Globalization and Offshoring of Software

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Whoosh . . .

- 1992: The sound of the jobs being sucked away to Mexico.
- 2004: The sound of the jobs being sucked away to India.

Impact: Plumetting enrollments.

Mid 2004: ACM established a *Job Migration Task Force* to examine the impact of offshoring and outsourcing on IT employment.

Step 1: Assemble Task Force

June - December, 2004:

- Intended size: 15
- Actual size: 30

Why? Diversity!

- Academia, industry, computer scientists, economists, social scientists, international (Europe, India, Israel, Japan)
- Special effort: Risks experts, Europeans

Early Decisions

- Co-chairs: Mayadas+Vardi. Editor: Aspray
- Global perspective
- Secondary research
  - Rich website
  - Rich bibliography (Aspray)
- Focus on software (exclude hardware)

Process

Four Meetings:

- Chicago, October 2004: Task force only – agree on report structure and committees
- Washington, DC, December 2004: DC experts
- Palo Alto, March 2005: Silicon Valley experts
- New York, May 2005: Task force only – committee presentations

Report Structure

Chapters:

- Big picture
- Economics and data
- Country perspective
- Firm perspective
- Research
- Education
- Political issues

Post-meeting addition: Risks and Exposures

Prescriptive chapters: Education, Risks.

Report Production

- June 2005: Committees submit draft chapters
- September 2005: Edited chapters sent to to reviewers.
- October-November 2005: Chapters reviewed by co-chairs and finalized.
- December 2005 - January 2006: Overview and Executive Summary finalized.

Difficult chapters: Education, Risks (three versions!).

The Big Picture

- Data and voice communication costs driven to almost zero.
- WWW providing curricular material to anyone, anywhere, anytime.
- HW costs driven down relentlessly.
- SW interoperability standards pervasive: MDA, UML, CWM, CORBA.
- Free markets expanding dramatically.
- Labor "shippable" over a wire.

Take-Home Points

- Offshoring is just a symptom, the issue is globalization.
- We enabled it. Now we have to live with it.
- It's like winter; you cannot stop it, but you can dress warmly.
- It is easy to measure offshoring, but it is difficult to measure and explain job losses. Most published data are suspect.
- Employment and wage data show complete recovery from the dot-com and telecomm crashes. No discernible effect of offshoring.

- We do know that competition is globalizing and moving up the skill ladder. No reason for complacency.

- Offshoring is good for the world, but there are winners and losers. No reason for complacency.

Educational Response

Challenge: How do we educate our students to compete in a globalized software marketplace?