Social Network Portability

Fun with the Social Graph

http://bradfitz.com/social-graph-problem/

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Problem Statement

• more & more tools/sites need the Social Graph (e.g. dopplr.com)

• sick of inviting my friends
  • been there, done that.

• use my existing public data, yo.

• use the existing Social Graph!
What I Want

• my friends to follow me on all sites
  • on signup, tell me which friends are already on $NEW_SITE, and keep track of new friends joining over time
• let a thousand social networks bloom
  • no prob; each can do one thing well
• the world not forced to be FaceBook apps
Social Graph

- directed graph
- many edge types,
  - different strengths of claims
- many node types,
- many nodes are equivalent.
- some edges/nodes secret (but most public!)
Example

(of data that’s already out there on the web, today....)
Already working (1)... 

• given a node, find all equivalent nodes
  • for each node, followed “claim” & “is” edges out,
  • for each node, follow “is” edges in,
  • until set of nodes stops growing
Already working (2)...

• given a node, find equivalent nodes,
• find all aggregate friends on all services,
• expand friends’ equivalent nodes,
• tell you missing friendship edges on all overlapping services
  • “here’s 17 vox & 6 LJ friends you’re missing, but friends with on other services...”
brad (LJ) is 4caal d6f.. (sha l email) claim
claim

brad (LJ)

is

4caal d6f.. (sha l email)

is

bradfitz (Vox)
brad
(LJ)

is

bradfitz
(Vox)

is

4caa1d6f..
(sha1 email)

claim

brad
(my space)
Brad (LJ)

Bradfitz (Vox)

4caaa l d6f.. (sha l email)

Claim

Friend

Whitaker (LJ)
claim

brad (LJ)

bradfitz (Vox)

4caal d6f.. (sha1 email)

is

friend

is

is

whitaker (Vox)

whitaker (LJ)

87adbe.. (sha1 email)

whit692 (myspace)

claim
Data I have...

- All LJ nodes, edges (13M, 140M)
  - x 4 node types: username, lj username, sha1 email, lj userid
- All Vox nodes (100k/250k), edges
- Twitter, Pownce, Zooomr (incl. openid logins), more in talks
Next Steps

• Find co-hackers
• Build user-visible website
  • never use the word “graph” or other geek talk
• developer side w/ APIs
• spiders, firefox/IE extensions/bookmarklets,
• stats, alerts, bling, widgets (fun for non-geek users)
  • users => data => users => data
user-visible site
website flow

• bootstrap: login with “something” supporting OpenID

• LJ, Vox, AIM, Digg, Twitter, or custom openid server

• “Glue” node (internal userid, no username) is vivified, with “is” link setup:

  glue #1  is  brad (LJ)
claim/prove more accts

- brad@danga.com (email)
- 500033387 (facebook)
- bradfitz (myspace)
- bradfitz (twitter)
- brad (LJ)
- bradfitz (vox)

claim

glue #1

is
claim/prove more accts

- brad@danga.com (email)
- 500033387 (facebook)
- bradfitz (myspace)
- bradfitz (twitter)
- bradfitz (vox)
- brad (LJ)

(glue #1)
• on initial login, many “is” and “claim” links could be pre-filled from prior knowledge of “brad (LJ)” node’s relationships

• upgrade “claim” to “is” with:
  • openid, confirmation email, scrape (verify widget/HTML comment insertion), facebook auth, yahoo auth, google auth,