



**NATIONAL SECURITY AND
NATIONAL
COMPETITIVENESS: OPEN
SOURCE SOLUTIONS
NASA REQUIREMENTS
AND CAPABILITIES**

First Annual Open Source Symposium

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Importance of Access to Foreign R&D

- **Foreign competitors are increasingly challenging U.S. leadership in critical technologies**
- **Budget pressures have increased necessity for international cooperative science projects**
- **It is critical to know what potential partners or competitors really have to offer from their technology base**



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The NASA STI Program Information Acquisition and Management

- **Provide the widest practicable and appropriate dissemination of information concerning its activities and the results thereof**

- **Develop a knowledge base of foreign R&D intelligence to contribute to**
 - **International cooperation in science and technology**

 - **R&D results from abroad as input to domestic program objectives**



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Today's Relevant Economic and Social Conditions

- **The U.S. high technology industries have lost world market share in most areas**
- **American productivity has been surpassed by many other industrialized nations**
- **The aerospace industry continues as the leading positive contributor to the U.S. balance of trade**
- **This industry is in the midst of major changes and significantly more challenging competition**
- **"With mounting anxiety, U.S. commercial aircraft builders have been looking over their shoulder as foreign competitors erode their traditional lead in the global aviation market."**



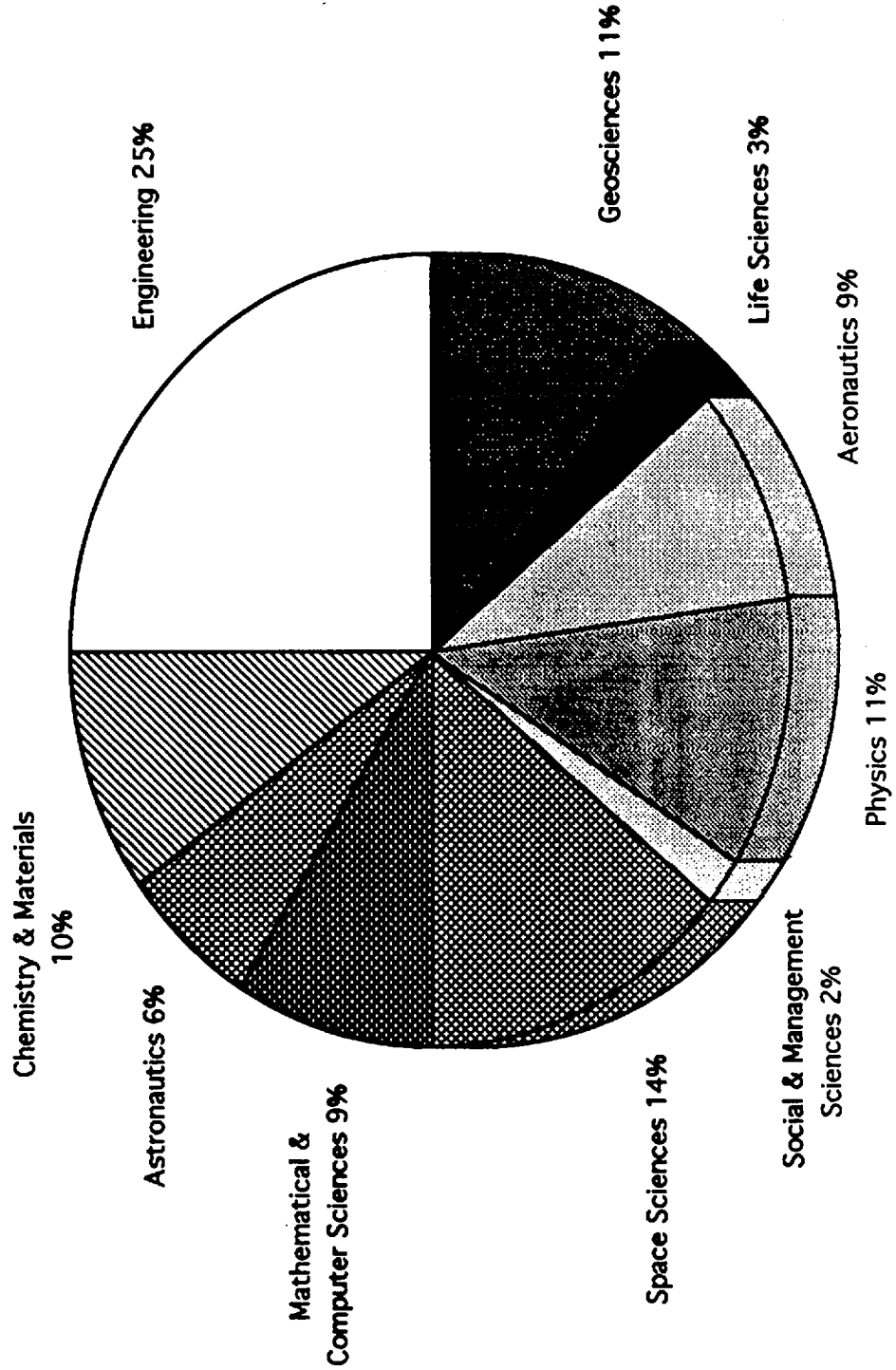
NASA De Facto International Aerospace Database

- **Database contains over 2.3 million summaries of worldwide research**
- **Journals, technical reports, conference proceedings, books, etc.**
- **Subject scope is aerospace science and technology and other subjects related to NASA's mission**
- **Input from 60 international organizations annually**
- **15% in non-English languages**

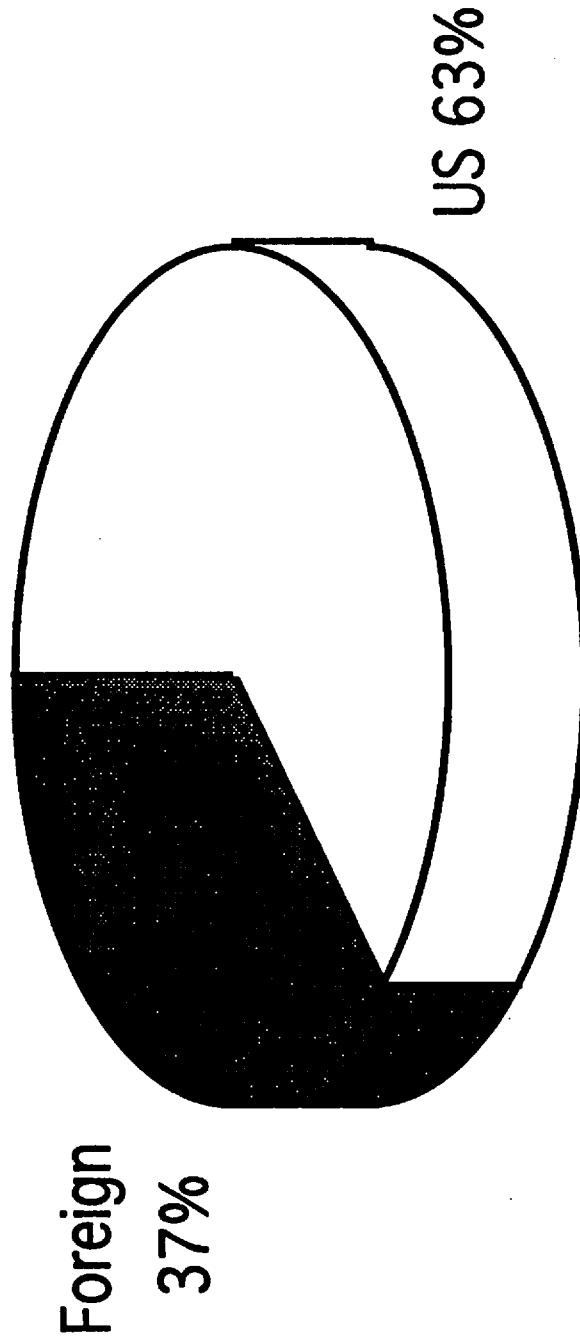


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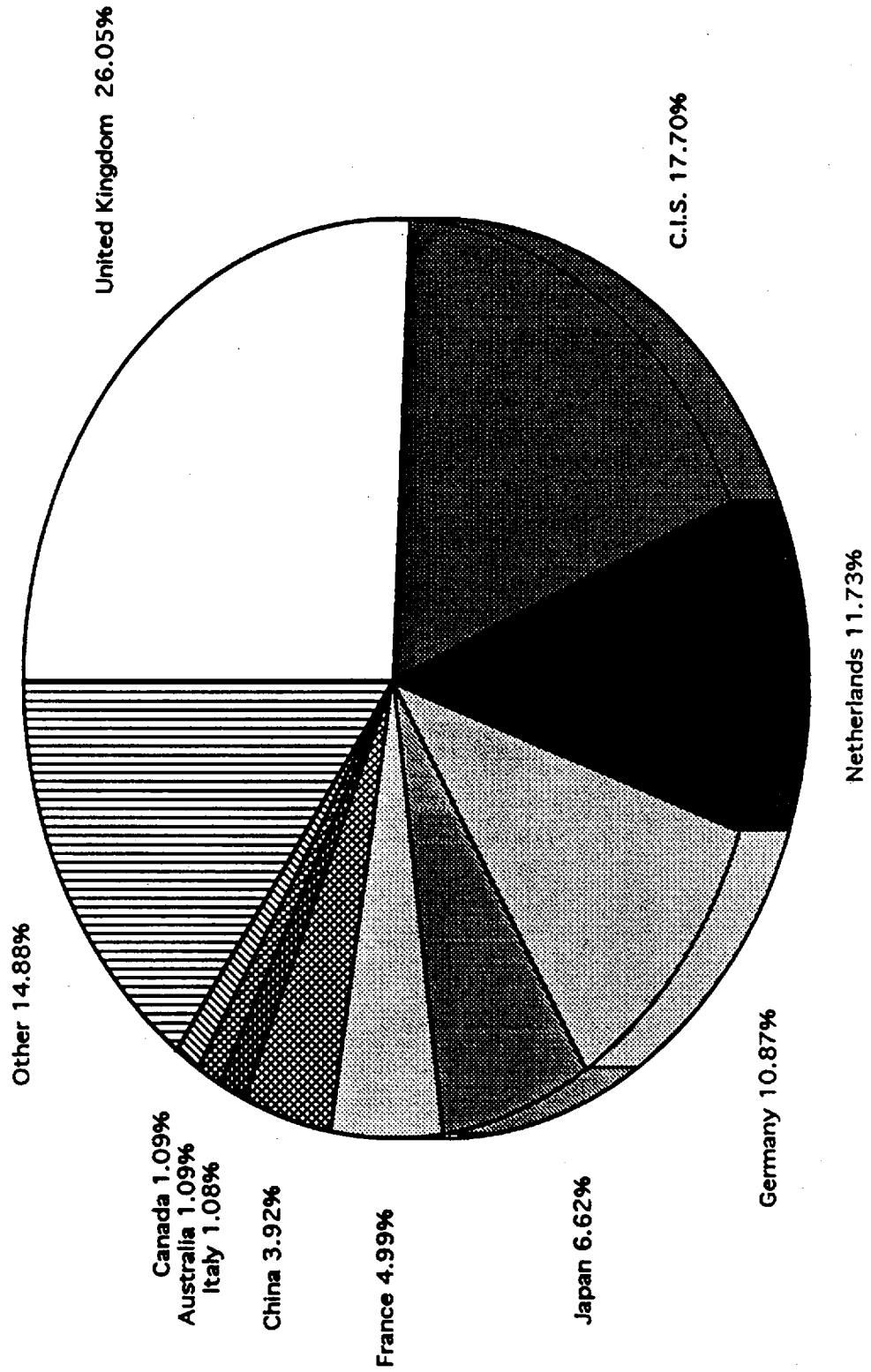
Subjects 1991



US vs. Foreign Input 1991



Top Foreign Countries - 1991



Major Sources

- **NASA funded R&D results**
- **International exchanges of information**
- **Purchase of information and documentation analysis**



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Models for International Exchange

- **Nation to nation agreements**
- **Tripartite agreements - NASA, ESA, ESA member organizations**
- **Bilateral agreements with specific institutions**



Key Coordinating Groups

- **NATO Advisory Group on Aerospace Research and Development/Technical Information Panel (AGARD/TIP)**
- **Commerce, Energy, NASA, National Library of Medicine, Defense Information Managers (CENDI)**
- **International Council of Scientific Unions/International Council on Scientific and Technical Information (ICSU/ICSTI) and Committee on Data (CODATA)**
- **U.S. Japan Committee on STI**



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Major New Impacts on the Way of Doing Business

- **STI Council foreign acquisitions focus**
- **Aggressive international information collection**
 - **European Aerospace Database being built by ESA**
 - **German national database (DELURA) by FIZ Karlsruhe**
- **Changing political environment opened opportunities for the STI and open source intelligence communities to cooperate**
- **STI program technology infrastructure modernization**
- **Budget constraints**



Significant NASA STI Responses Relevant to Symposium Theme

- **Two interagency foreign acquisitions workshops**
- **Working with international partners more cooperatively and more aggressively**
- **Targeted areas for interagency cooperation**
- **Working closely with the Air Force FASTC program**



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Expectations for the Future in the Open Source Area

- **Change in the composition of the NASA Aerospace Database**
- **NAD 1962 to 1990 was 27% foreign**
- **1991 - 37% foreign**

Information Technologies

- **Print products, microforms, and electronic information systems.**
- **The pace of technology development and change increasing more rapidly.**
- **Profoundly changed both user expectations and producers methods.**
- **Only fifteen years since introduction of the personal computer has**
- **Shifting paradigm with the telecommunications and networking revolution.**



NASA Modernization Program

- **Short term - low cost upgrades**
- **Long term - multimedia, global "information center without walls"**
- **Streamlining access to sources of STI by using advanced computer networking**
- **Creating and disseminating information in various electronic media including optical disks, video and full text**



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***The STI Community has Many Interests
in Common with the Open Source
Intelligence Community***

- **Issues of national security and national competitiveness become increasingly intertwined**
- **Discussion and closer cooperation**
- **This meeting is an excellent step in this process**

FIRST INTERNATIONAL SYMPOSIUM: NATIONAL SECURITY & NATIONAL COMPETITIVENESS: OPEN SOURCE SOLUTIONS Proceedings, Volume II - Link Page

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