Visualization Careers: Academia

Visualization/VAST Doctoral Colloquium Panel

Tamara Munzner, UBC

2 November 2006

My Perspective: Career History

- industry
  - ETA Systems (supercomputer company), intern, 86/87/88
  - SGI, part-time consultant, 96-98
- industrial lab
  - Microsoft Research, intern, 98
  - Compaq Systems Research Center, researcher, 00-02
- academia
  - Stanford, undergrad, 86-91
  - Stanford, grad, 95-00
  - Geometry Center (Minnesota), technical staff, 91-95
  - UBC, assistant professor, 02-now

Academic Freedom

- intellectual freedom to choose projects
- academia funding model
  - raise money by writing grants
  - you cover grad student salaries, travel, equip.
  - time required: constant, medium overhead
- can do project if convince anybody on planet to fund it
- free to publish, discuss, release code open-source, ...
- labs funding model
  - keep your job by justifying existence
  - time required: highly variable
    - minimal when company rich
    - arbitrarily high when company poor
- can't do project if killed by anybody in chain of command
- more secrecy, pressure to patent, ...

Academic Constraints

- crossing discipline boundaries
- academia
  - boundaries significant
    - hired into given department
    - judged by impact in specific field
    - often stay within forever, maybe switch once
    - very risky to switch before tenure
  - good base for longterm influence in field
- labs
  - easy/encouraged to move between fields
  - good base if motivation is do interesting new things

Scope

- academia: grad student
- lab
  - one or few hands-on projects at once
- academia: professor
  - many projects going simultaneously, as advisor
  - many non-research committments: teaching, service
  - unusual to do coding personally (alas...)

US vs. Canadian Universities

- again, funding models underlie differences
- US
  - grant overhead paid directly to department
    - institutional pressure for having large group
  - grantwriting odds: small chance of big payoff
- Canada
  - no direct overhead off federal grants
    - changing slowly, but less pressure for empire
  - grantwriting odds: medium chance of medium payoff
- degree program differences
  - US: direct to PhD
  - Canada: MS with thesis first

Visualization: Collaboration Approaches

- none/minimal
  - concentrate on algorithmics
- deep
  - establish persistent relationships in one or few domains
  - become near-expert yourself
- broad
  - establish shallower connections in many areas
  - easy to be opportunistic
- also, good way to cross between academia, labs, industry!