*** SUMMARY ***

NASA STI PROGRAM COORDINATING COUNCIL

SEVENTH MEETING

ACQUISITIONS

January 23, 1992
10:00 am - 4:00 pm

Crystal City Gateway 2
Suite 1300 Conference Room

Attendees:

JTT
- Katie Bajis
- Xenia Castell
- James Erwin
- Jennifer Garland
- Thomas A. Hermann
- Linda Hill
- Karen Kaye
- Tom Lahr
- Lucinda Leonard
- Georgiana Lira
- Elizabeth Nestor
- Roland M. Ridgeway
- Lou Ann Scanlan
- Ron Sepic
- Patt Sullivan
- Ardeth Taber
- Teresa Taylor
- Phil Thibideau
- Dick Tuey
- Kay Voglewede
- John Wilson

HWC
- Barbara Czerw
- Harold V. Jefferson

CASI
- Cynthia Barnes
- Carl Eberline
- Phil French
- Joe Gignac
- Mike Stroeks
- Jean Tolzman

AIAA
- George Cholewczynski
- Karen Holloway
- David Purdy
- Geoff Worton

DTIC
- Isaac A. Fox
- Sharon Serzan
INTRODUCTION

Jim Erwin, JTT, welcomed the attendees and gave the overview of the agenda:

1. Summarize current acquisition philosophies and procedures;
2. State the current problems with acquisitions; and

Questions to be addressed in regard to acquisitions included Who are our users? Are they only scientists and engineers, or a broader clientele (managers, etc.)? If we are serving a broader clientele, what do they want?

Also on the agenda were overviews of the acquisition programs at the Department of Defense (DOD) Defense Technical Information Center (DTIC), the NASA Center for AeroSpace Information (CASI), and the American Institute for Aeronautics and Astronautics (AIAA), plus a discussion of how the NASA Office of Procurement can help the NASA STI Program acquire some of the documents it needs.

PRESENTATIONS

Sharon Serzan, DTIC, presented information on the acquisition program at DTIC.

DTIC is the DoD counterpart of the NASA STI Program. DTIC began to reorganize in October 1991: there was a Directorate of Document Services that included acquisition, selection, reference, registration, micrographics, printing, and the mailroom. Now acquisition and selection fall under the Directorate of Operations (DTIC-O), and there is a new office called the DoD Scientific and Technical Information Policy Office (DTIC-S) that reports directly to the Office of the Secretary of Defense (OSD). The DTIC acquisitions section wants to expand the services it offers to the DoD community. To that end its staff will work with the weapons systems acquisition people, be involved from the beginning of the procurement process, and include management documents in its acquisitions. Also, fewer technical reports (TRs) are being produced currently. TRs used to constitute the bulk of the database; now, everything relevant to DoD procurement—more than the Program Element Description Summary (PEDS)—is included. The regulation that covers DTIC dates from 1983 and reads, “... all S&T observations, findings, recommendations, and results derived from DoD endeavors be made available to DTIC ...,” applies to the “Office of the Secretary of Defense, Joint Chiefs of Staff, military departments, [and] defense agencies.” The Air Force has a new regulation to submit reports to DTIC within 180 days.
DTIC's acquisition process took 60-80 days in 1990; it now takes less than 20 days (the goal was to get it under 35 days). The reduction in time was brought about by using parallel instead of sequential processing for the machine indexing and microfiche functions. There are now between 1.75 and 2 million documents in the Defense Research, Development, Testing, and Evaluation (RDT&E) Online System (DROLS). Of these, 90 percent are TRs, 40 percent are public release, 10 percent are classified, and 50 percent are limited. Users and contributors are the same population.

Subject areas covered in DROLS are not only the hard sciences, but also management and behavioral and social sciences. Special collections not maintained in DROLS are added to DROLS if requested. Some are German and Japanese documents (1930-1953) obtained during World War II. There were many requests for this material during Operation Desert Storm: DROLS houses a lot of information on desert warfare.

Part of the database is being redesigned. The Work Unit Information System (WUIS) that corresponds to the STI Database's DTIC Work Unit File (DWUF) will become Technical Effort and Management Support (TEAMS).

A change in policy now allows DTIC to accept nearly everything that is submitted. Formerly, nothing was accepted without a letter specifically stating that the material was released for submission; now anything sponsored by the DoD or any part of the Federal Government is acceptable. NTIS can display this material but not distribute it. This is acceptable because access is limited to DoD and its contractors only, not the general public. Conference proceedings are still reviewed at paper by paper for inclusion.

Also included are Pentagon administrative documents; other procurement-related documents such as statement of needs, technical area plans, and operational requirements; and management documents such as planning information, contract information, program performance information, and financial information.

DTIC accepts various formats; close to 200 nonprint products are represented on DROLS. Distribution on CD-ROM will be a reality in the near future.

DTIC acquires documents principally by (1) responding to user requests, (2) monitoring contracts, (3) maintaining a liaison program that gives them access to collections from military bases that are closing, and (4) keeping up with bibliographies, accession lists, and the like. DTIC also has memoranda of understanding with the international community, specifically Australia, Canada, the United Kingdom, the Netherlands, West Germany (sic), plus the Advisory Group for Aeronautical Research and Development (AGARD), NASA, and the Defense Research Group (DRG). DTIC is the secondary distributor for DRG documents in the United States. Embassies of friendly countries also supply documents, although they are not translated; clearinghouses are a further source.
The selection section feels that SF 298, the Report Documentation Page (RDP) needs a place to enter a point of contact; they may take that up with the coalition from the Departments of Commerce, Energy, NASA, National Library of Medicine, and Defense Information (CENDI).

The telephone number for acquisitions at DTIC is 703-274-4408.

Discussion: DTIC has seven people in its acquisitions section when it is fully staffed. In 1990 they took in 6000 documents, including collections. Usually they process some 1200 a month. DTIC must do all of the processing for foreign documents—they have no filled-out forms like the RDP to help.

Mike Streeks, CASI, presented an overview of CASI’s acquisition program, its policies, and feedback from the National Level Exchange.

CASI’s acquisitions policy is based on NASA Scientific and Technical Information (NMI 2220.5D), NASA Scientific and Technical Information Handbook: Documentation, Approval, and Dissemination (NHB 2200.2), and The NASA Scientific and Technical Information System: Its Scope and Coverage (NASA SP-7065/89N15779). Also, the Statement of Work of its current contract (NASW-4584) spells out the acquisition categories: NASA-generated and -sponsored report literature, non-NASA report literature from domestic sources, foreign-originated report literature from foreign sources, and published literature. Technical directives (TDs) also specify directions for CASI’s acquisitions program; for example, there is one on processing documents from NASA Centers, another for a contracts processing study, and another about working with acquisitions experts at NASA Centers. In the contracts processing study, staff are asking, “Are we getting all reports generated from contracts? Can we acquire these reports electronically rather than only in hard copy?”

Another thrust of the acquisitions program at CASI is the National Level Exchange Feedback. CASI has agreements with foreign national organizations: Canada, Australia, Israel, and Japan (pending). CASI is keeping communication links open and sending feedback regularly when these countries send documents. Israel communicates chiefly by fax, and sends information on corporate sources that CASI staff can use to check and correct information on the documents. CASI accepts information in various media: tape, floppy disks, or whatever means works best for the originator. (Canada, Japan, and Australia use magnetic tape.) ESA countries are moving toward PC-based systems and are using CENDI cataloging guidelines and ASCII format.

Cynthia Barnes, CASI, spoke on CASI’s proactive acquisitions activity.

CASI staff actively seek out documents that don’t come in automatically. The first mechanism used is domestic exchange partners: DTIC, the Department of Energy (DOE), the National Technical Information Service (NTIS), the Federal Aviation
Administration (FAA), the General Accounting Office (GAO), the National Science Foundation (NSF), and the Chemical Propulsion Information Agency (CPIA). CASI is on the automatic distribution list for all these organizations except NTIS, which sends its announcement journal. CASI staff need to follow up only if there's a problem with the medium or in cases of special requests. NASA Center interface is another mechanism for obtaining documents; formal reports from the Centers (Technical Memoranda, Contractor Reports, etc.) come to CASI automatically. CASI is compiling an Acquisitions Directory that lists all the helpful people by organization. So far there are about 150 names from NASA locations and about 150 from non-NASA organizations. CASI staff practice quality control: if a part of a document is missing or if a document received is poor quality, the staff will ask for a better copy.

Reference requests are another avenue of acquisitions. If users search for a document in the NASA STI Database and don’t find it, they will request it and then the acquisitions staff will try to find it and, if appropriate, acquire it. There used to be 300-400 such requests annually; now there are only 72-144 annually, or 6-12 a month.

Yet another potential source is onsite contractors. Acquisitions staff is working on getting on automatic distribution of their reports. CASI is standardizing its requesting process, from a half-page form to a full-page letter format that will be easily recognized.

CASI will continue working to improve its communications with acquisition contacts, and wants to visit NASA Centers to become more visible and continue establishing an acquisitions network.

Non-NASA organizations do not have formal distribution systems, so CASI staff work with them individually to establish means of acquiring appropriate documents. In the case of the National Academy of Sciences (NAS), CASI gets their newsletter with announcements of their publications, then requests those it wants. The Office of Technology Assessment (OTA) sends announcements of background papers. The National Institute of Aviation Research (NIAR) at Wichita State University in Kansas initiated contact with CASI. The Rand Corporation, Santa Monica branch, is adding CASI to its automatic distribution list.

CASI staff also look at the contract and grant information on file in the database and try to obtain all reports from each contract and grant. So far there has not been good response. They are working with the NASA Procurement Office to see which contracts require reports and to establish points of contact at the NASA Centers to make sure they obtain all relevant reports. Miscellaneous acquisition tools include newsletters, bibliographies, and reference lists. Following up requests has yielded an acquisition rate of more than 70 percent in 1989-1991; having acquisitions experts in place at Centers should improve that figure in the future.
Harold Jefferson, HWC, discussed contract and grant reports.

The NASA Procurement Office, Code HW, is beginning to work with the CASI acquisitions section to help them obtain reports from grants and contracts. There is a clause in contracts, mandatory since 1989, stating that the contractor must submit interim, quarterly, and final reports to CASI. CASI should receive copies of all research and development (R&D) contracts from the NASA Procurement Office. The NASA Procurement Policy Office, Code HP, will work with the NASA Centers to ensure compliance. One possible method is to maintain a tickler file to remind contractors of this reporting requirement a month before a contract expires. CASI will also be included on the contract closeout checklist to make sure that all reports are in before the contract can be closed. Especially on Cost Plus Fixed Fee (CPFF) contracts, final payment can be withheld until all reports are in. CASI staff will be able to follow up on these contracts with the cognizant contracting officer in Code HW if reports are not received within a reasonable amount of time.

Discussion: There is no mechanism yet in place to enforce reporting. Principal investigators (Pis) need to be encouraged to submit reports. Code HWC will work to get a policy in place to ensure that CASI staff will not have to chase these reports. Grants as well as contracts fall under this policy.

Phil French, CASI, described the document evaluation process at CASI.

Scope and Coverage (SP-7065) is a working guide for those who decide which documents to add to the NASA STI Database. In 1970, there were 34 subject categories to fit documents into; in 1978, there were 75; in 1988, one more was added: Category 29, Materials Processing in Space. This information is used by AIAA in New York and by all NASA installations to classify everything except progress reports. When submitting formal reports, the author should assign the category; if no category is specified on the RDP, the document evaluator at CASI assigns it. The subject category of a document determines where it is listed in STAR and IAA and to whom it is distributed.

To update the category lists, document evaluators read everything available related to NASA planning: authorization hearings, research and technology objectives and plans (RTOPS), long-range plans, current projects. They enter the update information in a current working copy of Scope and Coverage to keep it ready for the next revision. Category 99 is "general," and so far suffices as a catchall. The last category to be added, Category 29, was added only after 10 years of deliberation. If the need for a new category is identified and CASI staff are directed to do so by NASA Headquarters staff, then a new category will be added. The category numbering system has intentional gaps to allow for inclusion of additional categories in their proper places.
CASI staff are in the process of developing profiles for domestic exchange partners that will limit the material they send to certain categories. NASA has an agreement with the Department of Energy (DOE) on international energy categories; CASI staff has crafted a profile for DOE based on their subject categories that will tell them what material to send to CASI. Negotiations are also in process with NTIS, who will create a sales tape for CASI.

Discussion: CASI staff deliberately does not assign multiple categories to any document. DTIC used to do this but doesn’t now. Conference proceedings get analytic treatment; that is, the whole, or “mother,” document is assigned a category, and then each paper, or “daughter” document, is also categorized. Mothers and all daughters appear separately in the database. This type of analysis is limited to NASA and Advisory Group for Aerospace Research and Development (AGARD) material. Everything received from the European Space Agency (ESA) goes into the database; CASI assigns all categories to this material. Tapes that CASI receives from DTIC don’t contain all elements for restricted documents; for example, abstracts are not included (and don’t appear in the database), although they are included on the microfiche for that document. CASI staff would like to have the abstract on the tape; there is a filter in place that would keep restricted abstracts from appearing to unauthorized RECON users. Negotiations are in process to get these abstracts on the DTIC tapes.

David Purdy, AIAA, talked about open literature scope and coverage in the NASA STI Program.

Open literature is books, journals, and technical reports that do not come from Government agencies. AIAA is a professional membership organization, therefore has excellent access to open aerospace literature from all over the world. International conferences of groups like the International Aerospace Federation (IAF) help broaden the coverage. Acquisition tools include references and bibliographies, exchange agreements, and review copies. AIAA generates approximately 8 percent of the aerospace literature in the database. Many AIAA members are authors; they also recommend new areas to cover. AIAA began its coverage with 34 categories, and now has nearly 100. Technical committees (some 68 special interest groups within AIAA) also recommend subject areas to cover. There is a Soviet Literature Working Group, and the Pacific Rim Initiative covers China and Japan.

Personal contacts are important throughout the acquisition process. AIAA keeps in touch with users and their needs (there are 45,000 members and 72 corporate members), and works closely with the NASA STI Program.

AIAA is working on the Continuous Improvement principle. Its staff uses electronic input. The Institute of Electrical and Electronics Engineers, Inc. (IEEE) contributes citations and abstracts, as does the AIAA Journal; a large commercial publisher may
also begin to contribute. Planned improvements include scanning text in, updating exchange contracts to include new journals, and automating the acquisition process. With all of this automation, however, AIAA still emphasizes the one-on-one, person-to-person process for obtaining more incisive coverage of a subject.

**Discussion:** With the automated acquisition process, each document is tracked through all the steps, including associated financial information. AIAA accepts any document related to aerospace. They listen to their user community, and the emphasis of their database follows the stated interests of its users.

Jim Erwin, JTT, gave an overview of the STI Program's Acquisitions Experts Committee.

This committee was formed to improve and facilitate communication among Code JTT, CASI, AIAA, and the NASA Centers. Allan Kuhn and Katie Bajis from Code JTT are on the committee; there should also be representation from CASI, AIAA, and the NASA Centers. The committee is looking at problems with acquisitions, especially at the Center level. This committee will also deal with issues of scope and coverage, and with streamlining the process of acquisition from the other agencies such as DTIC, DOE, and NTIS.

One question to be resolved is: Are exchange agreements and foreign acquisitions a CENDI issue?

John Wilson, JTT, talked about acquisition initiatives at JTT.

Some of the people involved are Jim Erwin, from the operations perspective; Tom Lahr; Allan Kuhn; and Lou Ann Scanlan, working with Centers.

TD 91-064 directs CASI staff to add to the NASA STI Database anything the Centers want to see added. Often material coming from Centers is not readily identified as NASA material. Sometimes Centers have produced material that is not in the database. The Acquisitions Experts Committee is supposed to ferret out this material. For example, the report of the Small Business Innovative Research (SBIR) program did not get into the database because reports are marked proprietary. These documents also come through the Centers; this is an example of a problem that can be resolved at the Center level. The question of DTIC abstracts (mentioned above) is also being addressed.

Laurie Harrison, CASI, is analyzing all exchange agreements under our trilateral agreements for Tom Lahr to see where the various material we get is coming from. (Trilateral agreements are agreements among ESA, NASA, and organizations within the ESA countries.) The STI Program is also looking at what corporate sources are represented in the database from Hungary, China, India, and Brazil. Then comparisons
can be made with other databases to determine what else should be acquired for the STI Database. The Centers have a lot of this material.

The Soviet Institute of Scientific and Technical Information (VINITI) is sending tapes to Katie Bajis. A pouch is due soon with disks full of cyrillic data in ASCII format on fields and citations and sample data. Mr. Nesrov from VINITI has requested $2 million to buy personal computers and to upgrade the computers they already have. (Yeltsin will give them another $2 million.) Mr. Nesrov was on an interrepublic working group. It looks as though the new republics are working toward an infrastructure organization.

There are also negotiations in process with report section of the Science and Technology Division of the Library of Congress. This section has been reorganized and has a lot of interesting material available now, mostly in foreign languages. Copyright issues still need to be resolved. NASA may be able to borrow the material, catalogue it, and enter it into the database, but the Library of Congress will keep the documents and be the source for copies. This project may relate to the task of identifying corporate sources in Hungary, China, India, and Brazil; JTT could give the list to the Library of Congress.

Discussion: There was some question concerning the value of report literature from the former Soviet republics and the Eastern European countries. The consensus was to continue to acquire it.

CLOSING DISCUSSION

Acquisitions will be on the agenda at the STI Managers Conference; Allan Kuhn will hold a meeting of the Acquisitions Experts Committee there. NASA personnel have talked to people at the National Institute of Standards and Technology (NIST); NIST is involved in the President's Office of Science and Technology Policy (OSTP) initiative on investment in leading edge technologies. The STI Program might do an exchange with them. The National Science Foundation (NSF) has a public database with downloadable full text. Consortia such as MCC in Texas might be good sources of material. A multiple database access system (MDAS) is a possible vehicle for getting scope and coverage feedback from users. Compendex and internet are other possibilities, with their open discussion bulletin board systems. CASI has a new LAN which is Ethernet-based and has TCP/IP capability; CASI might try to establish a link to AIAA, especially for document orders.

The next NASA STI Program Coordinating Council meeting will address networks.
DEFENSE TECHNICAL INFORMATION CENTER

MISSION

DTIC SHALL PROVIDE CENTRALIZED OPERATION OF DoD SERVICES FOR THE ACQUISITION, STORAGE, RETRIEVAL, AND DISSEMINATION OF STI TO SUPPORT DoD RESEARCH, DEVELOPMENT, ENGINEERING AND STUDIES PROGRAMS.
EVOLVE DTIC

Expand information broker activity

Increase flexibility in handling a wide range of end-user terminal, inquiry, and delivery needs

Assist all levels of acquisition community decision makers

Provide value added means of information analysis

Enhance cross-organizational management and access of information and CALS compatibility
REGULATORY REQUIREMENT

- DoD DIRECTIVE 3200.12
  DoD SCIENTIFIC AND TECHNICAL INFORMATION PROGRAM
- APPLIES TO:
  OFFICE OF THE SECRETARY OF DEFENSE
  JOINT CHIEFS OF STAFF
  MILITARY DEPARTMENTS
  DEFENSE AGENCIES

THIS DIRECTIVE STATES THAT THESE ORGANIZATIONS SHALL ENSURE THAT ALL S&T OBSERVATIONS, FINDINGS, RECOMMENDATIONS, AND RESULTS DERIVED FROM DOD ENDEAVORS BE MADE AVAILABLE TO DTIC WITHIN ESTABLISHED SECURITY AND OTHER LIMITATIONS CONTROLS.
DTIC CURRENT CONTRIBUTORS AND USERS

- Department of Defense components
- Defense contractors, subcontractors, grantees
- Educational institutions
- Other U.S. government organizations
- Foreign agencies and institutions, including NATO
SUBJECT AREAS COLLECTED BY DTIC

- AERONAUTICS
- AGRICULTURE
- ASTRONOMY & ASTROPHYSICS
- ATMOSPHERIC SCIENCES
- BEHAVIORAL AND SOCIAL SCIENCES
- CHEMISTRY
- EARTH SCIENCES AND OCEANOGRAPHY
- ELECTRONICS AND ELECTRICAL ENGINEERING
- MATERIALS
- MATHEMATICAL SCIENCES
- MECHANICAL, INDUSTRIAL, CIVIL, AND MARINE ENGINEERING
- METHODS AND EQUIPMENT
- MILITARY SCIENCES
- MISSILE TECHNOLOGY
- NAVIGATION, COMMUNICATIONS, DETECTION, AND COUNTERMEASURES
- NUCLEAR SCIENCE AND TECHNOLOGY
- ORDNANCE
- PHYSICS
- PROPULSION AND FUELS
- SPACE TECHNOLOGY
ANNUAL DEFENSE CRITICAL TECHNOLOGIES PLAN

1990

- SEMICONDUCTOR MATERIALS AND MICROELECTRONIC CIRCUITS
- SOFTWARE PRODUCIBILITY
- PARALLEL COMPUTER ARCHITECTURES
- MACHINE INTELLIGENCE AND ROBOTICS
- SIMULATION AND MODELING
- PHOTONICS
- SENSITIVE RADARS
- PASSIVE SENSORS
- SIGNAL PROCESSING
- SIGNATURE CONTROL
- WEAPON SYSTEM ENVIRONMENT
- DATA FUSION
- COMPUTATIONAL FLUID DYNAMICS
- AIR-BREATHING PROPULSION
- PULSED POWER
- HYPERVELOCITY PROJECTILES
- HIGH ENERGY DENSITY MATERIALS
- COMPOSITE MATERIALS
- SUPERCONDUCTIVITY
- BIOTECHNOLOGY MATERIALS AND PROCESSES

AN ANNUAL PLAN FOR DEVELOPING THE TECHNOLOGIES CONSIDERED BY THE SECRETARY OF DEFENSE AND THE SECRETARY OF ENERGY TO BE THE TECHNOLOGIES MOST CRITICAL TO ENSURING THE LONG-TERM QUALITATIVE SUPERIORITY OF THE UNITED STATES' WEAPON SYSTEMS.
SPECIAL COLLECTIONS AT DTIC

- AIR TECHNICAL INFORMATION (ATI)
- TECHNICAL INFORMATION PILOT (TIP)
- X COLLECTION
- WORK UNIT INFORMATION SYSTEM (WUIS)
- INDEPENDENT RESEARCH & DEVELOPMENT DATABASE (IR&D)
- MANPOWER & TRAINING RESEARCH INFORMATION SYSTEM (MATRIS)
- INFORMATION ANALYSIS CENTERS (IAC)
- DOD DOMESTIC TECHNOLOGY REFERRAL DATABASE
- DTIC REFERRAL DATA BANK
- DOD GATEWAY INFORMATION SYSTEM (DGIS)
- DIRECTORY OF RESOURCES
DEFENSE TECHNICAL INFORMATION CENTER

TYPES OF REPORTS ACCEPTED (REPRESENTATIVE SAMPLE)

- TECHNICAL DOCUMENTS
  TECHNICAL REPORTS
  TECHNICAL NOTES
  TECHNICAL DATA SUMMARIES
  TECHNICAL SURVEYS
  INITIAL REPORTS
  IN-HOUSE REPORTS
  PROGRESS REPORTS
  PERIODIC REPORTS (QUARTERLY, SEMIYEARLY, ANNUAL, FINAL)
  STATE-OF-THE-ART REPORTS AND STUDIES
  RESEARCH REPORTS
DEFENSE TECHNICAL INFORMATION CENTER

TYPES OF REPORTS ACCEPTED (REPRESENTATIVE SAMPLE)

- DoD SECURITY CLASSIFICATION GUIDES
- HANDBOOKS
- STUDIES AND ANALYSES
- PATENTS AND PATENT APPLICATIONS
- DISSERTATIONS AND THESES
- JOURNAL ARTICLES
- CONFERENCE PROCEEDINGS AND PAPERS
- COMMAND HISTORIES
- BIBLIOGRAPHIES
- CHARTS, MAPS, GRAPHS, DRAWINGS, AND TABLES WITH TEXTUAL MATTER AS INTEGRAL PARTS OF DOCUMENTS
- PENTAGON ADMINISTRATIVE DOCUMENTS
ASSUMPTION

Current DTIC captures:

- completed research
- research in progress
- IR&D data

Pillers of OUSD(A) EIS should include:

- technical information
- planning information
- contract information
- program performance information
- financial information
DEFENSE TECHNICAL INFORMATION CENTER

• TYPES OF REPORTS NOT ACCEPTED

ADMINISTRATIVE PAPERS
ADVERTISEMENTS
CATALOGS AND BROCHURES
CIRCULARS
CONTRACT ADMINISTRATION DOCUMENTS
DIRECTORIES
DOCUMENT DECLASSIFICATION LISTS
FINANCIAL REPORTS

MONTHLY STATUS REPORTS
ORDERS
PROCEDURES
PROMOTIONAL MATERIALS
PROPAGANDA MATERIAL
REGULATIONS, SPECIFICATIONS AND INSTRUCTIONS
TECHNICAL MANUALS
DEFENSE TECHNICAL INFORMATION CENTER

- TYPES OF FORMATS ACCEPTED
  PAPER
  MICROFICHE
  MAGNETIC TAPES
  VIDEORECORDINGS (FY91)
  SOFTWARE ON DISKETTES (FY91)

- TYPES OF FORMATS NOT ACCEPTED
  PAINTINGS, ENGRAVINGS, SKETCHES
  MOVIE FILM
  SLIDE FILM
  COLOR PLATES
  FILM STRIPS
  DATA PROCESSING CARDS
## Nonprint Document Distribution

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*Product also includes additional accompanying materials provided by contributor and Report Documentation Page. Documentation product will also be cataloged as separate document with its own AD#.*
ACQUISITION SECTION FUNCTIONS

1. ACQUIRES DOCUMENTS OF VALUE TO DoD.
2. DETERMINES SOURCES AND AVAILABILITY.
3. DEVELOPS ACQUISITION CONTACTS.
4. PROMOTES THE SUBMISSION OF DOCUMENTS TO DTIC.
5. EFFECTS THE TRANSFER AND ACCESSION OF SELECTED DOCUMENTS FROM OLDER DoD COLLECTIONS.
TOP FOUR ACQUISITION METHODS

- USER REQUESTS
- CONTRACTS - NEW, EXPIRING, COMPLETED
- MASTER USER ADDRESS CONTRACT (MUAC) DATABASE
- WORK UNIT INFORMATION SYSTEM (WIJS) DATABASE
- LISTS
- LIAISON PROGRAM
- ONSITE VISITS - CONTRACTING OFFICERS, CONTRIBUTORS, NONCONTRIBUTORS
- CONFERENCES AND MEETINGS
- BASE CLOSINGS
- COLLECTIONS
- OTHER CLEARINGHOUSES
- BIBLIOGRAPHIES, ACCESSION LISTS, ETC.
DTIC's Interaction with the International Community

- Information Exchange Agreements with:
  - Australia
  - Canada
  - United Kingdom
  - West Germany
  - The Netherlands

Other Sources:
- Advisory Group for Aeronautical Research & Development (AGARD)
- NATO Central Registry
- ONR - London
- SHAPE Technical Center
- Defense Research Group (DRG)
SELECTION SECTION FUNCTIONS

1. REVIEWS DOCUMENTS.
2. DETERMINES THE TECHNICAL REPORTS TO BE ENTERED INTO THE DTIC TECHNICAL REPORT COLLECTION ACCORDING TO SUBJECT, SECURITY, AND FUNDING REQUIREMENTS.
3. INSPECTS INCOMING DOCUMENTS.
4. MAINTAINS RESOURCES TO CONTACT CONTRACT MONITORS TO RESOLVE PROBLEM DOCUMENTS.
5. DUPLICATE CHECKS DOCUMENTS FROM OLD COLLECTIONS.
6. PROCESSES REQUESTS FOR THE WITHDRAWAL OF DOCUMENTS AND/OR CHANGE IN AVAILABILITY STATUS.
7. PROCESSES ERRATA AND/OR ADDENDA TO DOCUMENTS.
8. PROVIDES PRIMARY DISTRIBUTION OF FOREIGN DOCUMENTS.
9. PROCESSES PATENTS AND PATENT APPLICATIONS.
SELECTION SECTION

- DoD 5200.1-R  INFORMATION SECURITY PROGRAM REGULATION (JUN 1986)
- DoD 5230.24  DISTRIBUTION STATEMENT ON TECHNICAL DOCUMENTS (18 MAR 87)
- DTICM 4185.4  REPORT SELECTION CRITERIA (JUN 1983, REVISION, FY 91)
- AD-A219 300  DEPARTMENT OF DEFENSE CRITICAL TECHNOLOGIES PLAN (15 MAR 90)
- AD-A172 650  SUBJECT CATEGORIZATION GUIDE FOR DEFENSE SCIENCE AND TECHNOLOGY (OCT 86)
Long Term Field Test Results of Experimental EPDM and PUF Roofing

by

David M. Bailey
Robert D. Fattt
Meyer J. Reesendfield

Expanding non-shrinkable urethanes adhesives and diamond abrasives to experimental and production bases PUF were installed during November and March of 1986 at Fort Polk, GA, and Fort Lewis, WA. The research objectives were to determine the long term results of a field-tested procedure for installation of EPDM and PUF adhesives in the production bases of the membrane. The EPDM membrane provides a watertight, weather and aging resistance to the treated substrate. Current rigid membranes for EPDM adhesives use proper materials for proper adhesion. This procedure is used for proper adhesion and for proper adhesion, the necessary materials were used in the original testing were very close.

It is recommended that additional testing procedures and testing equipment be considered for complete validation of the system. It is recommended that the specifications for PUF adhesives be expanded to include the long term performance testing. Additional testing should be designed to evaluate the effects of varying applied temperature to levels that are affected by the system in which it is directly in place, and to determine the long term performance of the system.

Appended for public review, distribution is authorized.

90 08 29 012

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FOREWORD

This work was performed by the Engineering and Materials Division (EM) of the U.S. Army Construction Engineering Research Laboratory (USACERL) for the U.S. Army Engineering and Housing Support Center (USAESHC) under Project 4A7/27151/AT41, "Military Facilities Engineering Technology", Task A, "Facilities Planning and Design", Work Unit DA "Improved and New Roofing for Military Construction" The Technical Monitor during the majority of this research was David R. Smith. The current Technical Monitor for this work unit is Mike Smith (CH/SC-PB-5).

Appreciation is expressed to the personnel at Fort Benning and Lewis for taking samples from the test rooves, to Mr. Bernard V. Jones and Mr. Vernon L. Kuenzi of the U.S. Bureau of Reclamation for performing the mechanical and physical tests on the material samples, and to Mr. Brian K. Young for coordinating and analyzing the recorded data. Dr. Robert Quiumbe is Chief of USACERL-EM. The Technical Editor was Glenn J. Weitzel, USACERL Information Management Office.

LTC R.J. Grobert, Jr. is Commander of USACERL and Lt. R. Stoffer is Director.
# REPORT DOCUMENTATION PAGE

## SF 298

### 1. REPORT TITLE
Long Term Field Test Results of Experimental EPDM and PON Roofing

### 2. AUTHORS
Bailey, David H.; Polk, Stuart D.; Rosenfield, Myer J.

### 3. REPORT DATE
April 90

### 4. FUNDING AGENCY

#### a. PROGRAM ELEMENT NUMBER

#### b. PROJECT NUMBER

#### c. TASK NUMBER

### 5. WORK UNIT NUMBER

### 6. SPONSORING OFFICER NAME AND OFFICE ADDRESS

### 7. DEPARTMENT OF THE ARMED FORCES NUMBER

### 8. DISTRIBUTION STATEMENT

#### a. DISTRIBUTION STATEMENT A

### 9. SECURITY CLASSIFICATION OF:  

#### a. REPORT

#### b. ABSTRACT

#### c. THIS PAGE

### 10. SUBJECT TERMS
EPDM  
PON

### 11. CLASSIFICATION CODE

### 12. DISTRIBUTION STATEMENT
Approved for public release; distribution is unlimited.

### 13. ABSTRACT

**Experimental multi-sensor system:** The EPDM and PON materials were tested in a field setting during 1990 and 1991 in Fort Bragg, NC. The results demonstrate the potential of the materials. Field testing revealed that the EPDM and PON were superior to the fielded materials. EPDM materials provided satisfactory, long-term performance. Aging is directly related to the EPDM and PON. Current repair techniques for EPDM are satisfactory when properly installed. The service life of the EPDM and PON should give satisfactory results if repairs are properly made and the asset is properly maintained or the original coating is properly applied.

**Material:** It is recommended that material testing be used to develop the procedures for repair and maintenance of the materials. The test materials should be designed to include supplemental systems. The testing should be conducted to determine the ability of the materials to bond to the substrate and the ability to bear the weight of the structure.

### 14. NUMBER OF PAGES

### 15. PRICE CODE

### 16. DISTRIBUTION STATEMENT

#### a. DOD DISTRIBUTION CODE

#### b. NAICS CODE

#### c. NAICS CODE

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**H. NUMBER OF ITEMS:**

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**PROBLEM DOCUMENTS**

- DISTRIBUTION STATEMENTS
- LACK OF
- INCONGRUENCY RDP VS COVER/TITLE PAGES
- MISSING PAGES
- ILLEGIBLE PAGES

### DTIC CONVERSATION RECORD

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</table>

**PERSON CALLING**

Rec'd 8/9/90

**OFFICE/COMPANY AND LOCATION**

**REASON FOR CALL**

- DOCUMENT IDENTIFICATION
- DOCUMENT ORDER
- GENERAL INFORMATION
- REFUSAL TO OTHER VENUES OF INFORMATION
- OTHER

**ACTION TAKEN**

- DOCUMENT IDENTIFIED
- DOCUMENTS NO RECORD IN DATABASE
- DOCUMENT STATUS IDENTIFIED
- DOCUMENTS IDENTIFIED
- DOCUMENTS ORDERED
- NEW USER REGISTRATION REGISTRATION KIT
- OTHER
- RETURNED TO

**REMARKS**

8/10/90 - Called Library at Aberdeen, talked to Dorothy Engers. She gave phone number of 3 who worked on this report:

- James Flaherty - 9/291-5105
- Patsy Patterson - 8/186-5115
- Kenneth Dick - 9/199-5652

8/10/90 - Called Flaherty at 1:15 - No answer

8/13/90 - Called Patterson at 8:00 - Last Callback. He called back later. Suggested calling Ray Adler at 8/784-6216

8/13/90 - Called Ken Adler at 8:15 - No answer

8/14/90 - Called Ken Adler at 12:30. Last callback. When he returned call, he suggested Ron Doss at 8/784-5015

8/14/90 - Called Ron Doss at 12:40 - Busy.

8/15/90 - Called Ron Doss at 8:05. He also supported "user's view" - only time that view up to date.

8/16/90 - Called Daniel Osterloh. He said he would check and call back

**NAME OF PERSON RECEIVING MAKING CALL**

See next page
LOAN DOCUMENTS

- COPY IS NOT OBTAINABLE FOR PROCESSING AND RETENTION BY DTIC

- FORM 70A ALLOWS SELECTION SECTION TO PUT ITS MARKINGS AND CODES ON DOCUMENTS FOR PIPELINE PROCESSING

- DOCUMENT IS RETURNED TO CONTRIBUTOR BY SELECTION SECTION

- SAME FORM PRINTED ON A DIFFERENT COLOR STOCK WITH "NONPRINT DOCUMENT" LABELS WILL BE USED TO PROCESS NONPRINT DOCUMENTS
Collection Development:
Report Acquisition/Selection (Cont'd)

- Benefits:
  - Complete collection
  - More reliable results
  - Fewer information gaps
  - Greater breadth and scope of coverage

Point of Contact: [redacted]
(703) 274-4408
1. **CASI ACQUISITIONS**

   **Overview and Policy**

   The acquisition policies/practices followed by CASI are based on the following documents. These documents define the rationale behind the practices.

   NASA Management Instruction 2220.5D - *NASA Scientific and Technical Information*

   NASA STI Handbook 2200.2 - *NASA Scientific and Technical Information Handbook - Documentation, Approval, and Dissemination*

   NASA-SP-7065 (89N15779) - *The NASA Scientific and Technical Information System...It's Scope and Coverage*

   Statement of Work (Contract NASw-4584)

   **Technical Directives:**

   TD 91-064 Processing of Documents for NASA Centers  
   TD 91-nnn NASA Center Acquisitions Initiative  
   TD 91-113 R&DCS (K-File) Processing Study  
   Other Technical Directives

   **Sources of technical reports include:**

   NASA  
   Non-NASA Domestic  
   Foreign

   The **Acquisitions Expert Committee** (Program Manager - Allan Kuhn) is made up of experts from:

   NASA Headquarters  
   NASA Centers  
   CASI
National Level Exchange Feedback

Organizations:

- Canada (Canada Institute for Scientific and Technical Information)
- Australia (Australian Defense Information Services)
- Israel (Israel Space Agency)
- Japan (National Space Development Agency of Japan)

Communication:

- Points-of-Contact
- Letters
- FAX
- Memorandums
- Telephone Calls
Dear Mr. Streekst,

Enclosed are the following documents for despatch 1/92:
85127 - analytic primary plus 38 analytic secondaries.
The total number of documents is 39.
This package also contains a diskette with the ASCII file, RNA1A10.WMS, a printout of the data, photocopies and microfiches of the documents, and forms 901.

We draw CASI attention to the following:

Forms 901 for the primary and some secondaries contain references to new corporate sources, as follow:
Primary:
(1) CASA - RI/SME, Tel-Aviv Chapter
P.O. Box 50432,
Tel-Aviv 65500, Israel.
(2) ITIM - The Israel Society for CAD/CAM

Secondaries:
ans no. 5: MABAT - Israel Aircraft Industries,
Yahud, Israel
ans nos. 6, 24: Edith Ohri,
Industrial Management Consultant,
Tel-Aviv, Israel.
ans nos. 9, 14: INESC, IST,
Aptdo. 10105,
1017 Lisboa, Portugal.
ans no. 10: IMS/Valid International,
Slough, Berks, U.K.
ans no. 12: SIFU - Elektronik,
Box 4012,
S-10261, Stockholm, Sweden.
ans nos. 18, 19: I.B.M. Israel Scientific Center,
Technion City, Haifa, Israel.
ans no. 22: National Semiconductor, (I.C.) Ltd,
P.O. Box no. 3007
Herzliya B, 46204, Israel.
2. **PROACTIVE ACQUISITIONS ACTIVITY**

- **Domestic Exchange Partners**

Over the course of several years, CASI has established several long-term agreements with other Agencies. Receipts from these agencies is automatic, therefore minimal follow-up is needed. The major ones are:

- **DTIC** - We receive an average of two magnetic tapes monthly and also microfiche and some hard copies.

- **DOE** - We receive an average of four magnetic tapes monthly and also microfiche.

- **NTIS** - Abstracts are selected from the GRA&I Index twice monthly.

- **FAA** - We are on automatic distribution for hard copies of all technical reports and notes.

- **CPIA** - We are on automatic distribution for all CPIA technical publications (with exception of some manuals).

- **GAO** - Within the last year, automatic distribution has been established for all reports with NASA involvement.

- **NSF** - Recently established automatic distribution for all publications.

**GOALS:** To continue to monitor receipts in these areas. Where profiles can be established, we intend to do so.

- **NASA Center Interface**

Most NASA reports are routinely received from NASA Headquarters and the field installations. This includes all NASA Report Series (i.e., TM, CP, CR, SP,...). Some current procedures being utilized to improve coverage:

- **RECON Research** - Searching the Database looking for 'gaps' in Report Number Series and requesting these from the Centers.

- **Acquisition Directory** - A directory is maintained with points of contact for each Facility. At present it contains about one hundred and fifty NASA and one hundred and fifty Non-NASA names.
Quality Control - Any document received with pages missing or poor reproducibility requires interacting with Center to obtain a better copy. Most respond positively.

Reference Request - Whenever a NASA document is requested by a user, all effort is made to try to obtain this document. We may call, write or FAX request to Center. These numbers are reported in the Monthly Operations Report.

Onsite Contractors - On-Site Contractors sometimes produce technical reports that are not "NASA-numbered" reports. Efforts are made to acquire these and establish automatic distribution. (i.e. RIACS, ICOMP, ICASE, NSSDC).

Standard Request Form - A standard form letter is being designed so that we will be consistent when interacting with Center personnel.

GOALS: To begin using the Standard Request Form. To make visits to a few NASA installations, officially establish and improve the Acquisitions Network.

- Non-NASA Organizational Interface

As stated, we have as many NASA as non-NASA contacts. The difference between these and exchange partners is due to the fact that some agencies do not have a formal distribution list and therefore agree to send us reports as we request them. Some that have worked well are:

NAS - We received newsletters announcing recent releases.

OTA - We also received announcement information.

NIAR - This institute contacted CASI in reference to requirements for submitted technical reports. They now send us reports periodically.

RAND - Sends a list of publications available regularly.

Note that all these reports are received gratis (No charge).

GOALS: To continue to follow new leads in this area.
Contracts and Grants

Presently a great amount of research is being done in this area. The file collection at CASI has over 31,000 R&D contracts and grants. Approximately 30% of those input never receive reports. On a regular basis, reports are requested from those outstanding. The response at present is minimal.

The objectives of the current studies are to: 1) Establish a better network between STIP, CASI, and Procurement, 2) Receive data electronically from Procurement for more timely and accurate information, and 3) Establish a good point of contact at each NASA center who will be responsible for seeing that CASI obtains all reports.

Once these objectives are accomplished, CASI should then be able to submit a deficiency report to JTT, as necessary showing where improvements are still needed.

Miscellaneous Acquisition Tools

To keep abreast of new topics of research in the STI community, various search tools are useful:

References and Bibliographies are searched.

Newsletters, Brochures, and Announcements are read.

User Request are followed-up and new leads taken.

Statistics:

Receipts and Requests for the Past Three Years

<table>
<thead>
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<th></th>
<th>1989</th>
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<th>1991</th>
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<tr>
<td>Requests</td>
<td>1176</td>
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<td>1364</td>
<td>1178</td>
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<tr>
<td>Receipts</td>
<td>908</td>
<td>620</td>
<td>1015</td>
<td>848</td>
</tr>
</tbody>
</table>

You can see from the above that Acquisitions has averaged a 72% response rate from all requests. These items have all been proactively acquired. As we respond to the needs of the Centers and NASA database users, we anticipate the numbers will continue to rise.
METHODS OF INSURING NASA/CASI RECEIPT OF FINAL TECHNICAL REPORT

0 Enforcement of Contract Clause "REPORTS OF WORK (HW 52.227-91)

0 Ensure that technical/contractual counterparts at Field Centers are incorporating similar contract clause in their contracts

0 Pursue through HP establishing a NASA-wide clause similar to HW’s "REPORTS OF WORK" clause

0 Emphasis during Post-Award Orientation discussions with Contractor(s)

0 Establish "tickler" file system to remind contractor one month prior to contract expiration

0 Emphasize need as part of Close-Out Procedure
   -- Including withholding of Final Payment until receipt of Final Report

0 CASI Representative should notify cognizant Contracting Officer if report hasn’t been received after reasonable time
REPORTS OF WORK (HW 52.227-91) (Apr 1989)

(a) Monthly Progress Reports. The Contractor shall submit separate monthly progress reports of all work accomplished during each month of contract performance. Reports shall be in narrative form and brief and informal in content. Monthly reports shall be submitted in six (6) copies. Monthly reports shall include:

(1) A quantitative description of overall progress.

(2) An indication of any current problems which may impede performance and proposed corrective action.

(3) A discussion of the work to be performed during the next monthly reporting period.

(b) Quarterly Progress Reports. The Contractor shall submit separate quarterly reports of all work accomplished during each three-month period of contract performance. In addition to factual data, these reports shall include a separate analysis section which interprets the results obtained, recommends further action, and relates occurrences to the ultimate objectives of the contract work. Sufficient diagrams, sketches, curves, photographs, and drawings shall be included to convey the intended meaning. Quarterly reports shall be submitted in six copies.

(c) Final Report. The Contractor shall submit a final report which documents and summarizes the results of the entire contract work, including recommendations and conclusions based on the experience, and results obtained. The final report shall include tables, graphs, diagrams, curves, sketches, photographs, and drawings in sufficient detail to comprehensively explain the results achieved under the contract. Unless otherwise directed by the Contracting Office, three (3) copies of the final report must be submitted.

(d) Report Documentation Page. The contractor shall include a completed Documentation Page (NASA Form 1626) as the final page of each report submitted in accordance with subdivisions (A) through (C) above.
(e) Distribution. The monthly and quarterly progress reports and the final report shall be distributed as follows:

<table>
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<th>No. of Copies Reproducible and 2 copies</th>
<th>Addressee</th>
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<tr>
<td>One</td>
<td>NASA Scientific &amp; Technical Information Facility</td>
<td>P.O. Box 8757 B/W Int’l Airport Baltimore, MD 21240</td>
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<tr>
<td>One</td>
<td>NASA HQ/Acq. Division</td>
<td>Code HW NASA Headquarters Washington, DC 20546</td>
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<td>____</td>
<td>NASA HQ/Technical Representative</td>
<td>(see Block 11 of SF 26)</td>
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</table>
3. **DOCUMENT EVALUATION**

- **Scope and Coverage**

  **History:**

  Working guide for individuals who scan published and report literature for documents to be added to the NASA Database.

  First publication in March 1970 contained thirty-four Categories.


  Third publication in December 1988 contained previous seventy-five Categories and new Category 29.

  Used by AIAA, CASI, and NASA Centers for all documents except progress reports receiving bibliographic control only.

  Author assigns Subject Category to NASA Formal documents which appears on Report Documentation Page (RDP).

  Document Evaluator assigns Subject Categories to non-NASA documents and NASA documents without preassigned Subject Category.

  **Purpose:**

  Subject Categories are used to identify the content of the document and to establish location in STAR and IAA Journals.

  Provides a means for determining the interests of subscribers and the eleven distribution divisions determine microfiche sent to subscribers.

  **Updating:**

  New additions are added to expand Scope Notes when encountered in document processing for incorporation into next revision.

  Sources of new subjects are NASA Authorization Hearings, NASA Newsletters, Long Range Plans, RTOPs, and brochures.
Layout:

Typical presentation:

Category 02, Aerodynamics

Scope Note
Definition
Degrees of NASA Interest:
  Exhaustive
  Selective
  Negative
Expanded Scope Notes

o NASA Program Office Needs

Letter from Lewis Center concerning categories for:

Ground Based Propulsion
Diesel Propulsion
Aircraft Propulsion
Spacecraft Propulsion
Mechanics of Materials
Intermetallic Materials

Subject Category 29, Materials Processing, was added after ten years of deliberation.

Subject Categories have been deliberately organized with gaps in the numbers for addition of new Categories.

CASI will comply with incorporating new Subject Categories to Scope and Coverage if a need is substantiated and with NASA Headquarters concurrence.

o Domestic Exchange Profiles

Three Government Agencies provide majority on non-NASA material on automatic distribution:

DTIC - two magnetic tapes per month
DOE - four magnetic tapes per month
NTIS - two journals and corresponding microfiche per month

Approximately fifty percent DTIC, thirty percent DOE, and less than one percent NTIS items are selected for the NASA Database.
Status:

DTIC - Efforts are underway to statistically analyze Subject Terms and Corporate Sources selected by CASI from DTIC Tapes. Another area for consideration is use of MAI.

DOE - Documentation prepared identifying Subject Categories desired with assurance that DOE will create a profile.

NTIS - Negotiations underway to create a 'sales tape' which will contain Subjects identified from NTIS Subject Category guides.
<table>
<thead>
<tr>
<th>AERONAUTICS A</th>
<th>62 COMPUTER SYSTEMS</th>
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<tbody>
<tr>
<td>01 AERONAUTICS (GENERAL)</td>
<td>63 CYBERNETICS</td>
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<tr>
<td>02 AERODYNAMICS AND FLIGHT MECHANICS</td>
<td>64 NUMERICAL ANALYSIS</td>
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<tr>
<td>03 AIR TRANSPORTATION AND SAFETY</td>
<td>65 STATISTICS AND PROBABILITY</td>
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<td>04 AIRCRAFT COMMUNICATIONS AND NAVIGATION</td>
<td>66 SYSTEMS ANALYSIS</td>
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<tr>
<td>05 AIRCRAFT DESIGN, TESTING, AND PERFORMANCE</td>
<td>67 THEORETICAL MATHEMATICS</td>
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<td>06 AIRCRAFT INSTRUMENTATION</td>
<td>PHYSICS H</td>
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<td>07 AIRCRAFT PROPULSION AND POWER</td>
<td>70 PHYSICS (GENERAL)</td>
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<tr>
<td>08 AIRCRAFT STABILITY AND CONTROL</td>
<td>71 ACOUSTICS</td>
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<tr>
<td>09 RESEARCH AND SUPPORT FACILITIES (AIR) - AIRFIELDS</td>
<td>72 ATOMIC AND MOLECULAR PHYSICS</td>
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<td>ASTRONAUTICS B</td>
<td>73 NUCLEAR &amp; HIGH ENERGY PHYSICS</td>
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<td>76 SOLID-STATE PHYSICS</td>
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<td>SOCIAL SCIENCES I</td>
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<tr>
<td>17 SPACECRAFT COMMUNICATIONS, COMMAND, AND TRACKING</td>
<td>80 SOCIAL SCIENCES (GENERAL)</td>
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<tr>
<td>18 SPACECRAFT DESIGN, TESTING, AND PERFORMANCE</td>
<td>81 ADMINISTRATION &amp; MANAGEMENT</td>
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<td>85 URBAN TECHNOLOGY AND TRANSPORTATION (TECH, UTILIZ.)</td>
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<tr>
<td>24 COMPOSITE MATERIALS (LAMINATES)</td>
<td>SPACE SCIENCES J</td>
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<tr>
<td>25 INORGANIC AND PHYSICAL CHEMISTRY</td>
<td>88 SPACE SCIENCES (GENERAL)</td>
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<td>27 NONMETALLIC MATERIALS</td>
<td>90 ASTRONPHYSICS</td>
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<td>28 PROPPELLANTS AND FUELS (EXPLOSIVES)</td>
<td>91 LUNAR &amp; PLANETARY EXPLORATION (METEORS)</td>
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<td>29 MATERIALS PROCESSING</td>
<td>92 SOLAR PHYSICS (SOLAR WIND)</td>
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<td>ENGINEERING D</td>
<td>93 SPACE RADIATION</td>
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<td>99 GENERAL</td>
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<tr>
<td>32 COMMUNICATIONS</td>
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</table>
Aerodynamics

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery. For related information see also Fluid Mechanics and Heat Transfer (pages 69-71).

Definition

Aerodynamics - The science that deals with the motion of air and other gaseous fluids and with the forces acting on bodies when the bodies move through such fluids or when such fluids move against or around the bodies. NASA Thesaurus, Volume 3: Definitions. Washington, DC: National Aeronautics and Space Administration, 1988. NASA SP-7064.

NASA Interest

Exhaustive Interest: All information dealing with the effects of relative motion on the flow of air or other gases and vapors, at any velocity, over aircraft, air cushion vehicles, land transportation vehicles, spacecraft, launch vehicles, missiles, and their components; over geometric shapes of models used in laboratory and wind tunnel tests, e.g., cones, plates, shells, spheres, and cylinders; internal flow in channels, ducts, and turbomachines; forces acting on bodies in aerodynamic flow, including aerodynamic lift and drag.

Selective Interest: Aerodynamics of ground support equipment for aerospace research, results of aerodynamic testing for these effects, or the aerodynamic effects of surface structures on weather or environment.

Negative Interest: Aerodynamics of surface structures, ships, and bridges.

Input Subjects of Specific Interest

• Aerodynamic derivatives
• Aerodynamic flow fields
• Aerodynamic heating
• Aerodynamic noise (airframe generated)
• Aerodynamic studies of skin friction
• Aerodynamic wakes
• Aerodynamics of:
  Airfoils
  Bodies
  Canards
  Combinations
  Control surfaces
  Diffusers
  Exits
  Launch vehicles (for specific launch vehicles see Launch Vehicles and Space Vehicles (pages 29-30))
  Propellers
  Protuberances (antennas, braces, external stores, fairings, landing gear, and struts)
  Reentry vehicles (for specific reentry vehicles see Launch Vehicles and Space Vehicles (pages 29-30))
INTERNATIONAL ENERGY

Subject Categories and Scope

1990
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<td>Miscellaneous Solar Applications</td>
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<td>Biosynthesis and Photochemical Processes</td>
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Open Literature Scope and Coverage in the NASA STI Program

Dave Purdy
AIAA
NASA STIIP
Jan 1992

Acquisitions Approach

Published literature requires an active approach, not the purchasing activity that many expect.

Emphasize:
- Quality selection
- Unique materials
- AIAA position
- Worldwide network

Methodology
- Literature surveillance
- Exchange
- Review copies
- Member input and assistance

AIAA Position Used to NASA STI Advantage

- AIAA publications contributed
  - 5% of the literature
  - AIAA publishes international conferences
- Exchanges
- Review
  - NASA and AIAA reputation as quality aerospace publisher
- Members as authors
- Technical committee connection

Presented by: D Purdy
Cost Pressures

- 16% rise in costs for 1992
- J Combustion S&T >1000% in 5 yrs
- No budget increase 1992

Keeping Tabs on a Changing World

- Soviet literature working group
- Pacific Rim Initiative

Literature Surveillance

- Publishers catalogs
- Ads
- Journal citations
- Unpublished lists
- Irregular events
- NASA supplied manuscripts
- Authors
Handouts for: STI COORDINATING COUNCIL
Open Literature Scope & Coverage in the NASA STI Program

SCOPE - a living thing

- Balancing act
- Some areas explode
- International growth
- User needs constantly monitored
- NASA STI feedback

Continuous Improvement

- Electronic Input
  IEEE has contributed to productivity increase
  AIAA journal input next
  Large commercial publisher interested
- Scanning
- Exchanges - updating contacts
- Acquisition automation frees time and enables more analysis

Presented by: D Purdy