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

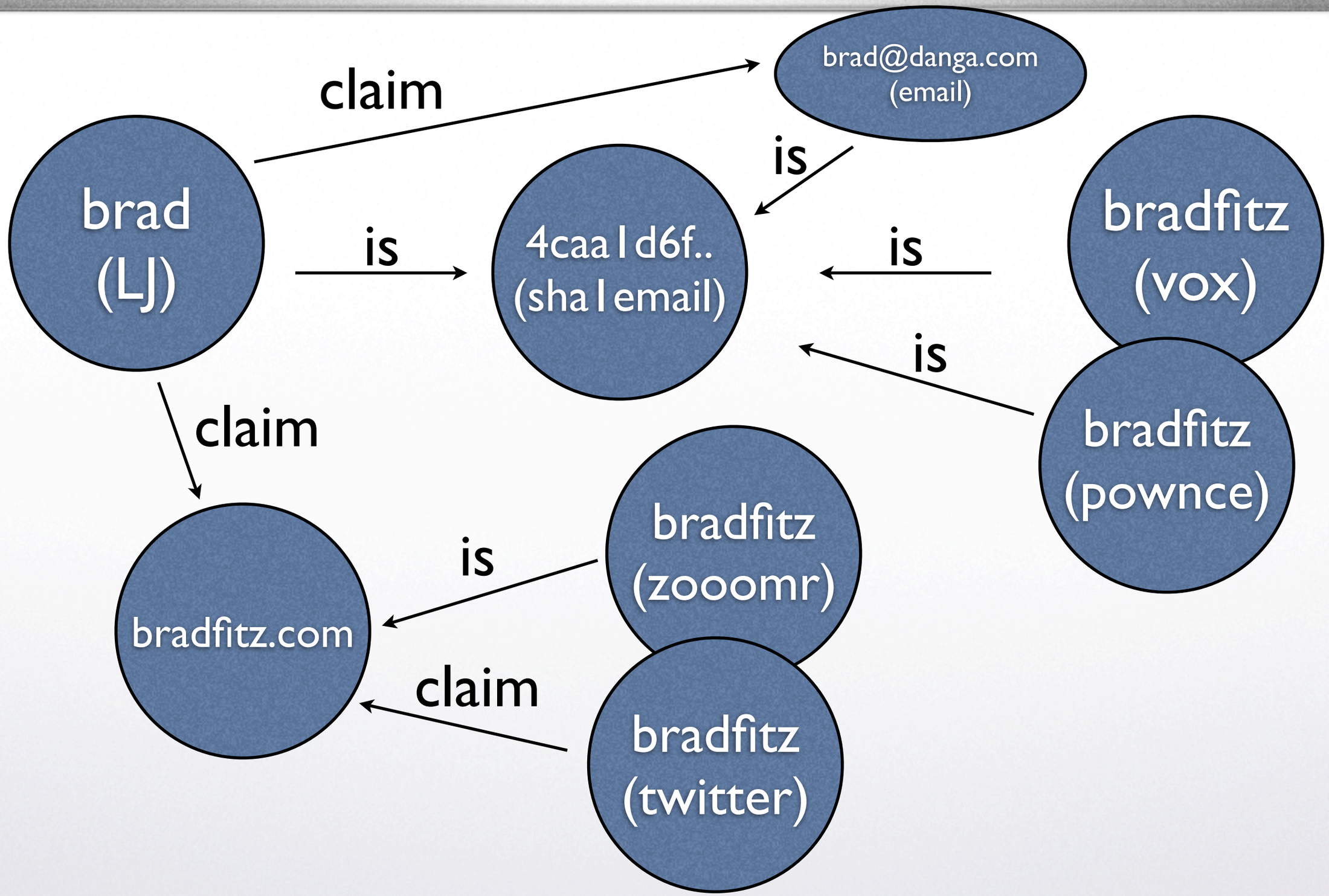
- my friends to follow me on all sites
  - on signup, tell me which friends are already on $NEW_SITE, and keep track of new friends joining over time
- let a thousand social networks bloom
  - no prob; each can do one thing well
- the world not forced to be FaceBook apps

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....)

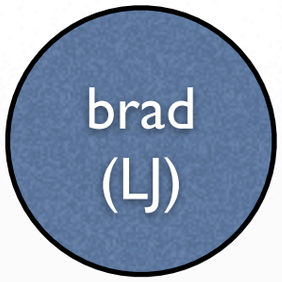

brad@danga.com
(email)
claim
is
brad
(LJ)
is
4caa1d6f..
(sha1 email)
is
bradfitz
(vox)
is
bradfitz
(pownce)
claim
bradfitz
(zooomr)
is
bradfitz.com
claim
bradfitz
(twitter)

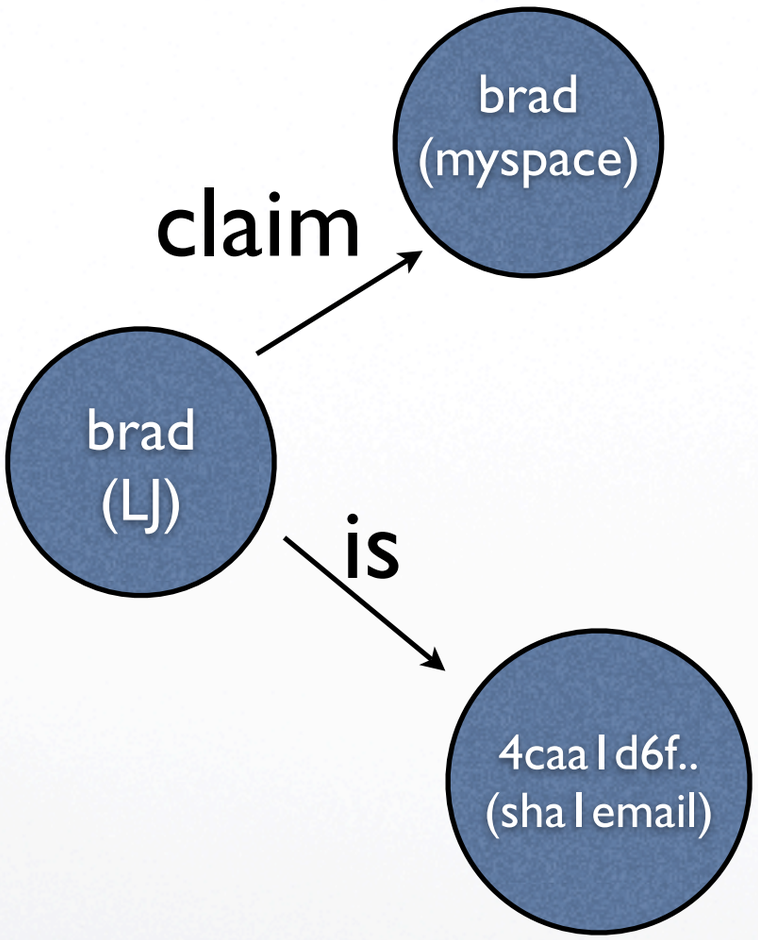
Already working (1)...

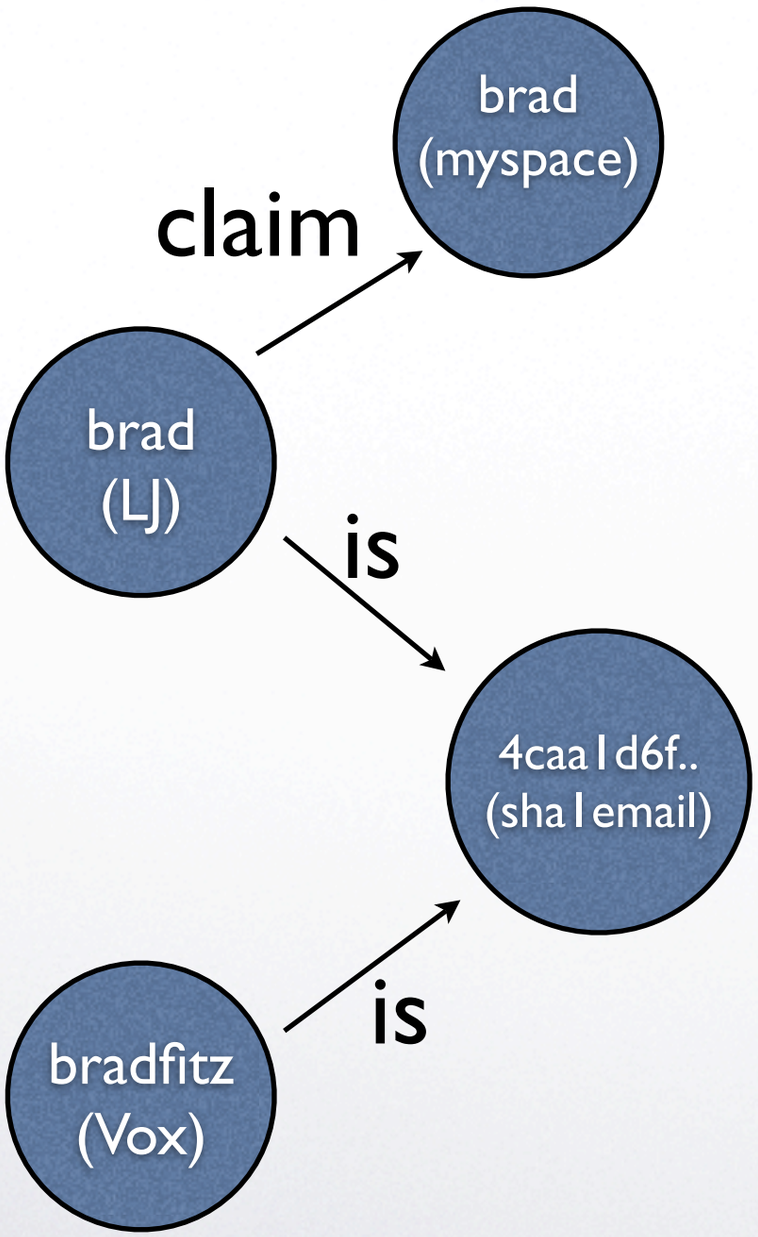
- given a node, find all equivalent nodes
  - for each node, followed "claim" & "is" edges out,
  - for each node, follow "is" edges in,
  - until set of nodes stops growing

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)


brad
(myspace)
claim
brad
(LJ)
is
4caa1d6f..
(sha1email)


brad
(myspace)
claim
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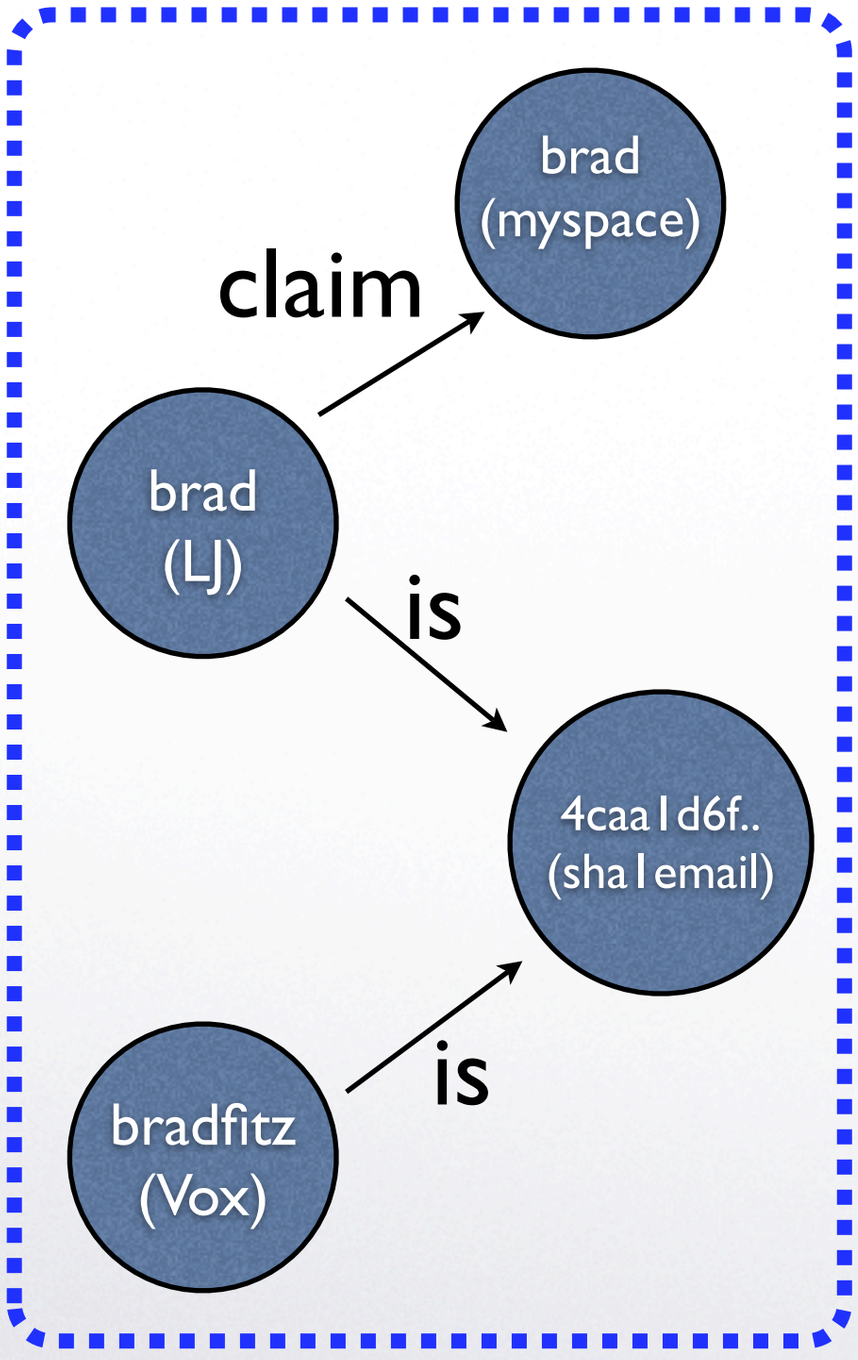
(LJ)
is
4caa1d6f..
(sha1email)
is
bradfitz
(Vox)


brad
(myspace)
claim
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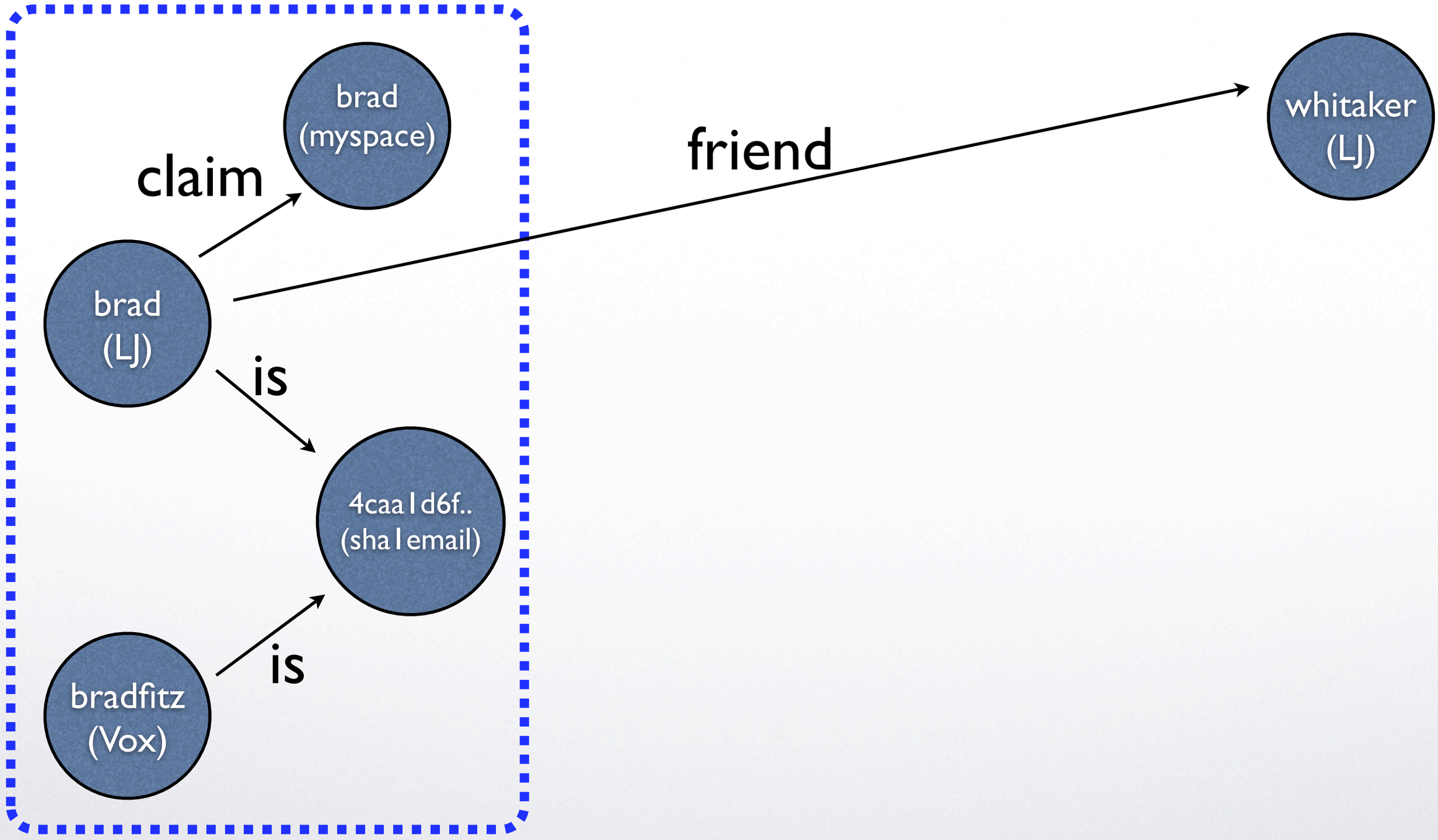
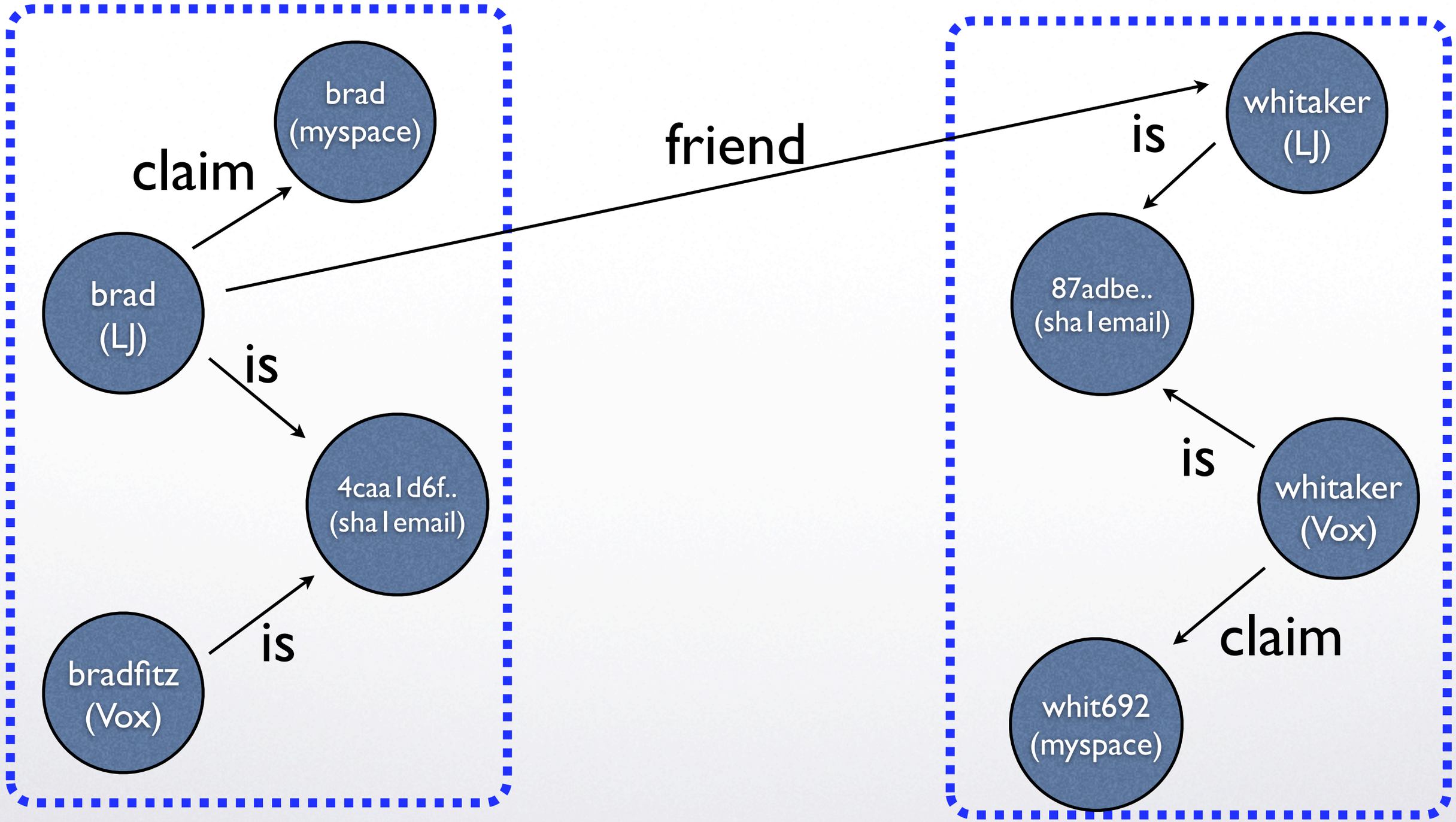
(LJ)
is
4caa1d6f..
(sha1email)
is
bradfitz
(Vox)


brad
(myspace)
claim
friend
whitaker
(LJ)
brad
(LJ)
is
4caa1d6f..
(sha1email)
is
bradfitz
(Vox)


brad
(myspace)
claim
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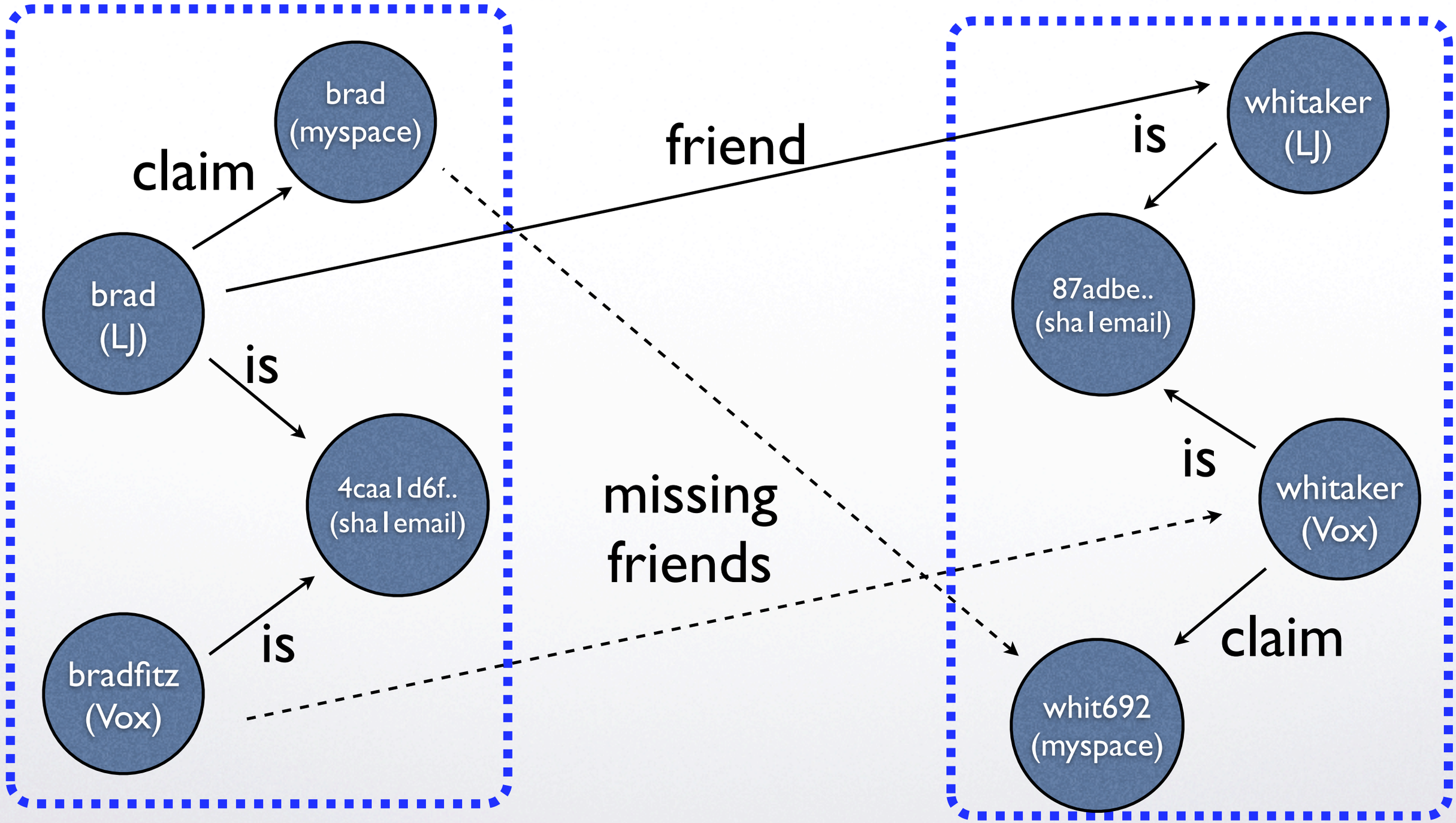
(LJ)
friend
is
4caa1d6f..
(sha1email)
bradfitz
(Vox)
is
whitaker
(LJ)
is
87adbe..
(sha1email)
is
whitaker
(Vox)
claim
whit692
(myspace)


brad
(myspace)
claim
brad
(LJ)
is
4caa1d6f..
(sha1email)
bradfitz
(Vox)
is
friend
missing
friends
whitaker
(LJ)
is
87adbe..
(sha1email)
is
whitaker
(Vox)
claim
whit692
(myspace)

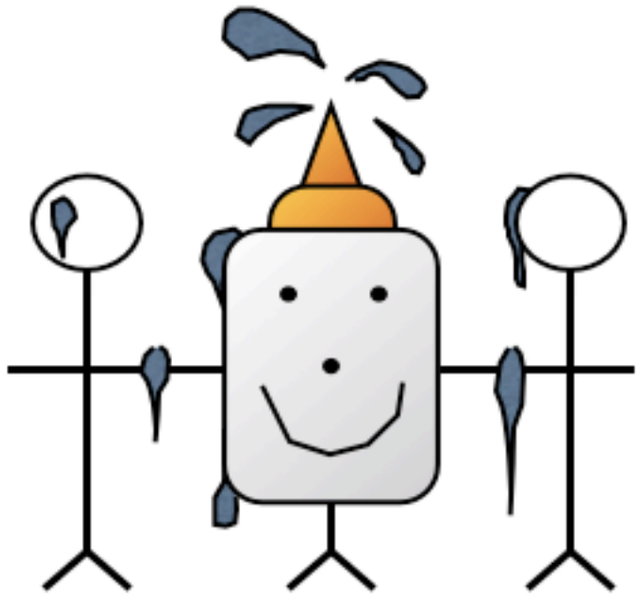
Data I have...

- All LJ nodes, edges (13M, 140M)
  - x 4 node types: username, lj username, sha1email, 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



Glue Your World Together.

(service) : Log in

(Log in with some account)

(service)
AOL/AIM
DeadJournal
LiveJournal
TypeKey
TypePad
Vox
OpenID (other)

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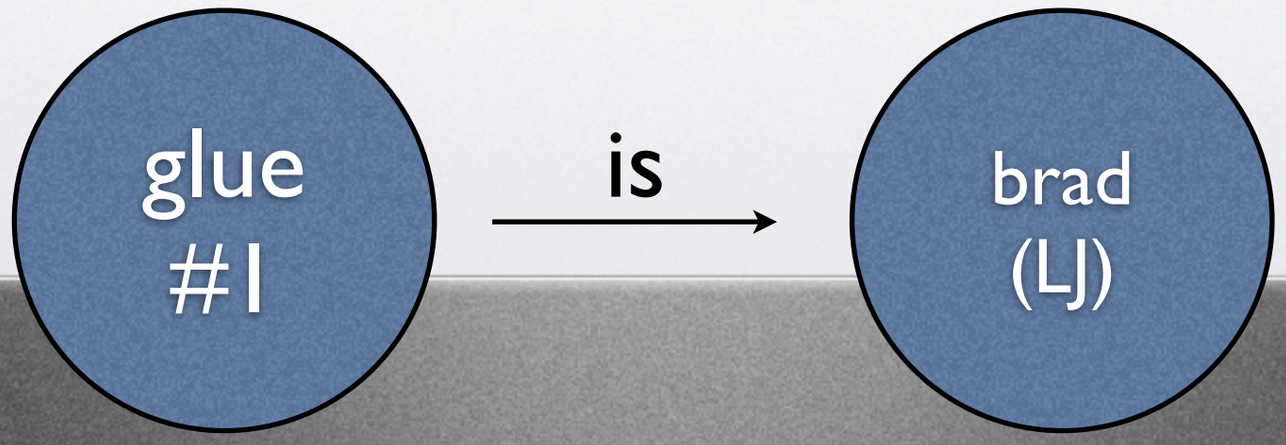
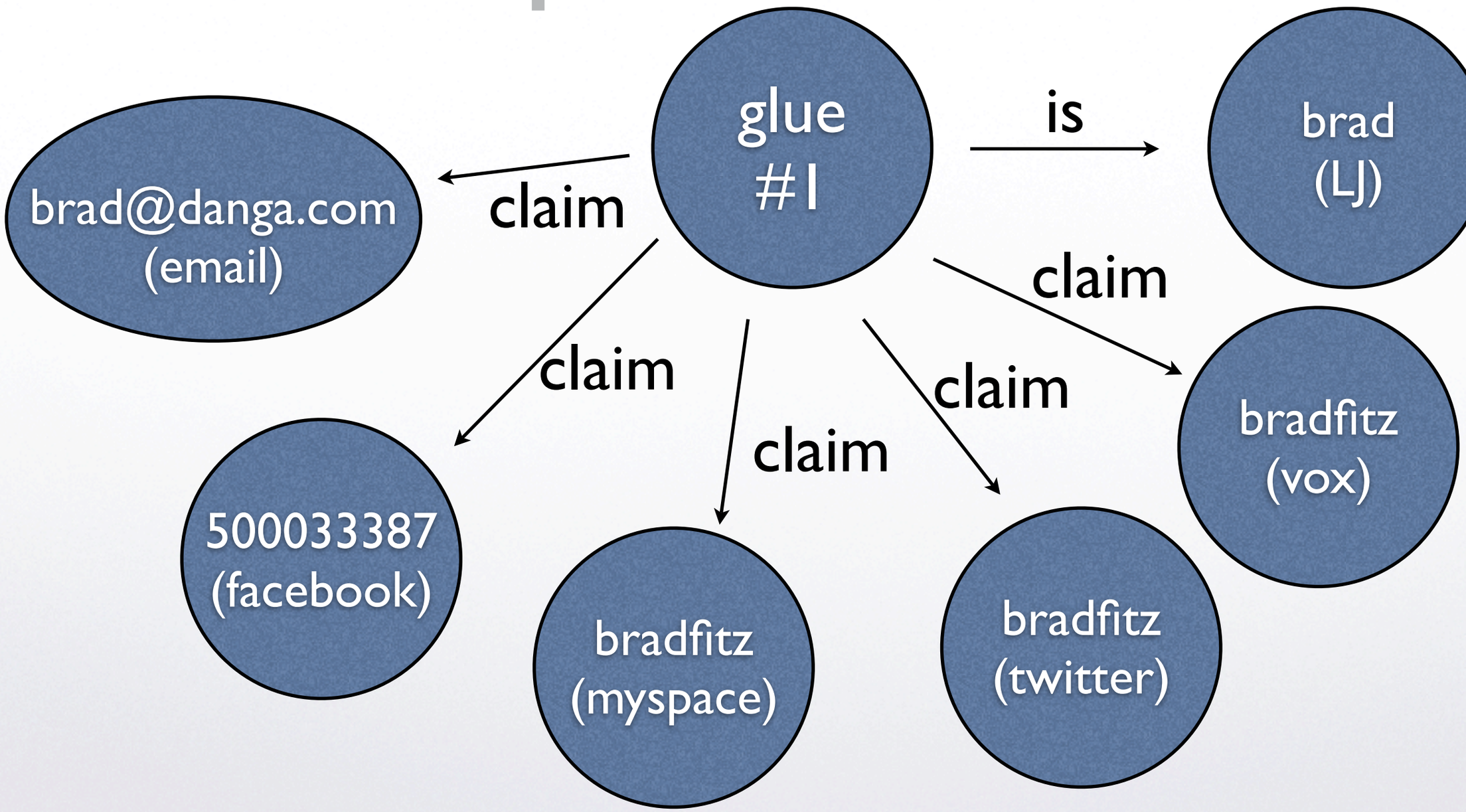
website flow

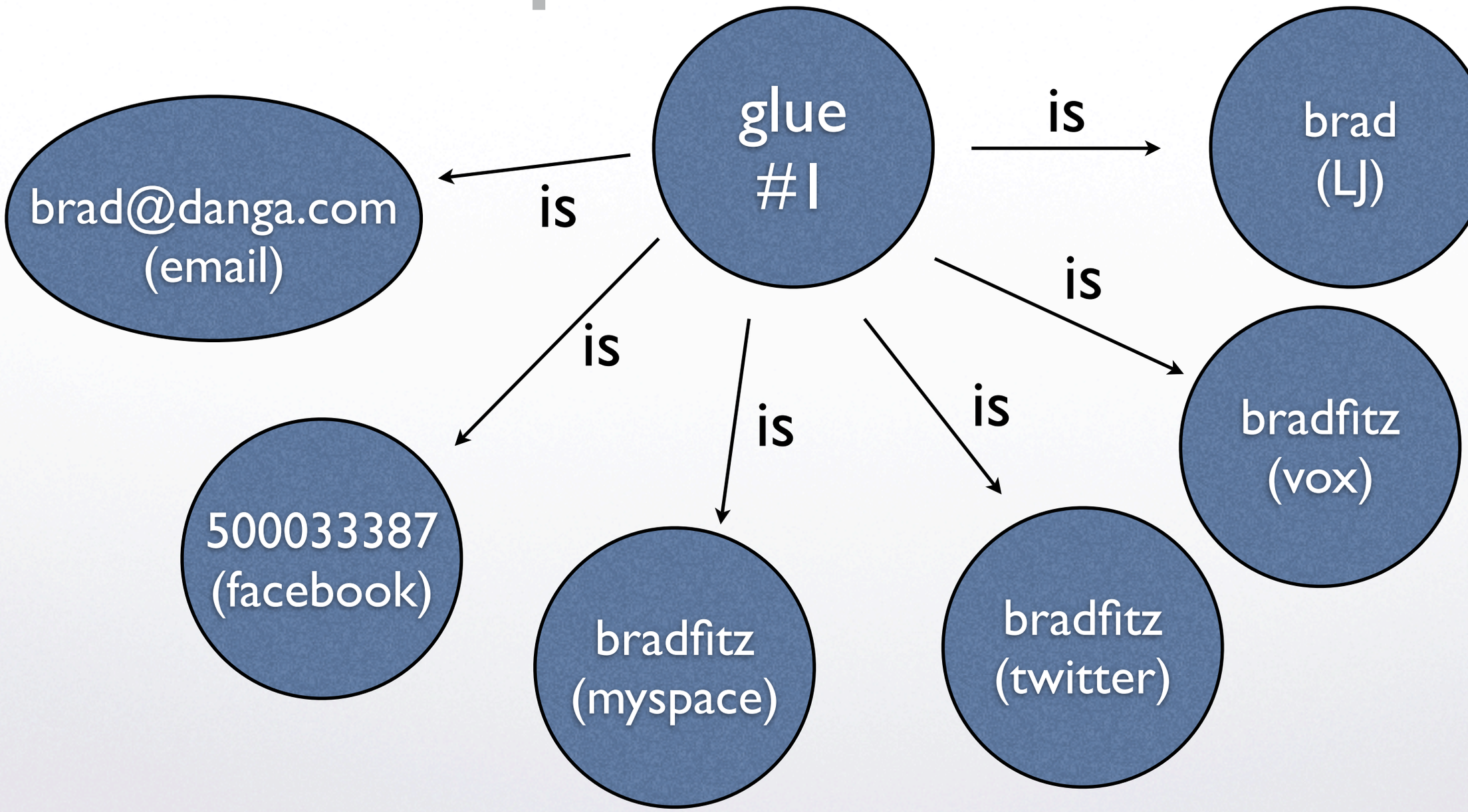
- bootstrap: login with "*something*" supporting OpenID
  - LJ, Vox, AIM, Digg, Twitter, or custom openid server
- "Glue" node (internal userid, no username) is vivified, with "is" link setup:



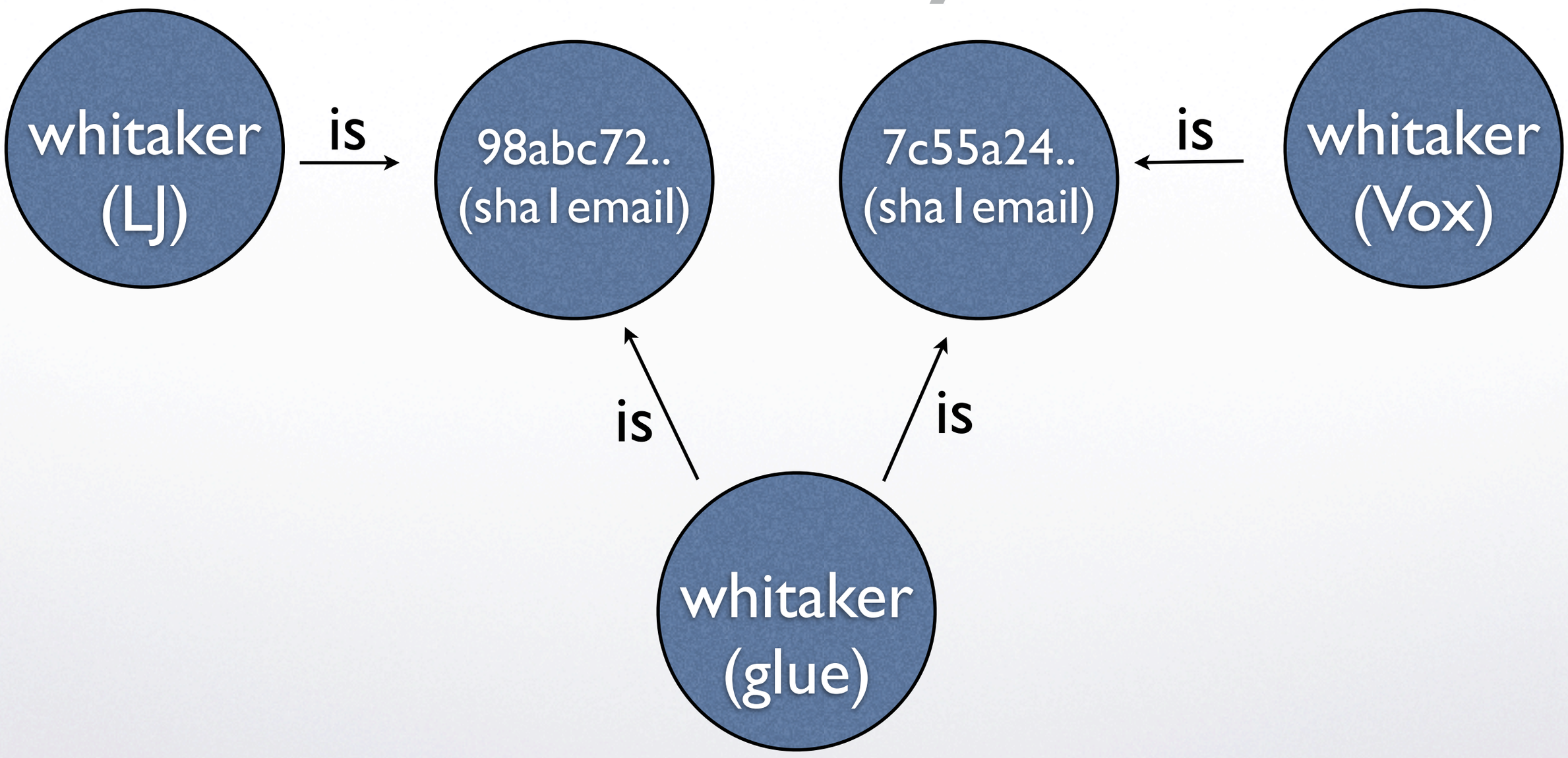
claim/prove more accts



claim/prove more accts



Utility


whitaker (LJ)
is
98abc72.. (sha1 email)
7c55a24.. (sha1 email)
is
whitaker (Vox)
is
is
whitaker (glue)

Notes

- 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,