Communities as a first-class abstraction for information sharing

Alan Mislove†‡
James Stewart†
Peter Druschel†
Krishna P. Gummadi†

†MPI-SWS
‡Rice University

OSDI 2008 Work-in-Progress Session
Online social networks

• Popular way to connect, share content
  • Among most visited sites on Web
  • Users: MySpace (247 M), Facebook (120 M)

• But, all is not well...

• Increasing volume and variety of content leading to challenges
  • Privacy and access control
  • Relevance
Can communities help us?

- Communities are groups of densely connected users
  - Can offer a solution to this dilemma
- Members often
  - Share interest
  - Enjoy mutual trust
- In practice, can automatically detect communities [Phy.E’02, ICCT’03, PNAS’04]
  - Manual maintenance not necessary
Addressing privacy

- Today, access control limited to
  - (Subsets of) friends
  - Entire world
- Communities provide a natural middle ground
- Can enable sharing between groups of users
  - Beyond just friends
Addressing relevance

- Increasing amount and variety of content
- Search facilities return aggregated global opinion

- Communities represent users with shared interest
- Can naturally be leveraged to find relevant information
Using communities in PeerSpective

- PeerSpective is a social network-based web search tool
- Indexes browsed pages
- Web search collects results from Google and from friends

- Aggregate results by community
- Allows community-based sharing
- Find more relevant results
Questions?

PeerSpective information and downloads:

http://peerspective.mpi-sws.org