

ENG Advisory Subcommittee on University-Industry Partnerships

Status Report to the ENG AdCom
Cherri Pancake

October 25, 2007

Participating in the Meeting

- Albert Johnson, Corning^{2,3}
- Wayne Johnson, Hewlett-Packard³
- Lesa Mitchell, Kauffman Foundation³
- Cherri Pancake, Oregon State University (Co-Chair)¹
- Richard Pearson, National Center for Manufacturing Sciences
- Karthik Ramani, Purdue University²
- Winslow Sargeant, Venture Investors LLC
- E. Jennings Taylor, Faraday Technology Inc (Co-Chair)^{1,2,3}

¹ - ENG AdCom

² - SBIR AdCom

³ - University/Industry Demonstration Project(UIDP), a standing committee of the National Academies Government University Industry Research Roundtable(GUIRR)

Meetings Convened

- May 17-18, 2007 in conjunction with the SBIR/STTR Grantees Conference in Kansas City, MO
 - Refined the charge and scope of the subcommittee
- August 20-21, 2007 at NSF
 - Reviewed background briefings on the various programs, primarily within the Engineering Directorate with industrial partnerships
 - Additional briefings on DARPA and NASA activities

University Industry Program Review/Agenda

- Roundtable Session I
 - Cost Sharing/Incentives Partnerships - Jean Feldman (BFA)
 - Cyberinfrastructure - Jose Munoz (OCI)
 - EHR - Wanda Ward (EHR)
 - DARPA - Mike Foster (CISE)
 - GOALI - Joe Hennessey (ENG)
 - NNIN - Larry Goldberg (ENG)
 - LPA Partnerships & Collaborations - Susan Mason (OLPA)
- ➔ Numerous university industry partnership activities are already in place!

University Industry Program Review/Agenda

- ROUNDTABLE SESSION II
 - STCs - Nat Pitts (OIA)
 - I/UCRCs - Alex Schwartzkopf (ENG)
 - ERCs - Lynn Preston (ENG)
 - NSECs - Bruce Kramer (ENG)
 - MRSECs - Maija Kukla (MPS)
 - PFI - Sarah Nerlove (ENG)
 - SBIR/STTR - Joe Hennessey (ENG)
 - NASA Mentor Protégé program- Dave Grove (NASA)
- ➔ Numerous university industry partnership activities are already in place!

Emerging Themes

1. Allow matching fund supplements to ENG grants for industrial partner co-investment
2. Increase role of small business in ENG grants to promote risk taking and technology/IP positioning for market insertion by large companies or venture capital backed startups
3. Educate faculty to understand and recognize market opportunities and give them the tools to exploit those opportunities
4. Get the word out to industry regarding the opportunity to partner with ENG grantees
5. Maintain NSF/ENG presence on the National Academies' UIDP
6. Look for opportunities to partner with other federal agencies and foundations with a similar mission

Recommendation 1

- Reassess the unintended consequences of eliminating cost-sharing incentives, as related to industry matching contributions
 - NSB-directed elimination of cost sharing was response to difficulties with university cost-sharing
 - Elimination of industry cost-sharing was unintended consequence
 - **Meanwhile...**
 - Small business grantees who obtain industry funds receive supplements to the existing grants.
 - Has been powerful incentive for industry participation - promotes partnering
- We suggest ... expand SBIR-style industry cost-sharing to other programs in ENG to promote university-industry partnerships.

Recommendation 2

- Facilitate and broker university-partnerships through education
 - Lack of understanding each other's perspectives is a barrier to partnering
 - E.g., industry often not aware of the leverage potential of SBIR supplements
 - In spite of considerable efforts in matchmaking (grantees conferences) and distribution of project descriptions
- We suggest ... educational initiatives to promote mutual (university/industry) understanding
 - Industrial Research Institute is an initial source of motivated participants

Recommendation 3

- Encourage wider adoption of best-practice partnering activities that already exist in ENG
 - SBIR matching-fund supplement for third party investment in grants
 - Supplements also incentivize industry to partners
 - SBIR encouragement of grantee participation in I/UCRCs and ERCs (pay part of membership)
 - Other programs' measures for assessing impact of innovative approaches
- We suggest ... ENG should establish methods to assess the effectiveness of programs in promoting university-industry partnerships
 - (Cherri's addition) Perhaps leverage new R&D tax incentives that are part of competitiveness initiative?

Recommendation 4

- Map degree of university-industry partnering across portfolio of current ENGR programs
 - Assess scope and magnitude of university-industry partnering
 - Identify gaps in current portfolio
- We suggest ... Use gaps as basis for future opportunities to formulate/modify programs to promote university-industry partnerships

Next Steps

- Follow-up meeting scheduled for November 29-30, 2007 at NSF
 - Conduct portfolio gap analysis
 - Formulate additional recommendations
- We solicit ENG Adcom guidance on future activities