Support for Academic Research at Cisco

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Academic Research and Technology Initiatives

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Cisco reloaded

- For twenty years, Cisco has been known for "research by acquisition"

- That's changing…

- New emphasis on developing ties with universities

- New VP for research and advanced development (Doug Comer) starts this summer

Why?

- Nourish the product line

- Be more visible to the talent pool

- Expand conduits for interaction

Modalities

- Direct interactions

- Cisco Applied R&D Program (CARD)

- University Research Program (URP)

- NRN research

- Research consortia & incubators

- Master research agreements

- … a developing strategy of university relations

Direct interactions

- Time line often 6 - 18 months

- Cisco engineers interact with their academic peers and colleagues, and ad hoc sponsored research agreements arise naturally

- Not controlled centrally, not coordinated, nor often even documented

CARD

- Time scale 18 - 36 months

- Contract between university and Cisco
  - Negotiated IPR

- Award amount not limited a priori

- May be initiated at any time, and may be multi-year

- Initiated by Cisco engineer as sponsor and collaborator (with VP concurrence)

- 50% cost-sharing required of sponsor in year 1

URP

- Time scale 3 - 5+ years

- 2 cohorts/yr - April, August

- $100k max award

- Unrestricted gifts, paid from Foundation
    - IP remains with PI/university
    - No indirect costs

- 1 year term - renewals not distinguished

- *Cisco Champion*: desirable before submission, prerequisite to peer review

NRN Research

- Time line tuned to that of associated NRN

- System-level rather than technology-focused

- Collaboration among networking and distributed systems researchers and NRN operators

- Experiments may run 'hot' - live network environments, real user traffic and applications

Consortia & incubators

- NSF I/UCRCs -

  CACC - NC State, Duke

  ConnectionOne - U. AZ, AZ State, U.HI, RPI

- TTC - Pitt, CMU, Penn State, state gov't

- Advantages -

  Influence choice of research projects

  IPR explicit

Disadvantages -

  Influence is diluted

  Loss of privacy

Master research agreements

- Terra incognita for Cisco

- Re-examine

    - Disposition of developed IP

    - Licensing and royalty terms

    - Patent and publication procedures

- Not all payoffs are equal

- New ideas are needed …

The Impact of Academic Research on Industrial Performance NAP (2003)

General Recommendation 2. Industries and universities should continue to explore mechanisms and pathways for bringing the benefits of academic research to industry, keeping in mind that what works well in one industry may not work well in another. Both partners should experiment with new approaches. (Emphasis added.)

Summary

- There's a new VP for R&AdvD

- New models of interaction with universities will augment existing ones

- There's a new climate for academic research at Cisco