



National Aeronautics and
Space Administration

THE NASA COMMERCIAL DEVELOPMENT OF SPACE PROGRAM

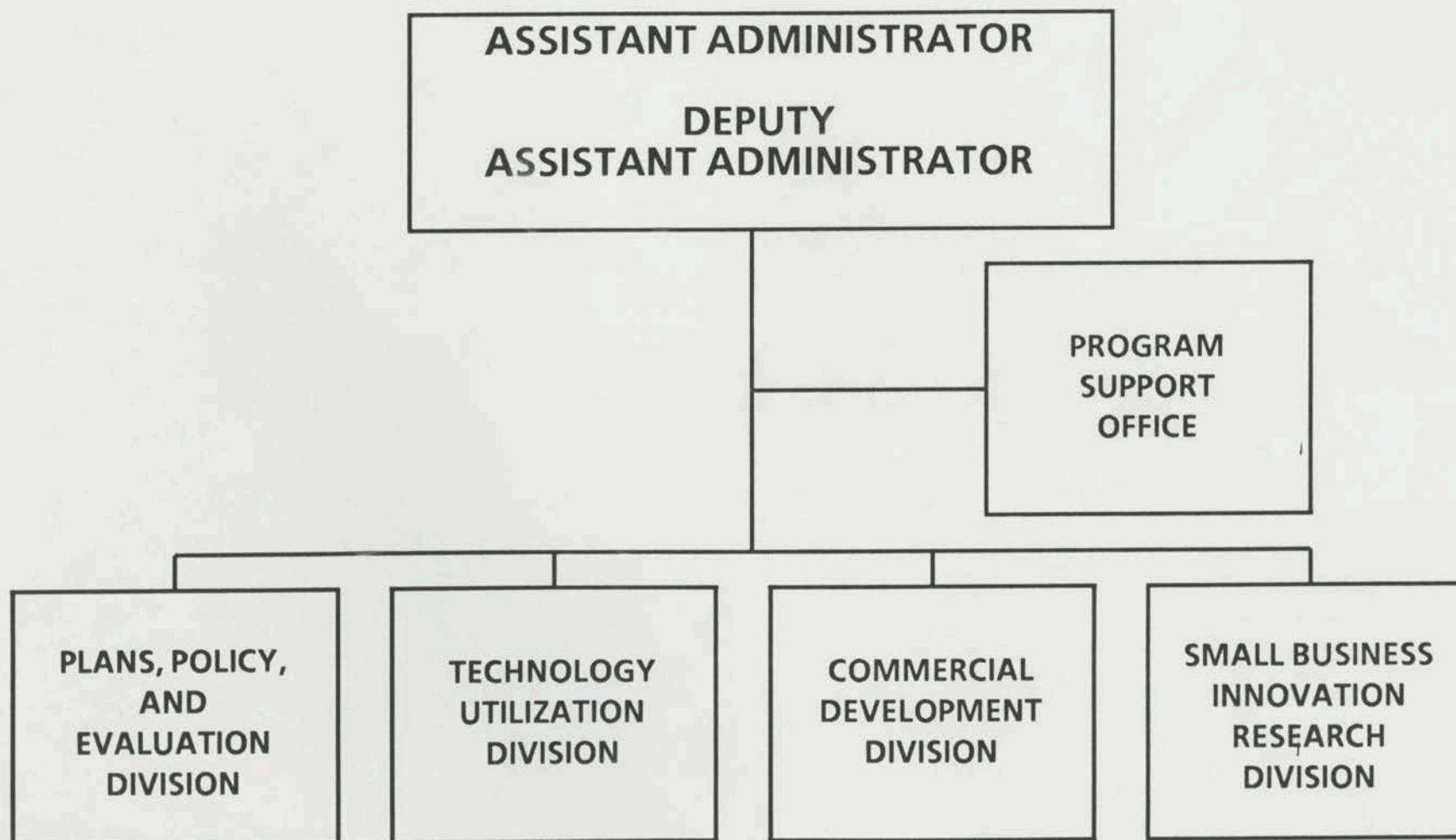
**PRESENTATION TO
CONGRESSIONAL STAFF**

**JAMES T. ROSE
ASSISTANT ADMINISTRATOR
OFFICE OF COMMERCIAL PROGRAMS**

FEBRUARY 8, 1989



OFFICE OF COMMERCIAL PROGRAMS ORGANIZATION





EXECUTIVE AND LEGISLATIVE BRANCH PRONOUNCEMENTS IN SUPPORT OF COMMERCIAL SPACE

"We will soon implement a number of executive initiatives, develop proposals to ease regulatory constraints, and with NASA's help, promote private sector investment in space."

State of the Union Address, 1984

"In the zero gravity of space, we could manufacture in 30 days life saving medicines it would take 30 years to make on Earth. We can make crystals of exceptional purity to produce super computers, creating jobs, technologies and medical breakthroughs beyond anything we ever dreamed possible."

State of the Union Address, 1985

"The Congress declares that the general welfare of the United States requires that the National Aeronautics and Space Administration seek and encourage to the maximum extent possible, the fullest commercial use of space."

Public Law 98-361, 1984

**MAINTAINING AND ENHANCING
U.S. LEADERSHIP IN
COMMERCIAL SPACE ACTIVITIES**

CP- 4003
03-14-88 --TEM



PRIVATIZATION/COMMERCIALIZATION ACTIVITIES

TYPE	KEY ISSUES	KEY ACTIONS
INFORMATION SYSTEMS <ul style="list-style-type: none"> • COMMUNICATIONS • REMOTE SENSING 	<ul style="list-style-type: none"> • NASA/INDUSTRY TECHNOLOGY ADVANCEMENTS • LICENSING ON FOREIGN VEHICLES 	<ul style="list-style-type: none"> • COMMUNICATION SATELLITE - CENTERS FOR THE COMMERCIAL DEVELOPMENT OF SPACE (CCDS) • SPONSOR MORE ACTIVE REMOTE SENSING PROGRAM
TRANSPORTATION	<ul style="list-style-type: none"> • INSURANCE • INTERNATIONAL COMPETITION • SOUNDING ROCKETS - LACK OF NONGOVERNMENT CUSTOMERS 	<ul style="list-style-type: none"> • IDENTIFICATION OF OPPORTUNITIES • FACILITATE • EXPENDABLE LAUNCH VEHICLE AGREEMENTS • SOUNDING ROCKET PROGRAM
INFRASTRUCTURE	<ul style="list-style-type: none"> • IDENTIFYING OPPORTUNITIES • CONSISTENT POLICIES • PROCUREMENT POLICY WHICH FACILITATES CONTRACTS • DEVELOPING COMMERCIAL SPECIFICATIONS • NASA "CULTURE CHANGE" 	<ul style="list-style-type: none"> • COMMERCIALIZATION POLICY AND CRITERIA • DEVELOPMENT OF FINANCIAL ANALYSIS CAPABILITY
NEW PRODUCTS AND SERVICES	<ul style="list-style-type: none"> • CONSISTENT, ASSURED FUTURE SPACE TRANSPORTATION • BROAD, FLEXIBLE PRICING POLICIES • INSURANCE • INTERNATIONAL COMPETITION • NEED BETTER MICROGRAVITY DATA BASE 	<ul style="list-style-type: none"> • DEVELOP FLIGHT PLAN TO MEET REQUIREMENTS • PRICING STUDIES FROM USERS' PERSPECTIVE • MANAGEMENT STRUCTURE TO BRING CCDS'S INTO MAINSTREAM • STREAMLINE AGREEMENT PROCESS • MICROGRAVITY PROGRAM
FULL COMMERCIALIZATION	<ul style="list-style-type: none"> • DEFINING FULL COMMERCIALIZATION GOALS • PLANNING FOR REALIZATION OF GOALS • INTERNATIONAL COMPETITION 	<ul style="list-style-type: none"> • STRATEGIC PLANNING • COMMERCIAL PROGRAMS ADVISORY COMMITTEE • NEW OPPORTUNITIES FOR SMALL BUSINESS



CENTERS FOR THE COMMERCIAL DEVELOPMENT OF SPACE (CCDS)

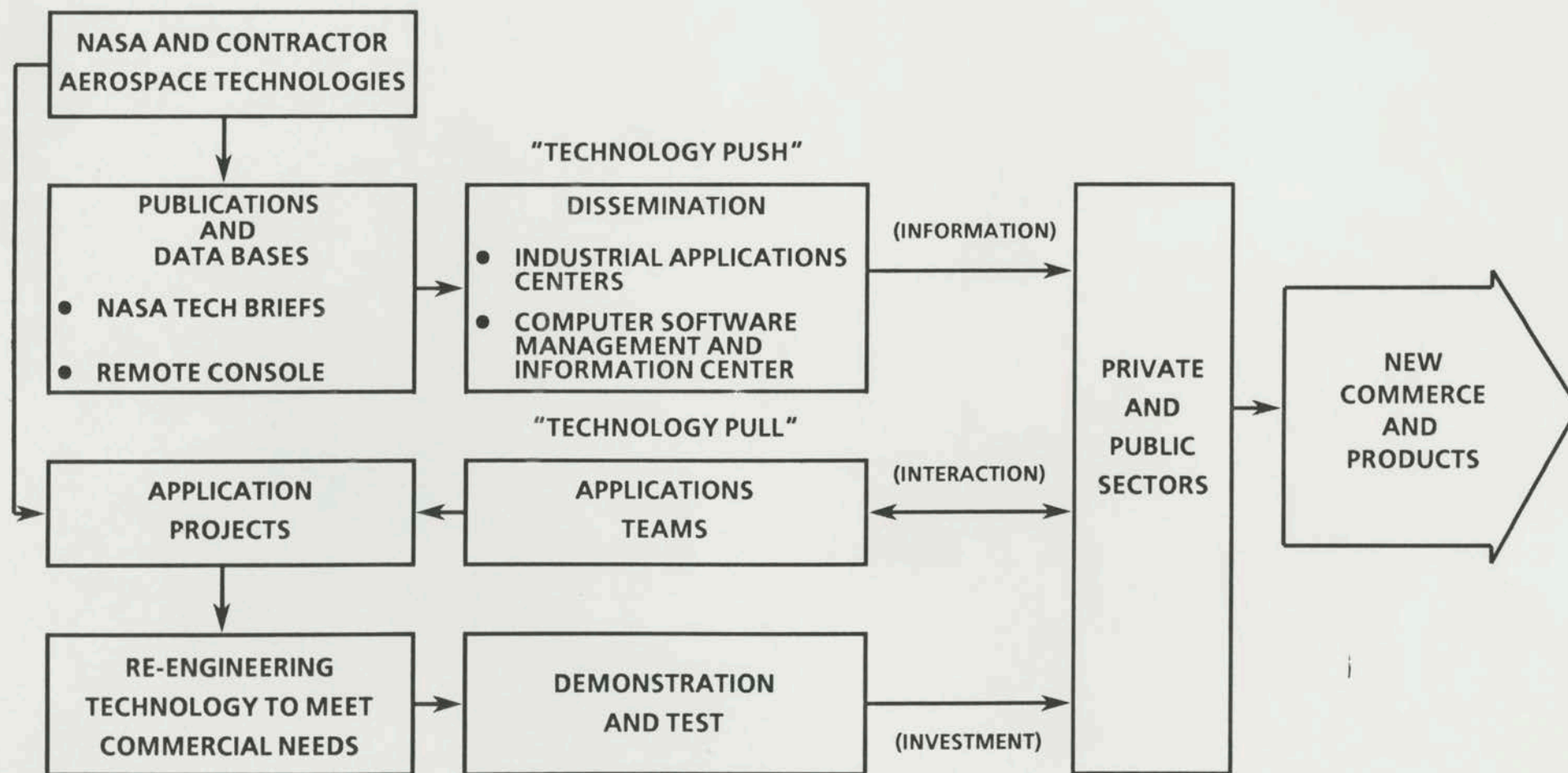
TECHNICAL DISCIPLINE	# INVOLVED	CCDS'S
1. AUTOMATION AND ROBOTICS	2	<ul style="list-style-type: none"> • UNIV. OF WISCONSIN, MADISON, WI • ENVIRON. RESEARCH INST. OF MICHIGAN, ANN ARBOR, MI
2. LIFE SCIENCES	3	<ul style="list-style-type: none"> • UNIV. OF COLORADO, BOULDER, CO • PENN STATE UNIV., UNIVERSITY PARK, PA • UNIV. OF ALABAMA, BIRMINGHAM, AL
3. MATERIALS PROCESSING IN SPACE (MPS)	5	<ul style="list-style-type: none"> • BATTELLE, COLUMBUS, OH • UNIV. OF ALABAMA, HUNTSVILLE, AL • VANDERBILT UNIV., NASHVILLE, TN • CLARKSON UNIV., POTSDAM, NY • UNIV. OF HOUSTON, HOUSTON, TX
4. REMOTE SENSING	2	<ul style="list-style-type: none"> • INST. FOR TECH. DEVELOP., STENNIS SPACE CENTER, MS • OHIO STATE, COLUMBUS, OH
5. SPACE POWER	2	<ul style="list-style-type: none"> • AUBURN UNIV., AUBURN, AL • TEXAS A&M UNIV., COLLEGE STATION, TX
6. SPACE PROPULSION	1	<ul style="list-style-type: none"> • UNIV. OF TENNESSEE SPACE INSTITUTE, TULLAHOMA, TN
7. SPACE STRUCTURES AND MATERIALS	1	<ul style="list-style-type: none"> • CASE WESTERN RESERVE UNIV., CLEVELAND, OH

SUMMARY: THERE ARE CURRENTLY SEVEN TECHNOLOGY DISCIPLINES REPRESENTED IN THE CCDS PROGRAM. THE MAJORITY OF THE CCDS'S ARE CONDUCTING RESEARCH IN MPS.

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07/07/88 -- TEM

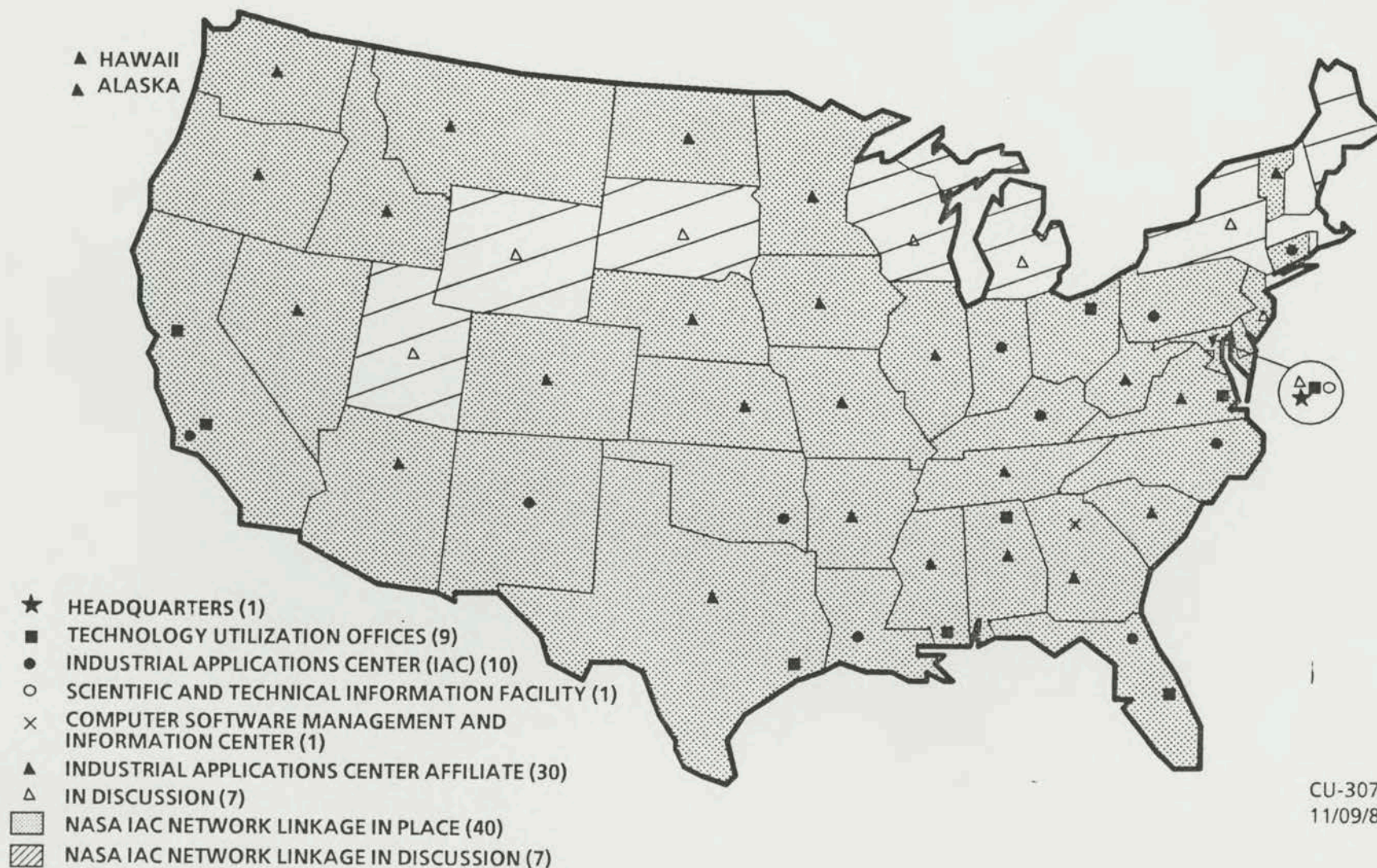


TECHNOLOGY TRANSFER PROCESS



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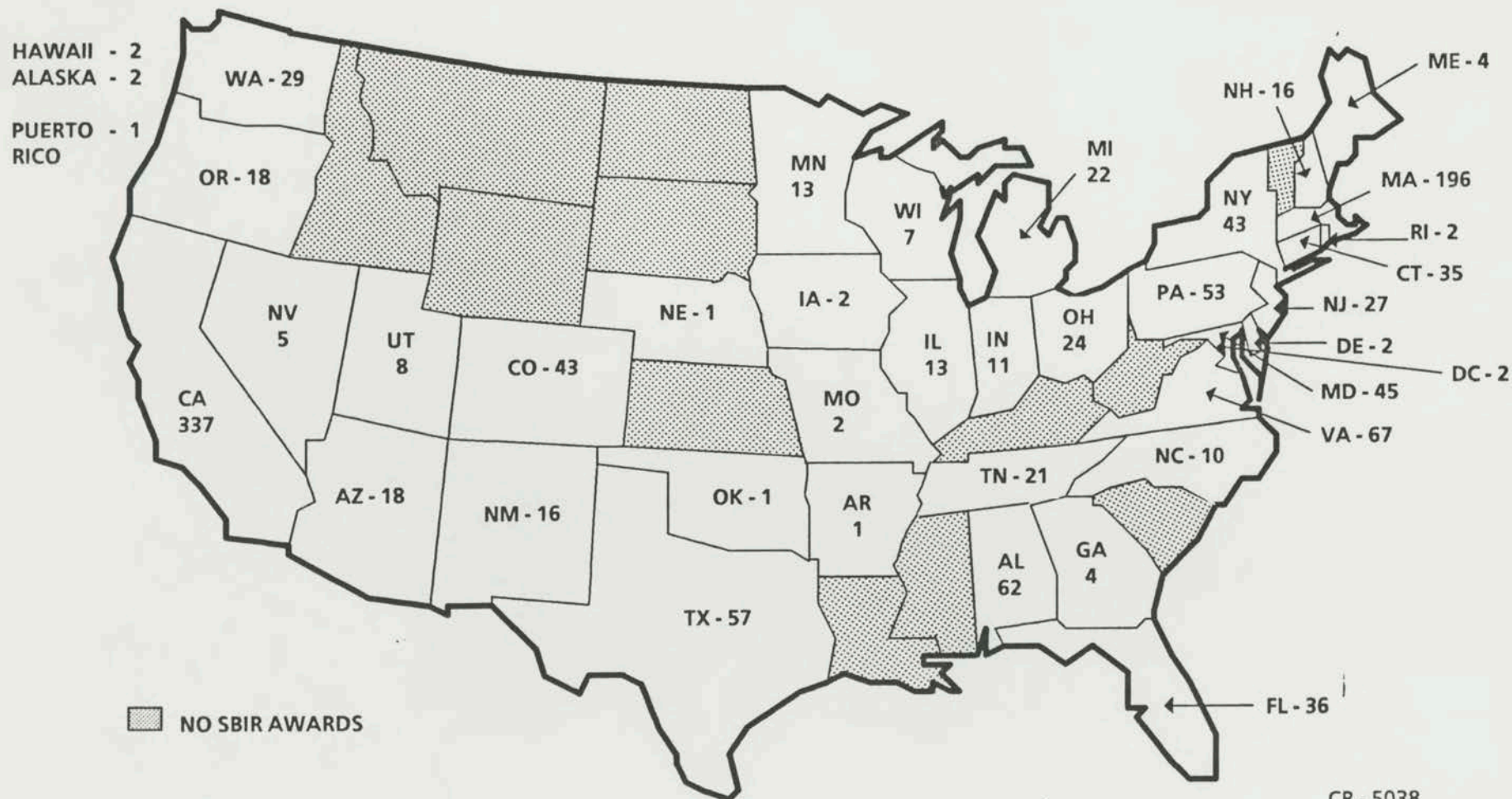
NASA INDUSTRIAL APPLICATIONS AFFILIATE PROGRAM



CU-3072
11/09/88 -- TEM

NASA
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COMMERCIAL
PROGRAMS

SMALL BUSINESS INNOVATION RESEARCH AWARDS 1983 THROUGH 1987



CR - 5038
11/18/88 -- TEM



SMALL BUSINESS INNOVATION RESEARCH (SBIR)

	<u>FY 1983</u>	<u>FY 1984</u>	<u>FY 1985</u>	<u>FY 1986</u>	<u>FY 1987</u>	<u>FY 1988</u>
SBIR % R&D	0.20	0.60	1.00	1.25	1.25	1.25
NASA FUNDS (\$M)	4.90	13.20	24.20	32.60	38.90	40.40

NASA PROGRAM STATISTICS

PHASE I: PROPOSALS	977	919	1,164	1,628	1,811	2,379
SELECTIONS	102	128	151	172	206	228
PHASE II: PROPOSALS	92	113	129	154	176	
SELECTIONS	57	71	85	85	90*	90*
PROGRAM YEAR AWARDS (\$M)	28.7	39.1	47.3	49.0	TBD	

* ESTIMATE



OFFICE OF COMMERCIAL PROGRAMS (OCP) ACCOMPLISHMENTS - 1988

- INITIATED STRATEGIC PLAN FOR COMMERCIAL DEVELOPMENT OF SPACE
- ESTABLISHED COMMERCIAL PROGRAMS ADVISORY GROUP
- SIGNED 6 NEW NASA/INDUSTRY AGREEMENTS (20 AGREEMENTS CURRENTLY ACTIVE)
 - SIGNED FIRST AGREEMENT FOR COMMERCIAL USE OF SHUTTLE EXTERNAL TANKS (ET)
- SOLICITED EXPRESSIONS OF INTEREST FOR COMMERCIAL USE OF SHUTTLE ET'S
- FLEW 2 SUCCESSFUL PAYLOADS ABOARD STS-26
- ASSISTED 7 NEW CENTERS FOR THE COMMERCIAL DEVELOPMENT OF SPACE (CCDS)
- IDENTIFIED 58 CCDS PAYLOADS FOR REPETITIVE MATERIALS PROCESSING TESTING
- ESTABLISHED THE CCDS OPERATIONS MANAGEMENT COUNCIL



OFFICE OF COMMERCIAL PROGRAMS (OCP) ACCOMPLISHMENTS - 1988 (CONTINUED)

- DEVELOPED COMMERCIAL SPACE INFRASTRUCTURE POLICY
- INITIATED COMMERCIAL SOUNDING ROCKET OPPORTUNITY TO SUPPORT MICROGRAVITY ACTIVITIES OF 3 CENTERS FOR THE COMMERCIAL DEVELOPMENT OF SPACE
- ESTABLISHED "SPINOFF HALL OF FAME"
- EXPANDED TECHNOLOGY TRANSFER NETWORK TO VIRTUALLY EVERY STATE IN THE UNION
- FINALIZING AGREEMENT WITH SMALL BUSINESS ADMINISTRATION LINKING 570 SMALL BUSINESS DEVELOPMENT CENTERS, OVER 500 FEDERAL LABORATORY CONSORTIUM, AND NASA TECHNOLOGY UTILIZATION STRUCTURE
- SELECTED 227 PHASE I SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROPOSALS FROM 2,379 SUBMITTED
- TOTAL NUMBER OF PHASE II SBIR AWARDS EXPECTED TO EXCEED 90 FROM 180 PROPOSALS SUBMITTED