA matters.



## **Manufacturing Technology**

AIA representatives convened several times during 1982 with DoD officials concerned with the DoD Manufacturing Technology (MANTECH) Program. Recommendations were submitted concerning the identification, type and relative priority of MANTECH data to be collected and maintained by the DoD in a projected computer data base which would be readily available and of greatest use to industry. This project was continuing at year-end.

In November, the Deputy Secretary of Defense announced initiation of the DoD Industrial Modernization Incentive Program (IMIP), which encompasses and expands upon the philosophy of the military services' Technical Modernization and Industrial Productivity Improvement programs. IMIP is designed to encourage greater innovation and experimentation toward productivity, enhancing upgrading of equipment, processes, engineering and real property on an industry/government shared savings basis. AIA feels that this may be a real step forward toward greater productivity achievement; its progress will be monitored in 1983.

## **Logistics Guidance in R&D**

At the invitation of the Air Force Acquisition Logistics Division (AFALD), an AIA group undertook a study to develop guidance for including long-range support and maintenance planning as an integral part of the research and development process. A response based on replies from AIA members made these points: "boilerplate" RFP material should be eliminated and specific logistics considerations, as they relate to the proposed R&D activity, should be addressed; greater incentive must be provided industry if an increase in its logistics R&D budgets is to be expected; and, if logistics is to be given greater emphasis in R&D, there must be greater motivation for engineers to consider the logistics factor. A continuing course of action was established by the AIA group and Air Force counterparts for joint efforts in developing a guide for researchers/purchasers to help obtain accurate research emphasis in logistics research programs.

## **Information Bulletins**

Four AIA Information Bulletins, designed to advise key government logistics representatives and industry management of new concepts, methods and articles of significant interest in the field of technical publications, were issued during 1982. Two described different approaches in preparing software packages for performing readability analysis in accordance with military specifications. The third provided a brief primer on how digital input and output devices are connected into local area and remote telecommunications networks. It also described basic telecommunications language to facilitate an understanding of the communications details contained in suppliers' operating instructions. The fourth bulletin noted the issuance of the Navy's Technical Manual Quality Assurance Program Guide and provided instructions for obtaining copies. This guide defines the responsibilities associated with the evaluation and control of contractor-established Technical Manual Quality Assurance Programs and product development.

## **Technical Operations Glossary**

Through the International Coordinating Council of Aerospace Industries Associations (ICCAIA) affiliation,

AIA members continued their joint efforts with the Air Transport Association and the International Air Transport Association in preparing the 10th edition of the *World Airlines Technical Operations Glossary*. The initial edition of this publication was distributed worldwide to airlines and their manufacturing suppliers in 1970; since that time, operating experience has revealed the need for periodic updating. The intent of the glossary is to foster improved worldwide inter-industry communications through the use of common definitions of terms which are relevant to airline operations and manufacturers' engineering and product support functions.

#### **Air Transport Association Liaison**

In a continuing action, AIA members joined with their counterparts in British, French, German and Italian industry organizations in coordinating improvements in airline specifications with the Air Transport Association (ATA). These efforts were directed toward achieving more efficient implementation of airline requirements for manufacturers' supply information, data processing and technical data publications. Included were recommendations to facilitate the operation of a new Airline Inventory Redistribution System that will provide airlines and suppliers/manufacturers with an on-line data base to display the world-wide availability of jet aircraft materials and to utilize the airline communications system to access the data base. Separately, there was an ongoing product support effort with ATA purchasing members to clarify the intent of the instructions contained in their *World Airline Suppliers' Guide*.

#### **Replenishment Parts**

AIA spearheaded a CODSIA project established to review a Defense Acquisition Regulation Supplement for the DoD Replenishment Parts Breakout Program. The supplement will replace the current regulation; its purpose is to achieve cost savings by identifying and screening replenishment parts to determine the optimum procurement method.

The CODSIA response, submitted to the Office of the Under Secretary of Defense, Research and Engineering, noted that existing DoD Procurement Method Coding policies adequately govern source selection processes for replenishment parts. However, concern was expressed that the proposed supplement not only overstressed the advantages of breakout for competitive acquisition but also clearly stated a preference for such breakouts. It was feared, therefore, that the supplement's impact as a universal and mandatory DAR Supplement could force breakout decisions at the expense of total system performance, reliability and supportability. Consequently, AIA/CODSIA held that any changes in present policies should be incorporated in the pertinent military standards rather than in the form of a DAR Supplement. At year-end, a response from OUSD was awaited.

#### **International Standardization of Provisioning Data**

AIA members, by invitation, have been involved in an ongoing project with their European counterparts in the AECMA (Association Europeene des Constructeurs de Material Aerospatial) Product Support Commission on the harmonization (standardization) of military and civil provisioning specifications. The basis established for this harmonization is Air Transport Association Specification 200, which provides a substantial amount of common

ity between the European and United States governments in this area. It is a proven method for reducing costs and workloads associated with providing supply data in an automated fashion. AIA members have taken a major role in presenting applications on the appropriate sections of ATA Specification 200 to both the military and civil organizations.

#### **Accelerated FMS Acquisition Support**

At the invitation of the Air Force, AIA reviewed a proposed set of policies and procedures for providing initial logistics support for foreign military sales when the desired delivery date of a major system does not allow sufficient leadtime to use normal processing procedures. The AIA response endorsed the FMS procedures with a number of suggested amendments, which prescribed procedures for allowing the prime contractor to procure support hardware in anticipation of the sale of the weapon system without fear that the U.S. government would procure the hardware from alternate sources.

Under these proposed amendments, the U.S. government would be required to assure fair pricing to customers on the basis of a contractor-maintained price catalog of spares. Because the contractor would procure support material from vendors concurrent with procurement of production hardware, the cost of the support material could be significantly reduced. Additionally, the U.S. government would avoid significant administrative costs involved in the requisitioning, procurement/contracting and handling costs associated with government competitive procurement from alternative sources.

#### **Contractor Engineering and Technical Services**

A significant favorable breakthrough was achieved by AIA member companies involved in providing Contractor Engineering and Technical Services (CETS). Since 1958, DoD Directive 1130.2, which prescribes the policies and criteria for management, programming and administration of engineering and technical services personnel, has contained a requirement limiting the use of Contractor Field Services (CFS) to a 12-month period after military customers achieve self-sufficiency in the use of new equipment and systems. Because of ongoing engineering changes in weapon systems, the ever-increasing complexities of these systems and reductions in the number of experienced service personnel who provide instruction and on-the-job training to recruits, there is a need for civilian CETS technical expertise on many weapon systems to sustain and improve current readiness beyond the 12-month limitation. However, varying interpretations of the directive and its implementation documents have severely limited necessary extensions of this time period.

In industry reviews of succeeding editions of the directive, AIA recommendations have continued to stress the need for eliminating the 12-month constraint. Finally, in March 1982, agreement was reached with OASD for the elimination of this constraint from the latest draft revision of DoDD 1130.2.

#### **Diminishing Manufacturing Sources**

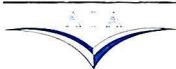
AIA joined with EIA and NSIA in an effort to solve problems and seek improvements in policy and procedures related to diminishing manufacturing sources and material shortages (DMS/MS). Established early in 1982, a tri-association working group collaborated with a Department of Defense task group and developed some

short term approaches. Among them was the need for a DoD locator system that can put both Inventory Control Points and industry in contact with responsible program managers. This would help constrain DMS/MS decision-making cycles within reasonable limits. It would allow industry to provide technical and budgetary cost data for assessment of new vendor qualification or engineering change proposal alternatives while life-of-type buyout costs are being estimated in parallel. A spinoff feature of this approach would give program managers funding and authority to place unpriced orders for vendor qualification or redesign. Long term reduction of DMS/MS problems will require considerable further effort on the part of industry and DoD.

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# AEROSPACE PROCUREMENT SERVICE

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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 and 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 1982 activities:

## **Defense Acquisition Improvement Program (DAIP)**

In a report marking completion of the first year's effort in the Defense Acquisition Improvement Program (DAIP), the Department of Defense indicated that four internal initiatives had been completed and measurable progress was being made on the remainder of the 32 initiatives. Continued emphasis will be placed on those initiatives concerning competition, support and readiness, program stability, and multiyear contracting. DoD will concentrate on guidance to the services in understanding and implementing senior DoD management objectives.

The Air Force Systems Command, together with AIA, began efforts to assure implementation of selected initiatives of the DAIP. At the request of AFSC, an Ad Hoc Board of Governors Committee was formed to interface with AFSC. The committee is supported by a task force comprised of representatives from the Procurement and Finance Council, Technical Council and Operations Service. Initiatives under the cognizance of the P & F Council are contractor investment, contract type, competition and prime/subcontractor relationships, while the Technical Council and Operations Service are concerned with support and reliability and readiness and support, respectively. A presentation to identify impediments to implementation of these initiatives, along with suggested remedial action, was being developed at year-end for a meeting between senior Air Force officers and AIA's Ad Hoc Committee in early 1983.

## **Uniform Federal Procurement System**

In early 1982, as required by law, the Office of Federal Procurement Policy (OFPP) transmitted a final proposal to Congress for a Uniform Federal Procurement System (UFPS) that would include a single Federal Acquisition Regulation (FAR) applicable to all federal agencies with agency authority to supplement to meet unique needs or missions. The final proposal also included a manage-



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F. E. "GENE" AKIN  
The Boeing Company

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Chairman  
Material Management  
Committee



ROBERT W. BRADSHAW  
Grumman Corp.

•  
Chairman  
Industrial Relations  
Committee



JACK G. PRUETT  
Honeywell Inc.

•  
Chairman  
Industrial Security  
Committee

ment system and proposed revisions to existing statutes necessary for implementation. Perhaps in anticipation of lengthy Congressional discussion of the proposed UFPS, the President issued Executive Order 12352 which puts much of the proposed management system into effect without legislation. The Executive Order directed DoD, GSA, and NASA, under OFPP coordination, to continue joint efforts to issue a complete FAR by the end of 1982 with an effective date of October, 1983. The Executive Order also directed that agency procurement programs reduce administrative costs and other burdens imposed on the federal government and the private sector, and that private sector views on needed changes be solicited. In Congressional testimony, AIA endorsed the OFPP proposal and provisions of the Executive Order. AIA will continue to monitor progress of the FAR and make every effort to reduce proliferation of supplemental regulations as experienced with the Armed Services Procurement Regulation.

### Federal Patent Policy

A bill (S. 1657) that would have established contractors' right to retain title to inventions made in the performance of government contracts failed to reach the Senate floor during the "lame duck" session of Congress. Under existing law only small businesses and nonprofits and universities maintain rights to inventions. However, the bill was sponsored by more than 30 Senators and AIA hopes that some of those returning to the Congress will find it appropriate to introduce similar legislation in 1983.

President Kennedy issued a Presidential Statement on Patents in 1963 which was later revised by President Nixon. In essence, the Presidential Policy Statement, which is now applicable to all agencies not otherwise covered by statute, provides that the government retains title to inventions except in certain enumerated instances. In process at year-end was a revision to the President's Policy Statement that will reverse the presumption so that title to inventions made under government contracts may be retained by the contractor except in certain stated instances.

#### **Tax Matters**

On long-term or extended contracts, many AIA member companies use the Completed Contract Method of Tax Accounting (CCM). In the 97th Congress, proposed legislation would have eliminated that method. However, after significant effort by industry, the bill as finally passed gave statutory authorization to the CCM but also authorized the Treasury Department to issue regulations delineating those costs to be allocated to contracts and those which would be deemed "period" costs. AIA worked closely with the Treasury Department in the development of draft regulations on the CCM.

#### **Independent Research and Development**

Unexpectedly, the House Appropriations Committee amended the Department of Defense FY '83 Authorization Bill to include a provision (Section 790) that would place a ceiling on DoD's reimbursement from procurement appropriations of contractors' independent research and development (IR & D) and bid and proposal (B & P) costs. In addition, IR & D and B & P were to be line items within the Research, Development, Test and Evaluation (RDT & E) segment of the 1984 DoD budget. Because of the serious impact this would have upon innovative efforts of defense contractors, AIA sought to have these provisions deleted. Although significant efforts were made to convince the Senate of the adverse effect Section 790 would have upon the nation's technological base, particularly in the area of defense, the "lame duck" session passed a continuing resolution for fiscal year 1983 that places a ceiling of \$2.1 billion on IR & D and B & P costs, to be reimbursed from procurement accounts. Moreover, the conference report required that DoD submit to the Senate and House Appropriations Committees for approval an annex proposing total ceilings for IR & D and B & P by service. The report further requires that IR & D and B & P be line items in the FY 1985 budget unless hearings show conclusively such treatment is counterproductive. AIA will continue to work on the problems resulting from this legislation and seek appropriate implementation.

#### **Financial Management**

AIA continued to address a number of Cost Accounting Standards issues with the DoD CAS Working Group, among them the cost of facilities capital applicable to overceiling IR & D/B & P costs, changes in cost accounting practice for state and local taxes resulting from a change in method of reporting income from long term contracts, and inequity in accounting for land used in proposed contractor expansion.

Continued AIA interest in Cost Principles in the Defense Acquisition Regulation (DAR) and the Federal Acquisition Regulation (FAR) resulted in an active interface with the Department of Defense and the Office of Federal

Procurement Policy on such matters. Working primarily through CODSIA, AIA expressed views to DoD on the 75 percent ceiling on the IR & D/B & P in absence of an advance agreement, insurance costs, compensation for personal services, selling costs, fraud proceedings, ADPE, and uncompensated overtime. DoD revised the DAR cost principle on relocation costs incorporating many of industry's suggestions. At year-end, AIA was participating with other professional associations in a DoD study effort to review the Contractor's Weighted Average Share (CWAS) concept.

AIA actively pursued a proposal to increase Foreign Military Sales progress payment rates toward improved cash flow in financing defense contracts. DoD increased the payment rate to 95 percent for large business and 100 percent for small business. Additionally, DoD instituted a flexible progress payment policy, applied on a contract-by-contract basis, which permits a progress payment rate of up to 100 percent. A cash flow model for determining the payment rate, in use since late 1981, was being updated at year-end. AIA was assisting DoD in this effort; the association was also preparing comments on a proposed DAR revision to authorize contract multiple progress payment rates.

### **Implied Employment Contracts**

The long standing legal concept of "employment at will" is being successfully challenged in court by terminated employees, who claim that they have implied employment contracts based upon verbal and written statements made at the time they were hired. AIA initiated an analysis of industry-wide practices that offer good prospects for defense against such suits.

### **Plant Closing**

Although not of immediate concern to AIA members, plant closing legislation being introduced or enacted on federal, state and local levels offers a challenge to long-range business and human resource planners. AIA conducted a study of such legislation to understand better the enforcement of and employer response to plant closing restraints.

### **Contractor Systems Review**

An AIA group completed a survey on *Contractor Procurement Systems Review (CPSR) Lessons Learned and Contract Management Systems Evaluation Programs (CMSEP) Subcontract Management Lessons Learned*. The lessons cited are being distributed to materiel managers for information and necessary action to improve their operations. In the time period surveyed, an average of approximately two CPSRs per company were performed, with about four to five individual findings per review. Nine percent of the CPSRs resulted in the Defense Department's withholding approval of procurement systems, compared with an average withhold rate of eight percent in a comparative survey of AIA members conducted in the early 1970s. Approximately 40 percent of AIA members are under AFCMD cognizance. The problems reported in the CMSEP survey will be useful to these contractors, operating under AFPROs, in evaluating and improving the subcontract part of their procurement systems.

### **Small Business Subcontracting**

AIA continued efforts to eliminate duplicate audits of small subcontracting compliance by DoD, NASA and DoD. For example, DoD is often advised on short notice



that the Small Business Administration is going to conduct an audit, and it declines the invitation to participate on the grounds of not having adequate preparation time; later DoD conducts its own audit, with the result that the AIA member company is audited twice to verify the same information. Some forms were eliminated due to membership efforts.

### **Government Property**

Looking for better ways of keeping accurate track of government-owned property within the aerospace industry's inventory, AIA met several times with members of government agencies. In one significant case, the Department of Defense dropped from its reporting and screening almost 20 property classifications, which led to a savings of reports in almost 95 percent of facilities reporting.

At year-end, an AIA Task Group was working with the policy staff of the Office of the Assistant Secretary of Defense (Comptroller) on the issuance, on an interim basis, of a Property Accounting Standard.

In response to a request from the Joint Logistics Commanders (JLC) the membership of the Facilities and Property Task Group was being surveyed to help determine whether there is duplicate or parallel reporting on special test and plant equipment in the hands of contractors. Interim results indicate that there will be a decrease in the number of forms and addressees, which should lessen the administrative burden.

### **Computer Security**

Following the successful AIA/DoD team approach to revising the Communication Security (COMSEC) section of the Industrial Security Manual, DoD requested AIA's help in strengthening the ISM guidance on Computer Security. AIA brought together technical experts from the physical and information asset protection fields to study the near and long-term security problems caused by technological changes.

AIA's near-term objective is revision of ISM Section XIII. This will be coordinated through CODSIA by mid-1983. The long-term objective is to keep AIA members and DoD current with changing technology through a newly-formed Security Technology Subcommittee that will study state-of-the-art advances in data encryption standards, electronic physical characteristic recognition devices, Tempest shielding, fiber optics, etc., and their application to communication and computer security systems.

### **Operational Security**

Individual military departments continue to impose OPSEC requirements on a contract-by-contract basis, despite high cost, administrative difficulties, redundancy and contradictions with the Defense Industrial Security Program. Through CODSIA, AIA presented to the Secretary of Defense the contractors' position opposing OPSEC. AIA plans to follow these initial arguments by providing DoD with estimated OPSEC costs and suggestions for less costly alternatives.

### **Hazardous Material Information Systems**

The 29 member companies or major divisions participating in the Hazardous Material Information Systems program are on schedule for entering their Material Safety Data Sheet information into the system, thus fulfilling their part of the agreement with DoD. AIA plans to work closely with DoD over the next year to remodel the system from mag tape/microfiche to "real time", making

the computer data base immediately accessible while reducing operating costs.

DoD's Defense Logistics Agency has awarded the Hazardous Materials Technical Center contract to a private firm. HMIS participants are automatic recipients of the Technical Center's hazardous chemical disposal data as it becomes part of the overall system. It is anticipated that the HMTCC will be a fully functioning computer system within 18 months.

#### **Technical Data**

The contractor has title to technical data first produced in the performance of government contracts. Such title, however, is by implication inasmuch as in most instances the government obtains an unlimited license to use such data. It is understood that proposed provisions of the Federal Acquisition Regulation (Part 27) will provide specifically that title to technical data made in the performance of government contracts is held by the contractor and that the government acquires a license to use such data.

#### **Air Travel Protection Act**

AIA worked with the Air Transport Association (ATA) in development of proposed legislation, the Air Travel Protection Act (ATPA), that provides for the prompt compensation of the damaged public and, to the extent that required insurance carried by the air carrier, airframe or engine manufacturer is insufficient to cover the total of such damages, provides that the government would serve as an indemnitor for such excess damages. After satisfaction of public claims, the parties concerned—for example, the air carrier, airframe and engine manufacturer—would determine an appropriate sharing of the damages. It is anticipated that the proposed ATPA will be introduced in the 98th Congress.

#### **Access to Records**

The almost insatiable appetite of government auditors for access to a contractor's records continued to present significant problems to industry. AIA's latest effort in connection with this matter was to file a brief *amicus curiae* in the U.S. Supreme Court in the Merck v. Bowsher case, in which the Comptroller General sought access to the commercial records of the Merck Company to audit prices of off-the-shelf items. Although the Court of Appeals found substantially in favor of Merck and denied access to most of the records sought by Government Accounting Office auditors, the Comptroller General appealed to the U.S. Supreme Court.

#### **Paperwork Reduction**

Two major provisions of the Paperwork Reduction Act of 1980 impose new duties and responsibilities upon the Office of Management and Budget that have a long term impact on certain aspects of the procurement process and "members of the public" directly involved in the process. The law requires a major revision in OMB Circular A-40, *Controlling Paperwork Burdens on the Public* and provides for the establishment of a Federal Information Locator System (FILS). OMB has determined that policy expressed in the current Circular A-40 can best be promulgated through a rule presently being formulated. Development and implementation of these statutorily mandated requirements by OMB have been slow and sporadic because OMB has been pressed to solve other problems associated with the legislation. Nevertheless, progress was made in 1982; AIA will continue to monitor activities within OMB.

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# AEROSPACE RESEARCH CENTER

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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 which bear on the nation's technological and economic status.

During 1982, the Center published one major report and developed several others focusing on the increasingly competitive international aerospace marketplace. Center staff continued to chart Administration and Congressional action, along with AIA initiatives and followup, on major issues identified in the association's 1980 Issue Statements. The association used the vehicle of its Issue Statements to communicate views on broad areas of national policy to key leaders in the political parties and in Congress, the Administration and federal agencies. The staff laid the groundwork for an analysis and reevaluation of issues and AIA priorities, to be undertaken in 1983 in cooperation with AIA staff directors.

The Research Center cooperated with the Treasury Department in a member survey of offset and co-production commitments to foreign governments in connection with major export contracts. Center staff assisted Treasury in compilation and analysis of data. The staff also supported the AIA Executive Committee's Ad Hoc Committee on Competitive Export Financing in Development of a position paper on Export and R&D policy.

## **Standards**

The increasingly competitive international marketplace and the trade impact potential of standards and related technical areas of certification/testing was the subject of a study published in conjunction with the Aerospace Technical Council. The study, titled *Impact of International Standardization Trends on the U.S. Aerospace Industry*, suggested a reexamination of the industry's standardization activities and encouraged a more active role in standardization decisions at national and international levels. As an outgrowth of this work, the AIA Board of Governors authorized the association to exercise a strong leadership role in maintaining an effective and coordinated industry standards program.

## **Foreign Competition**

As a follow-on to an early 1982 report on foreign competition in the commercial jet transport segment of the industry, the Research Center initiated reports on the international competitive environment for helicopter producers and for private, business and light transport manufacturers. The two projects are being conducted in cooperation with the Aerospace Technical Council.

## **Export Benefits**

The Center completed work on an econometric analysis of the value of aircraft exports to the economy. Publication of a report on this work and on the role of aerospace exports generally in U.S. foreign trade is expected in early 1983.

## **Industry/University Interface**

The Center surveyed AIA members concerning their ties with the university community. The survey is one aspect of a study conducted with the Aerospace Technical Council on the importance of the industry-university relationship in meeting engineering manpower needs and, ultimately, in contributing to the health of the nation's capabilities for research, development and innovation.

## **Impact of Defense Spending**

The first phase of a defense business-related study was completed at year-end. The centerpiece is an examination of the construction of price indices specifically suited to aerospace industries in an inflationary era. In particular, the study will address the predictability of inflation effects in labor and material markets related to defense contracting.

## **Economic Data Service**

As the statistical branch of the Research Center, The Economic Data Service (EDS) continued its distribution of periodic statistical series on a variety of industry-related subjects, including employment, production, foreign trade, DoD and NASA contract awards and status of funds. The introduction of six new statistical series brought the total number compiled to 25. An active effort was made to expand distribution of AIA's statistics, and computerization of mailing procedures now permits recipients to select among statistical subject areas.

Published during the year was *Aerospace Facts and Figures 1982/83*, the 30th edition of the industry's statistical yearbook, which contains annual summaries for 1981 as well as historic time series drawn from EDS' own statistics plus a number of other sources. Notable in this edition was the expanded coverage of aerospace foreign trade, R&D and space programs. The value of the book was also enhanced by the extensive use of constant dollar tables to permit inflation-adjusted analyses.

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# AEROSPACE TECHNICAL COUNCIL

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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 responsibility covers the research, engineering, development, test and safety aspects of aircraft, missiles and space vehicles. The Council directs the activities of two divisions which manage 12 committees and oversee a large number of working level technical project groups. Major Technical Council activities of 1982 include:

## **Strategy for the '80s**

Addressing the increasingly important subject of technology and international competition, the Aerospace Technical Council emphasized the need for long range industry goals and new strategies as it brought suggestions for industry action to the November session of the AIA Board of Governors. The Council outlined a proposal for a major AIA program, entitled *Strategy for the '80s*, centered around an industry-wide goal. The Board accepted the Council's report for study and review.

## **Space Studies**

The Council reviewed and critiqued studies by the Office of Technology Assessment (OTA) and the Office of Science Technology Policy (OSTP). The OTA study on Civilian Space Policy and Application was completed and many of the AIA comments were incorporated. The OSTP study of the same area recommended such basic goals as strengthening U.S. security, maintaining space leadership and obtaining economic and scientific benefits through the exploration of space. AIA noted that OTA and OSTP basic space policies are not converging on a single solution for space activities. As a result, industry will continue to interface with both agencies to better define AIA's role in the space arena.

## **Standardization Policy**

In response to the AIA Board's mandate to improve the effectiveness and coordination of aerospace standardization efforts in the U.S. and internationally, a two-pronged effort embracing a number of initiatives was launched. Internally, the ability of AIA membership to be aware of and responsive to standardization trends will be enhanced by the identification in each member company of a focal point for standardization matters and by development of information bases on industry participation in standards activities. An overview report highlighting standardization accomplishments of interest to the aerospace industry is targeted for 1983.



J. W. STUNTZ  
Westinghouse Electric Corp.  
•  
Chairman  
Aerospace Technical Council



L. M. MEAD, JR.  
Grumman Corp.  
•  
Chairman  
Technical Specifications  
Division



R. R. LYNN  
Textron, Inc.  
•  
Chairman  
Aviation Division



A. S. LAURA  
The Boeing Company  
•  
Chairman  
Technical Management  
Committee



R. L. GREETAN  
Northrop Corp.  
•  
Chairman  
International  
Standardization  
Advisory Group



W. C. STARLOF  
McDonnell Douglas Corp.  
•  
Chairman  
Transport Airworthiness  
Requirements Committee



A. PETERSON  
The Boeing Company  
•  
Chairman  
Aerospace Sector Committee



R. L. McDOUGAL  
Lockheed Corp.  
•  
Chairman  
Materials &  
Structures Committee



T. E. DUMONT  
United Technologies Corp.  
•  
Chairman  
Rotorcraft Airworthiness  
Requirements Committee



C. G. TREVILLION  
Lockheed Corp.  
•  
Chairman  
National Aerospace  
Standards Committee



J. N. BREEN  
RCA  
•  
Chairman  
Electronic Systems  
Committee



H. A. BUCKNER, JR.  
The Garrett Corp.  
•  
Chairman  
Propulsion Committee



T. A. MARTIN  
RCA  
•  
Chairman  
Embedded Computer  
Software Committee



D. W. BAHR  
General Electric Co.  
•  
Chairman  
Aircraft Engine  
Emissions Committee



J. F. MELZER  
General Electric Co.  
•  
Chairman  
Civil Aviation  
Advisory Group



R. E. PENDLEY  
McDonnell Douglas Corp.  
•  
Chairman  
Airplane Noise  
Control Committee



R. G. SCHLEGEL  
United Technologies Corp.  
•  
Chairman  
Helicopter Noise  
Control Committee



J. E. KRINGS  
McDonnell Douglas Corp.  
•  
Chairman  
Flight Test  
Operations Committee

Externally, mechanisms were being sought to improve the coordination of U.S. aerospace standardization strategy across the spectrum of involved trade associations, professional societies and government agencies. Two key thrusts of U.S. action will focus on NATO standardization and the European Association of Aerospace Industries (AECMA). Ongoing informal talks with AECMA are expected to culminate in a joint working meeting of U.S. and European experts in the spring of 1983 to coordinate metric fastener standards.

AIA remained active in international standardization through its role as international secretariat for Technical Committee (TC) 20, Aircraft and Space Vehicles, of the International Organization for Standardization (ISO). TC 20, one of the oldest and most productive international standardization bodies, held its 25th plenary meeting in the spring. A good rate of output by the TC and its 10 subcommittees brought the number of international aerospace standards to more than 100 at year-end.

### **National Aerospace Standards Program**

AIA's standardization program produced 160 new and revised National Aerospace Standards, on items ranging from optical tool alignment lasers to metric clevis bolts. NAS 875, Industrial Robot for Drilling, Reaming and Countersinking, represents a major achievement as the first AIA standard on robotics. A significant proportion of new standards are in SI metric units, reflecting the industry's commitment to informed readiness in the area of metric conversion.

In the wake of the Supreme Court decision on the standards-related ASME-Hydrolevel case, AIA's standards developing procedures were subjected to close examination, to safeguard association members who participate in standards development. A number of procedural changes and clarifications are included in a revised NAS procedures handbook scheduled for publication early in 1983.

A major achievement by AIA and other private standards developers was the release of a revised version of OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Standards*. The original circular and its implementing procedures would have imposed a heavy burden of administrative requirements on voluntary standards developers. AIA was instrumental in successfully proposing a revision to the circular that eliminated the burdensome procedures and instead stressed the principle of government use of and participation in the development of voluntary standards.

The AIA standards program for the first time will become an income-generating activity as royalty license agreements were concluded with major distributors of NAS standards.

### **NASA Aeronautical R & T**

It has been a matter of continuing concern to AIA that appropriations for NASA research and technology programs have steadily declined in real dollars. Although Congress has increased the NASA appropriations above Administration proposals, recent funding still falls substantially short of the requirements projected by AIA members. Congressional hearings on the NASA program authorizations began in December 1982 and it is clear that AIA will once more have to take an active position in support of improved research and technology programs if the United States is to maintain a strong aeronautical industry.

## Major Systems Acquisition

AIA completed its comparison of past AIA positions on acquisition procedures and the initiatives proposed in the Defense Acquisition Improvement Program. The association strongly recommended that DoD assure that solicitations and contracts are drafted to specify "what" not "how", require tailoring of all acquisition documents and preclude tiering of specifications and standards. These factors not only need to be addressed in top policy documents, but need some means of assuring flowdown of acquisition policies to the working level. The suggestion was made that improving statements of policy in the DAR would be useful.

## Laboratory Study

At the request of the Department of Defense, AIA provided assistance in DoD's comprehensive review of its 73 laboratories. The study report recommended preservation of the laboratory system, but improvement in its management, structure, practices, processes and results. Recommendations included upgrading personnel practices; streamlining procurement; increasing modestly the rate of facilities and equipment modernization; improving university relationships; establishing a peer review process for the technical centers; developing a biannual operational concept basis for guiding technology development and application; expanding laboratory relationships with operational forces; and expanding the critical technology demonstration program. In addition, the study recommends strengthening service logistics and manufacturing R & D programs, as well as establishment of four new centers. The new centers would specialize in training equipment and simulation techniques; microelectronics and computer science; electronic warfare techniques; and command and control research.

## National Airspace Review

The Federal Aviation Administration's National Airspace Review, involving study of the regulation, problems and conflicts related to the use of airspace under U.S. control, will be carried out by 16 task forces over a period of three and a half years. The task force meetings commenced in 1982. AIA will be represented on seven of the task forces, primarily concerned with airspace usage related to test operations or operations that might require installation of special equipment aboard the aircraft.

AIA has requested representation on the Advisory Executive Steering Committee of this National Airspace Review program, but at year-end such representation had not been authorized. This steering committee held its second meeting in October to review the task group staff studies on military operations areas, terminal control areas, weather programs, facility shutdown agreement, Canadian airspace redefinition and VFR charts. These studies were also being reviewed by AIA representatives at year-end.

## Airport/Airway Congestion Studies

AIA published the second edition of a study detailing the factors that influence airport and airway congestion and at year-end was reviewing the desirability of publishing a third edition. These studies have been well accepted and used at all levels of government.

The FAA also conducted a study of airport/airway congestion in which AIA participated: the report was submitted to the FAA Administrator for review



The Office of Technology Assessment was requested by Congress to conduct a study of airport/airway congestion. The study group, to include industry representation, was being organized at year-end.

The recently enacted Airport and Airway Improvement legislation contained a requirement that a study of airport access be conducted by a task force appointed by the Secretary of Transportation. Appointed in October, the 24-member task force held its first meeting in November. Unfortunately, the task force does not include a representative of AIA or the transport aircraft manufacturing community, although there is industry representation on the working groups. AIA petitioned the Secretary of Transportation to select a member of the transport aircraft manufacturing industry to sit on the task force.

### **National Airspace System Program**

Early in 1982, the FAA announced the completion of the National Airspace Systems Plan which would provide for modernization and improvement of air traffic control and airway facilities services through the year 2000. It delineates specific improvements to facilities and equipment and supporting research and development associated with the National Airspace System. Emphasis focuses on terminal and en route air traffic control, flight service stations and weather services, ground-to-air services, inter-facility communications, and auxiliary services such as airway facilities maintenance and flight inspection of navigational aids. Preliminary review of the plan by AIA indicates that it can form the basis for much needed improvements in the airways system. While there are minor areas of concern from a technical point of view, it would appear that the plan is generally feasible.

AIA reviewers expressed some reservations as to the FAA's capability for effective management of a system modernization program as large and complex as that proposed. The Administrator, in recognition of these concerns, suggested that FAA might contract for the services of an outside management consulting firm to bolster FAA's management capabilities. Actions were taken in 1982 to contract for essential parts of the system. The 1982 Airport and Airway Improvement Act provides funds for this program up through the year 1987; the source of these funds will be the Airport and Airways Trust Fund, money generated by various taxes applied to aviation operations.

### **Helicopter Program Requirements**

Policy level technical representatives of the major helicopter manufacturers expressed concern to the FAA that there was a lack of emphasis within FAA on the growing needs of the helicopter within the national airspace system. AIA and other helicopter-oriented industry associations developed a proposal for an FAA management alignment that could provide a focus for FAA staff and management on the unique needs of the helicopter. FAA reacted to the industry proposal by establishing a Rotorcraft Program Office to serve as a focal point for all FAA rotorcraft matters.

### **Flight Development Standard**

In an effort to resolve the conflict between the Air Force philosophy of total control of contractor flight operations and the need for exercise of the contractor's responsibility and authority during the flight phase, AIA developed and published the National Aerospace Standard *Flight Development*. This standard (NAS-3602) is designed to

be incorporated into contracts for development programs which require flight testing to accomplish the development goals. It establishes the management authority and flexibility required if the contractor is to meet the contract and program requirements effectively. Negotiations were under way at year-end to obtain Department of Defense approval for inclusion of the standard in the *Department of Defense Index of Specifications and Standards* (DoDISS); that could permit its incorporation in DoD contracts by reference.

As an extension of this activity, preliminary work was completed on a complementary standard *Contractor Flight Operations* that would provide for more flexibility in contractors' management of flight operations when involved in the operation of aircraft for which the government has assumed "ground and flight risk."

### **Research and Technology Policy**

In the development of the Administration's Fiscal Year 1983 budget, significant questions were raised concerning the appropriateness and effectiveness of current U.S. aeronautical R & T policies and the federal government's role in supporting these needs. In response to these questions, the Office of Science and Technology Policy (OSTP) reviewed national aeronautical R & T policy and released its findings in November.

The study group found that aeronautical R & T programs in the U.S. are essential for national security and for continuing success in the marketing of U.S. civil aeronautics products. It recognized the heavy investments required for long term aeronautical R & T and suggested that such investment is generally beyond the capability of the private sector. It also recognized that current antitrust laws constrain U.S. companies from domestic joint ventures. The study group recommended that the government role in aeronautical R & T should be limited to aeronautical technology development and to military aeronautical technology demonstration. Industry strongly supported the OSTP study in hearings before Congress in December and will continue to press for expanded authorization and increased appropriations.

### **Simplified Noise Certification**

In keeping with the FAA's policy of "regulation by objective," AIA submitted a petition for rulemaking to the FAA to make a number of changes in FAR Part 36, Noise Standards: Aircraft Type and Airworthiness Certification. The changes recommended by AIA will greatly simplify the certification procedure. Significant reductions in certification costs and administrative burden can be achieved both for industry and the FAA without any degradation of the noise environment around airports. In addition, the regulation will be further simplified by the removal of detailed noise measurement and analysis specifications from the rule and placing all such compliance demonstration techniques in appropriately developed advisory circulars.

The changes recommended will not alter the noise certification reference conditions, will not relax noise certification stringency and will not degrade test data quality. At year-end, AIA was developing proposed advisory circulars for the presentation of noise measurement and analysis details. As a follow-on, efforts will be made to gain international acceptance through changes to the International Civil Aviation Organization Annex 16, which will be undergoing review at a meeting of the ICAO Committee on Aircraft Noise in May 1983.

## **Engine Emission Standards**

The International Civil Aviation Organization's standards defining maximum amounts of smoke, vented fuel and gaseous emissions for turbine aircraft engines are primarily intended to serve as ceilings; most existing engines already comply or can be modified to meet these standards. The U.S. government will not adopt some of these provisions since they are inconsistent with current standards issued by the Environmental Protection Agency (EPA). Specifically, these are the standards for carbon monoxide and oxides of nitrogen and the applicability of all gaseous emissions standards to general aviation aircraft engines.

AIA has continually maintained a position with EPA that air quality impact justification does not exist for the imposition of any gaseous emission standards for aircraft engines. AIA estimates of hydrocarbon emissions of future aircraft fleets show that the hydrocarbon emission burdens will continue to decline even if no standards are imposed. Despite the AIA recommendation, a standard for hydrocarbon emissions remained in the revised EPA regulations.

## **Transport Flammability Project**

In an effort to provide improved transport aircraft cabin occupant protection in a fire environment, either in flight or on the ground, a Cabin Flammability Project Group was established to study the history of actual events involving cabin fire in commercial aircraft. The project group proposes to obtain industry agreement on realistic fire scenarios based primarily on a study of historical events, and to provide industry recommendations to the FAA and NASA on test and development programs needed for establishment of a factual data base for the scenarios. Scenario description will include all pertinent aspects of a specific fire situation in a given area or compartment, including ignition sources, combustibles, propagation mechanisms, probable method of detection and possible means of extinguishment. Cabin fires initiating both internally and externally will be considered. A new project group will be activated to work with government and industry organizations to evaluate solutions options relative to the most severe threat level scenarios identified.

## **New Transport Criteria**

Following an industry-wide conference on takeoff performance, the FAA Administrator expressed concern as to the suitability of current regulatory requirements for takeoff and landing performance of large twin engine transport aircraft. Specifically, his concern was with the runway overshoot problem, both on landing and following a refused or aborted takeoff.

AIA agreed to take the lead in an effort to rewrite all criteria related to the problems. This effort will involve coordination of other aviation oriented organizations such as airlines, airline pilots, airports and research organizations. AIA already has a task group of flight performance experts who are assessing the problems of takeoff performance; the group will be expanded to cover the landing requirements. A plan to carry out this project for the FAA is being developed. It is expected that the final result will be a petition for rule changes in various parts of the Federal Aviation Regulations.

## **GATT Standardization**

AIA participated in a review of the Department of Commerce proposal on Voluntary Guidelines for State and

Local Government and Private Sector Organizations engaged in Standards Development, Product Testing and Certification Systems. Although the guidelines are generally acceptable, AIA suggested a need for the incorporation of additional guidelines to better define products and protect standards based on proprietary designs.

#### **Embedded Computer Software**

AIA completed development of a paper entitled *Suggestions for DoD Management of Embedded Computer Software in an Environment of Rapidly Moving Technology*. This paper identified five issues which present challenges to DoD managers, including the need for sound disciplines that permit flexible design and allow for development of software of differing scope and application. After completion of this effort, AIA participated in a review of a Joint Logistics Commanders proposed set of standards. This proposal recommended issuance of one embedded computer software standard and changes in four others, all aimed at providing a disciplined software development process. Industry suggested a rewrite because the proposal does not include provisions for tailoring and isolates embedded computer programming from the engineering of systems. AIA reformed its expertise into one committee to better address the embedded computer software area.

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# INTERNATIONAL SERVICE

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STEPHEN SOHN  
United Technologies Corp.  
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Chairman  
International Council

The International Service is the AIA staff office that works with the International Council to serve the exporting segment of the aerospace industry, providing guidance, coordination and policy recommendations on issues affecting the commercial and military interests of the industry.

International trade issues cast longer shadows on the aerospace industry in 1982. Although the industry's export volume remained strong, it dropped below the previous year's level, as did the aerospace balance of trade. Among the most difficult issues affecting current and future U.S. aerospace trade were foreign competition, foreign nations' subsidization of exports, reductions in the U.S. Export-Import Bank budget, and problems in negotiating a satisfactory international agreement on export credits. A positive development was Congressional enactment of the Export Trading Companies bill.

## Export Financing

In 1982, much of the International Council's time and attention was devoted to efforts aimed at providing the Export-Import Bank with adequate budget authority and at negotiating improved international understandings on commercial export financing.

Late in the year, there were signs of greater recognition of the importance of better financing for the Bank among the membership of the House Appropriations Committee and the House as a whole; the Senate has traditionally favored a strong bank. A continuing resolution passed near year-end granted the Bank \$4.4 billion in direct loan authority and \$9 billion in guarantees. Supporters were engaged in a campaign to reduce political overtones affecting the Bank, strengthen its continuity, remove it from the national budget, and make it a more effective element in U.S. pursuit of equitable international trade practices. The 1983 renewal of the Bank's charter provides an opportunity to seek changes in the Bank's organization and procedures.

Parallel to the efforts to strengthen the Bank, industry worked closely with the U.S. government in pushing for agreement on equitable international credit arrangements. The 1981 Commonline Agreement represented some progress, but applied only to commercial transports and consequently was of little benefit to the business, commuter, general aviation and helicopter segments of the industry.

The Commonline Agreement was extended indefinitely by the four adherents—the Federal Republic of Germany, the United Kingdom, France and the U.S.—but negotiations failed to produce anything beyond the existing limited accord. Negotiations will continue in 1983, but they may have to be raised to a higher political level if major results are to be obtained.

## Protectionism

The Ministerial Meeting of the General Agreements on Tariffs and Trade in November highlighted a generally sour atmosphere pervading international commerce and a growing trend toward protectionism among foreign nations and, to some extent, in the U.S. Congress.

The most striking example of dissatisfaction with current terms of trade appeared with the introduction of domestic content legislation that would require a certain percentage of parts and components of foreign automobiles sold in the United States to be manufactured in the U.S. With more than 200 Congressmen sponsoring it, the UAW-designed bill passed the House of Representatives, but the Senate did not act. Not only is the bill a violation of the GATT, inviting retaliation from U.S. competitors abroad, but it will be interpreted by America's trading partners, regardless of whether it passes, as a sign of increased protectionist sentiment in the United States.

In another instance, the "Buy America" waiver permitting the purchase of foreign specialty metals for U.S. defense items was turned back by the Congress in a continuing authorization resolution for the Department of Defense. The new restriction can also be interpreted as U.S. reluctance to implement international cooperation in defense items as well as a new expression of growing U.S. protectionism. AIA expressed opposition to the domestic content legislation and to the elimination of the waiver of the "Buy America" provision in the Defense appropriation bill.

## International Cooperation

In 1982 the aerospace industry explored expanded defense cooperation with U.S. allies, with DoD assistance, in seminars and meetings with Belgian, Indonesian, Canadian and Spanish representatives. While DoD assisted in the arrangements of meetings, it left to U.S. industry the development of specific programs for cooperation.

Co-development and co-production remained the principal targets of foreign entities seeking U.S. cooperation. DoD sees such programs as a means of enhancing the effectiveness of the NATO alliance and of increasing the allies' sense of sharing in joint industry efforts. NATO allies sometimes voice disappointment with the slow pace and limited extent of implementation.

At year-end, Memoranda of Understanding existed with 15 countries (Australia, Belgium, Canada, Denmark, Egypt, France, Germany, Israel, Italy, the Netherlands, Norway, Portugal, Switzerland, Turkey, and the United Kingdom) and two (with Greece and Spain) were pending.

## Technology Transfer

The Multi-Association Policy Advisory Group (MAPAG) proceeded with an industry review of the Militarily Critical Technology List (MCTL), following discussions between industry and government on understandings which would govern the review. AIA provided the focal points for the MAPAG effort. In October, the results of the review were submitted to the Departments of State, Defense and Commerce. It remained to be seen, however, how industry's comments will be used. The Department of Defense stated at a November meeting that it intends to study further much of the material submitted by industry in the list review. It will complete the study by May 1983, at which time industry will have an opportunity to comment.

In the meantime, the Administration is preparing to formulate its positions for the renewal of the Export Administration Act, which expires in September 1983. Renewal of the Act can serve as a forcing instrument for the government to set forth its views on controls affecting technology transfer, not only to potential adversaries but to friendly and allied countries. The pervasive worry within the Administration and Congress over leakage of U.S. technology to adversaries has created an atmosphere conducive to stricter interpretation of constraints, complicating the task of industry in addressing the truly critical technologies.

#### **Foreign Military Sales**

Congress has challenged some of the tenets of Foreign Military Sales. In addition to a desire to reduce the size of the Defense Department allocation for FMS, Congress is increasingly skeptical about the principle of credit extension to foreign buyers. Industry has generally experienced difficulties with the credit issue but the intensity of the challenge increased in 1982. Increasing examination of the Defense Department budget could make FMS a more attractive target for reductions.

The reinstatement of the one to four percent risk adjustment provision in FMS contracts appears to face a long battle; 1982 saw no movement on this issue in the Department of Defense. The \$50,000 limit on agents' fees imposed by the Department of Defense also seems destined to remain.

#### **NATO Industry Advisory Group**

With the active support of the Department of Defense, the U.S. delegation to the NATO Industrial Advisory Group pushed to increase the role and effectiveness of NIAG in the NATO structure. Aimed at making NIAG more than a focal point for pre-feasibility studies, the objective is to make the Council of National Armaments Directors more responsive to NIAG and to enhance the involvement of U.S. industry in NATO activities.

Most of NIAG's current budget and a great deal of effort has gone into feasibility studies of a new NATO frigate for the 1990s; 19 U.S. companies are participating. Between 100 and 200 ships (3,500 tons) are contemplated, with first trials targeted for 1992. NIAG is also studying a companion helicopter, target date 1992. Funding, however, is likely to remain a problem.

NIAG established a sub-group designated AC-313 to replace AC-94, which developed criteria on intellectual property rights. The new group will examine incentives and impediments to industrial cooperation, particularly major NATO procurement policies and contractual problems. NIAG also set up AC-225 as a NATO Armaments Committee to explore the merits of feasibility studies on Self-Defense-Air-Defense and Light-Land-Based-Air-Defense. Military authorities are preparing requirements on these projects and it could be six months to a year before industry is invited to participate.

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# OFFICE OF LEGISLATIVE COUNSEL

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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 1982, AIA coordinated and participated in a number of industry coalitions, dealing with such issues as the completed contract method of accounting (CCM), Export-Import Bank funding, contracting-out and Independent Research and Development (IR & D) and Bid and Proposal (B & P) costs. On behalf of the association, the Legislative Office worked with AIA staff and member companies to prepare testimony on CCM, the role of the aerospace industry in the world market, development of a Uniform Federal Procurement System, cabin air quality standards, the FAA's 20-year modernization program for the air traffic control system and NASA's role in aeronautical research and technology. In addition, letters or position papers were submitted for the record of Congressional hearings on airport and airway development funding, strategic stockpile reform, national materials and minerals policy, domestic content and reciprocity legislation, Buy American waivers for the purchase of foreign-made specialty metals, the performance of the Export-Import Bank and construction of a public-use heliport for Washington, D.C.



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# OFFICE OF PUBLIC AFFAIRS

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JOHN KUMPF  
E-Systems, Inc.  
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Chairman  
Public Affairs Council

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.

In 1982, service to the media was expanded and improved through the creation of the new position of Manager of Information Services.

## 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 1982 were the annual aerospace industry review and forecast, a pictorial update on the growing military role in space, and a report on NASA's plans for a permanent manned space station. *Aerospace* also featured signed articles by Richard N. Perle, Assistant Secretary of Defense for International Security Policy, on raiding the free world's technology; by Secretary of Defense Caspar W. Weinberger on the relationship of defense to the national economy; by USAF Chief of Staff General Charles A. Gabriel on the status of the Air Force on its 35th anniversary; and by Robert F. Allnutt, NASA Acting Associate Administrator for External Affairs on the dawning of the commercial era in space, emphasizing the increasing levels of effort among foreign producers of commercial space hardware.

Continued as public affairs projects were the internal publications *AIA Quarterly Digest*, the *AIA Annual Report* and *Key Speeches*, a reprint service calling attention to speeches of particular interest made by industry or government executives. A revised edition of another internal publication, *AIA Organization and Functions*, was produced.

The Public Affairs Office also published and distributed the *1982 Directory of VTOL Aircraft* and the Federation Aeronautique Internationale *Directory of Helicopter Records*, the latter prepared in cooperation with the National Aeronautic Association. At year-end, the *1982/83 Directory of Helicopter Operators* was being prepared for early 1983 publication.

Editorial assistance was provided to the Aerospace Research Center for the 1982/83 edition of *Aerospace Facts and Figures*, the economic reference book of the industry. It was published under a long-standing agreement with *Aviation Week and Space Technology*, which handles promotion and commercial distribution.

### **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 Tucson, Arizona. Public affairs support was provided for the AIA Board of Governors meetings in Williamsburg, Virginia and Phoenix, Arizona.

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 meeting drew 75 Washington editors and correspondents and resulted in substantial press coverage.

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# TRAFFIC SERVICE

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J. T. WELTY  
Raytheon Company  
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Chairman  
Traffic Committee

Traffic Service is a guidance and coordinating point for the traffic management segment of the aerospace industries. As such it serves as a medium for exchange of views on government regulation of traffic. The service provides staff representation before government agencies concerned with transportation issues. Providing specific direction for these representations is the responsibility of the Traffic Committee, aided by task forces created to study specific problems and to develop programs for committee consideration. During 1982, these programs led to participation in proceedings before the Civil Aeronautics Board, the Interstate Commerce Commission, the U.S. Customs Service, the Materials Transportation Bureau of the Department of Transportation and various carrier organizations.

## Task Force Activities

The Export/Import Task Force recommended actions through the ISAC structure and to U.S. Customs with respect to the duty free entry of aircraft parts as contemplated by the Civil Aircraft Agreement. Concerned with U.S. Customs implementation of the agreement, the task force provided practical positions related to international aerospace trade and Customs procedures to assure the formulation of entry regulations to carry out the intent of the agreement with a minimum of regulatory restraint.

An Automation Task Force was established for the purpose of providing information on software programs and systems available for application in the area of traffic and transportation management.

The DoD/NASA Task Force programmed and conducted industry/government traffic management seminars. It also performed initial review and drafted comments on government procurement regulations affecting traffic management.

The Household Goods Transportation Task Force maintained surveillance of rate and service proposals of carriers and the related ICC proceedings. The task force compiled data to support Traffic Service in its handling of cases, before carrier bureaus and the Interstate Commerce Commission, concerning personal property removal as well as the movement of electronic materials.

DOT/Hazardous Material and Waste Task Force performed similar functions related to the air and surface movement of hazardous materials. Additionally, this task force was responsible for the review of Department of Transportation and Environmental Protection Agency rulemaking notices concerned with the transportation of hazardous materials and waste; it also had responsibility for the preparation of position papers.

The Transportability Task Force coordinated the activities of the Traffic Committee's effort to obtain uniformity among the states' procedures involving permits for movement of overdimension shipments on the nation's highways. The task force completed work on an aerospace transportability guide for use by members in the planning of movements of extreme dimension aerospace components; the guide was distributed in December.

The Rates and Classification Subcommittee, a permanent subcommittee of Traffic Service, is responsible for maintaining 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. If AIA action is warranted, this subcommittee develops the necessary facts and data to permit appropriate representation. In the wake of major transportation legislation enacted in 1980 and 1981, the Interstate Commerce Commission conducted a series of rulemaking proceedings; these proceedings were under review by the Traffic Committee throughout 1982.

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