Initial Experience in Moving Key Academic Department Functions to Social Networking Sites

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Outline

- Institutional context
- Social/cultural context of technology choices
- Evolution of the technology choices
- Targeted department functions and actors
- Evolution of technical architectures used to support these functions
- Discussion and possible generalization
Objectives

● Share preliminary experience
● Start a dialog with other interested researchers
● Receive feedback
● Repeat
Institutional Context

- mid-size urban private university (15,000 students)
- two academic departments: computer science and history
- three core functions
  - course management
  - research and administrative collaboration
  - community engagement
Social Context

• Baby Boomers (born 1946-1964)
  ○ various types of print and broadcast media, mail, telephone
  ○ encountered the internet as adults

• Generation X (born 1965-1981)
  ○ widespread access to television during its formative
  ○ encountered mobile phones and the internet as young adults

• Generation Y (born 1982-1995)
  ○ born into the later stages of the PC era and the pre-broadband internet
  ○ embraced mobile phones and social networking as teenagers

• Generation Z (born 1996-present)
  ○ born into a world of mobile smart phones
  ○ connected through social networking
Social Context

Successive generations are increasingly willing to:

- adopt new technologies
- live more "public" private lives, much more
- share their personal data with others

Demographic considerations

- Generation Y: all current college students
- Generation Z: now entering college and will constitute the vast majority of users over the next ten years
Evolving Interaction

● Distant past: limited internet access
  ○ mostly read-only content: FTP, Gopher, WAIS
  ○ email and USENET

● Recent past: widespread internet access
  ○ rapid growth of web, some interactive sites
  ○ rapid growth of email for nonpublic interaction

● Present: widespread broadband access
  ○ web 2.0: user engagement, public APIs
  ○ social networking and cloud computing
Present Interaction Landscape

- general social networking: Facebook, Orkut
- specialized professional networking: LinkedIn, XING
- hosted conventional and lightweight blogs: Blogger, Tumblr
- microblogging sites: Twitter
- social bookmarking: Delicious, StumbleUpon
- web content management: Google Sites
- online document management and groupware: Google Docs, Zoho
Target Functions

- course management: see paper
- research (and administrative) collaboration
  1. knowledge gathering
  2. project planning/management
  3. collaborative writing and software development
  4. bibliography management
  5. formal publication
  6. other types of dissemination
- community engagement: see paper
Target Actors

- Faculty
- Staff
- Current students
- Prospective students
- Alumni
- External users: employers, faculty candidates, parents, etc.
Evolving Architecture Example: Research Collaboration

● Distant past: email, removable media, early VCS, phone, Unix talk

● Recent past: more modern VCS over SSH, IM

● Present:
  1. knowledge gathering: Google Sites wiki
  2. project planning/management: Basecamp
  3. collaborative writing and software development: hosted DVCS (BitBucket, GitHub), Google Docs
  4. bibliography management: CiteULike
  5. formal publication: WikiCFP, Twitter, LaTeX/LyX
  6. other types of dissemination (integrated): Tumblr, Disqus, Gravatar, Google Analytics
Conclusion

- Cloud-backed, integration-based approaches off to a good start, effective, continue to evolve
- Related work descriptive, focused on one technology, or non-integration-based (build from scratch)
- To understand how best to broaden participation in computing (e.g. NSF BPC program), further data is needed on social networking participation across other demographic aspects besides age:
  - gender
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Questions?