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WORKING PANEL #4

TECHNOLOGY TRANSFER TO THE BROADER ECONOMY

GORDON DYER & ROBERT CLARK

TRANSFER TO/FROM THE BROADER ECONOMY

SUBTOPIC A: HARVESTING COMMERCIALY
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?

**RAPPORTEUR: ANN RYDALCH - IDAHO
NATL. RESEARCH LAB.**

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 TECHNOL-
OGY, LOWEST PRICE)**

**(THE LATER IN THE CYCLE THE COMMERCIAL SECTOR IS
INVOLVED, THE LESS THE CHANCE OF A SUCCESSFUL
TRANSFER.)**

**"HARVESTING" COMMERCIALY 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-RESPON-
SIVE, NON-USER FRIENDLY SYSTEMS.

**"HARVESTING" COMMERCIALY 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 (NIDL)
(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

**"HARVESTING" COMMERCIALY DEVELOPED
TECHNOLOGIES**

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**