WORKING PANEL #4

TECHNOLOGY TRANSFER TO THE BROADER ECONOMY

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TRANSFER TO/FROM THE BROADER ECONOMY

SUBTOPIC A: HARVESTING COMMERCIALLY DEVELOPED TECHNOLOGIES FOR THE CIVIL SPACE MISSION:

- New paradigms for relationships
- Challenges to the "complex" and "primitive" procurement process

Rapporteur: Jim Morrison - BDM
TRANSFER TO/FROM THE BROADER ECONOMY

SUBTOPIC B: COMMERCIAL APPLICATION OF NASA/GOVT. (LABS) DEVELOPED CIVIL SPACE TECHNOLOGY

SIGNIFICANT ISSUE:
How to Measure Success?


TRANSFER TO/FROM THE BROADER ECONOMY

SUBTOPIC C: COMMERCIAL APPLICATIONS OF GOVT. FUNDED CIVIL SPACE TECHNOLOGY

SIGNIFICANT ISSUES:
- How to Measure Success?
- Contractor Involvement

RAPPORTEUR: Bob Clark - Natl. Media Lab.
"HARVESTING" COMMERCIALY DEVELOPED TECHNOLOGIES

OVERVIEW

A- NARROW VIEW - "HARVESTING" MEANS TECHNOLOGY IS ALREADY DEVELOPED (A PRODUCT)

B- BROADER VIEW - SOME GOVERNMENT DEVELOPMENT IS NEEDED TO MEET NASA APPLICATION

STATEMENT OF THE PROBLEM

A- ON THE GOVERNMENT SIDE:
- NEED AN OPEN DOOR
- NEED TO KNOW WHAT'S OUT THERE
- RFP IS A PRIMITIVE, POOR PROCESS FOR COMMERCIAL

B- ON THE COMMERCIAL SIDE:
- MANY COMPANIES DO NOT WANT GOV'T. BUSINESS
- MANY THAT DO – NEVER READ RFP'S

"HARVESTING" COMMERCIALY AVAILABLE TECHNOLOGIES

STATEMENT OF THE PROBLEM (CONT.)

TYPE OF PROBLEM DEPENDS ON TIME-FRAME INVOLVED:

ADVANCED TECHNOLOGY (PRE-PHASE A): THERE ARE PROCESSES TO DO THIS, SUCH AS RFP, JOINT PARTNERSHIPS, ETC.

DURING PHASES A, B, C: GOVERNMENT FOCUS CHANGES TO TECHNOLOGY NEEDED TO DO THE JOB (I.E., BEST TECHNOLOGY, LOWEST PRICE)

(THE LATER IN THE CYCLE THE COMMERCIAL SECTOR IS INVOLVED, THE LESS THE CHANCE OF A SUCCESSFUL TRANSFER.)
"HARVESTING" COMMERCIALLY AVAILABLE TECHNOLOGY

LESSONS LEARNED

- NEED TO SPACE QUALIFY COMMERCIAL PRODUCTS (MAY BE A ROLE FOR GOVERNMENT ASSISTANCE HERE)
- GOVERNMENT DEVELOPMENT CYCLE AND COMMERCIAL DEVELOPMENT CYCLE ARE WAY OUT OF SYNC.
- GOVERNMENT NOT AWARE OF COMMERCIAL STANDARDS.
- GOVERNMENT SPEC.S ARE NOT "REAL WORLD".
- GOVERNMENT HAS A PROCESS AND POLITICAL ORIENTATION; PRIVATE SECTOR HAS A PRODUCT AND ROI ORIENTATION.
- NASA DOES NOT HAVE THE RESOURCES IN TECHNOLOGY TRANSFER TO BE ABLE TO COPE WITH SUCCESS. PEOPLE ARE BEING TURNED OFF NOW BECAUSE OF NON-RESPONSIVE, NON-USER FRIENDLY SYSTEMS.

"HARVESTING" COMMERCIALLY DEVELOPED TECHNOLOGY

CURRENT PROGRAMS

- A GOVERNMENT PROCUREMENT SYSTEM IS IN PLACE (IT HAS PROBLEMS, BUT...)
- THE SYSTEM NEEDS TO BE MADE AS FLEXIBLE AS POSSIBLE
- THE COMMERCIAL SECTOR NEEDS TO BE EDUCATED ON HOW TO ENTER THE SYSTEM

SPECIFIC EXAMPLE:

- WORKSHOPS INVOLVING NASA CENTERS AND INDUSTRY TRADE ASSOCIATIONS HAVE BEEN FOUND TO BE VERY FRUITFUL
"HARVESTING" COMMERCIALY DEVELOPED TECHNOLOGY

NEW/INNOVATIVE APPROACHES

- NATIONAL INFORMATION DISPLAY LABORATORY (NITL) 
  (C/O DAVID SARNOFF RESEARCH CENTER - PRINCETON)
  AND
- NATIONAL (RECORDING) MEDIA LABORATORY (NML) 
  (C/O 3M, ST. PAUL, MN)
- THE SRI/DARPA "INNOVATION SEARCH" PROCESS
- THE SDI/MMC OPTICS INDUSTRY INITIATIVE

WHO SHOULD ACT?

- KEEP THE PRESSURE ON EVERYONE.
- MANAGEMENT NEEDS TO ACT AS IF THIS IS IMPORTANT
- THE RESOURCES NEED TO BE APPLIED TO MAKE IT IMPORTANT
- THE SYSTEM NEEDS TO BE MADE RESPONSIVE

THE PROCUREMENT SYSTEM: CAN IT BE MADE TO BE HALF-WAY BETWEEN CIA/DARPA/SDIO AND THE REST OF THE GOVERNMENT?

QUESTION: HOW CAN YOU GET THE "SUN SYSTEMS" OF THIS WORLD, WHICH DON'T READ RFP'S, INVOLVED?
REPORT FROM WORKING PANEL 4

TRANSFER WITH THE BROADER ECONOMY

SUB-TOPIC: TRANSFER FROM NASA TO THE BROADER ECONOMY

PROBLEMS:

* NASA should be pro-active in supporting NTTC and the nationwide technology transfer network.

* Measurement of success is necessary and needs to be built into a program or process.

* Industry is not aware for the most part that technology or Federal labs is accessible for a technology interchange.

* Make sure resources at Federal labs are such to handle industry inquiries.

* Civil space needs to be more visible and network more.

* General perception that NASA is singly focused on space.

* When developing technology on a broad base, get industry involved up front.
REPORT FROM WORKING PANEL 4

TRANSFER WITH THE BROADER ECONOMY

SUBTOPIC: TRANSFER FROM NASA TO THE BROADER ECONOMY

Suggestions/Lessons Learned:

* NASA has a good program already in place for doing technology transfer, including RTTCs, although NASA divisions and organizations could interact better among themselves.

* Because of changes in federal laws, licensing and other tech transfer mechanisms are making it better.

* NASA civil space and others should continue promoting the idea of tech transfer, explaining what it is, and communicating to industry that industry can participate.

* Technology transfer includes technical assistance problem solving, exchange of knowledge, and use of facilities, etc.

* Caution was expressed in putting the same for-profit motivators to non-profits or labs on tech transfer.

* NASA needs to develop a more pro-active program and let the public know that many technologies being used originated within NASA.

* Success cannot be measured totally based on licensing or flowback.
TRANSFER TO/FROM THE BROADER ECONOMY

COMMERCIAL APPLICATIONS OF GOVT. FUNDED CIVIL SPACE TECHNOLOGY

INSIGHT: WITH NO COMMERCIAL INTEREST, THERE CAN BE NO TRANSFER

ISSUES: AWARENESS

USER-FRIENDLY INTERACTIONS

MOTIVATION OF CONTRACTOR SUPPORT

SUPPORT TO SMALL VS. LARGE COMMERCIALIZATION EFFORTS

CURRENT SUCCESSES:

SUPPORTED INDUSTRY CONSORTIA SUCH AS NML, NIDL, the optics industry

ACTION: GOVT. DEFINITION OF WHICH INDUSTRIES

COMMITMENT TO FINANCIALLY SUPPORT TECH TRANSFER