

Lockr

Social Access Control for Web 2.0

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Huge Amounts of Personal Content

- People have tons of photos, videos, blog posts
- People need to manage their personal content
- Online sharing systems have become very popular



Sharing Personal Content is a Mess!

- Sites are **content-specific**: YouTube (videos), Flickr (photos)
 - Users' content are scattered across the Web
- Principals and access control are often **site-specific**
- Sites often require users to **join & invite** their friends
 - Users need to reconcile their social network on each site

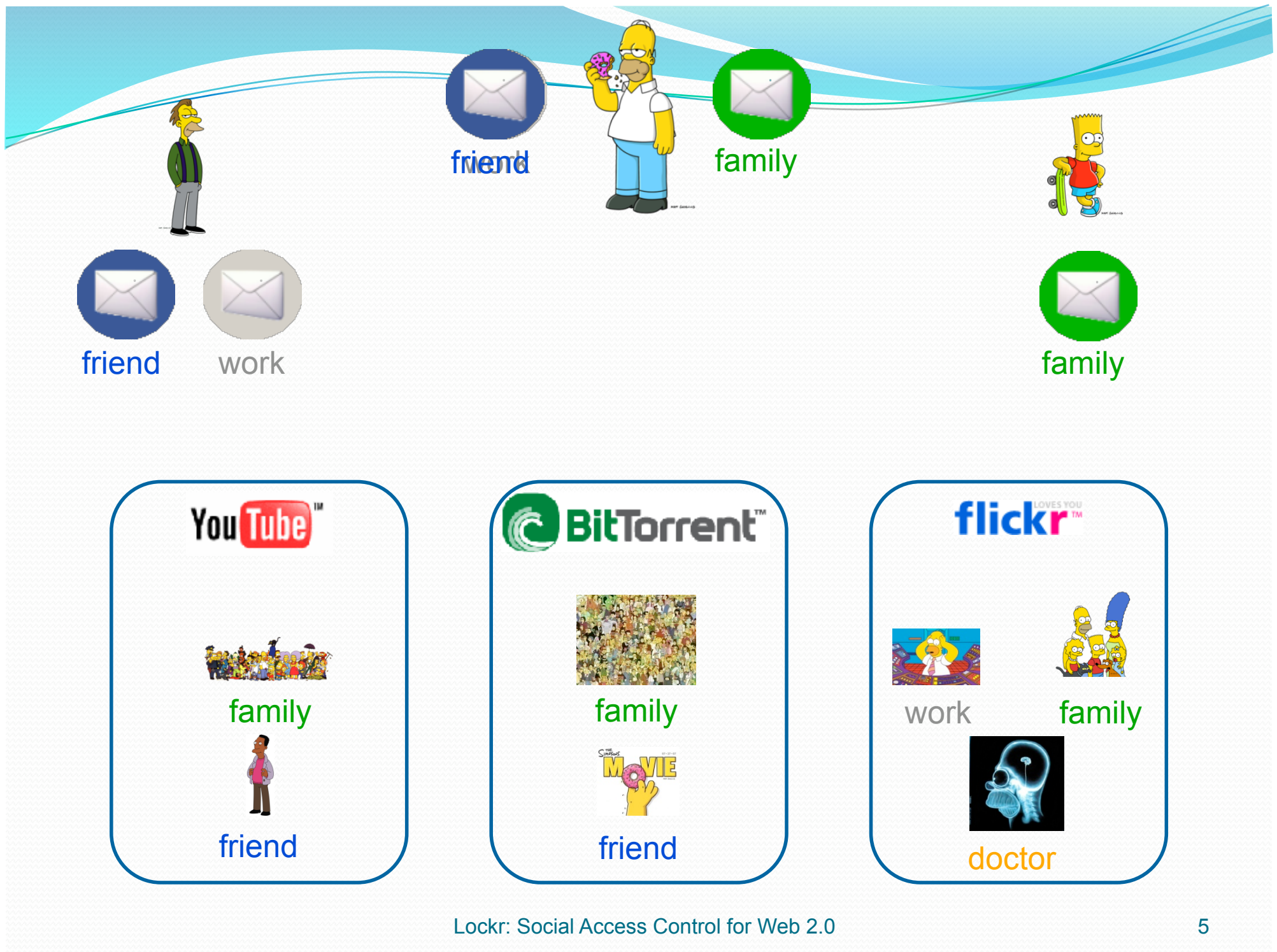
Burden of content/reg. mgmt. is on end users

Approach: Design an access control scheme

Making Content Sharing Easy

1. Use social relationships for access control
 - Fits people's mental model for sharing personal content
2. Decouple social networking and content sharing
 - Users manage social network & sites provide sharing
 - Eliminate need to manage multiple social networks
 - Reuse social information across different systems

Lockr: Web 2.0 access control based on 1, 2



Lockr's Two Key Abstractions

- Pass
 - Encapsulates a relationship
 - Excludes access rights, app. semantics, object names
- Social Access Control List
 - Lists relationships authorized to access content

Lockr Implementation

- Lockr users need to use a pass manager
 - LockrCenter – pass manager for Facebook users
- Lockr can be added to different systems/applications
 - BitTorrent – a plugin for Vuze (formerly Azureus)
 - Flickr – a Firefox extension + an access control server
 - Our implementation bypasses Flickr's support

LockrCenter: Pass Manager

- Roles: storing, issuing and exchanging passes
- Facebook application

The screenshot shows the LockrCenter application interface within a Facebook layout. The Facebook header includes the logo, navigation links (Profile, edit, Friends, Inbox), and utility links (home, account, privacy, logout). The left sidebar contains a search bar, a search icon, and a list of applications (Super Wall, Photos) with a 'more' link. The main content area features the LockrCenter title and a navigation bar with tabs: Send Pass, Request Pass, Invite Friends, Inbox, Outbox, and Pending Requests. The 'Send Pass' tab is active, displaying a form with fields for 'To:' (with a placeholder 'Start typing a friend's name'), 'Relation:', and 'Expires in:' (set to 'Never'). A 'Send' button is located below the form. At the bottom, a footer indicates 'Page built by Lockr Center (report)' and provides links for About, Find Friends, Advertising, Developers, Terms, Privacy, and Help.

facebook Profile edit Friends ▾ Inbox ▾ home account privacy logout

Search

Applications edit

Super Wall

Photos

▼ more

LockrCenter

Send Pass Request Pass Invite Friends Inbox Outbox Pending Requests

To:

Relation:

Expires in:

Send

Page built by Lockr Center (report)

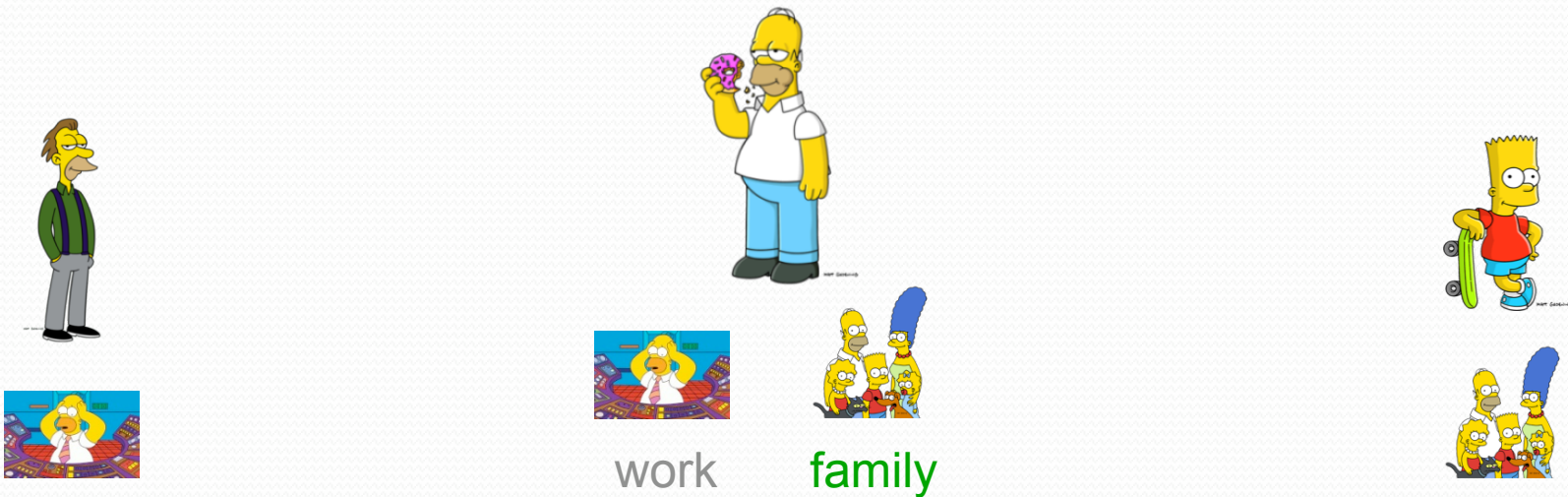
About Find Friends Advertising Developers Terms Privacy Help

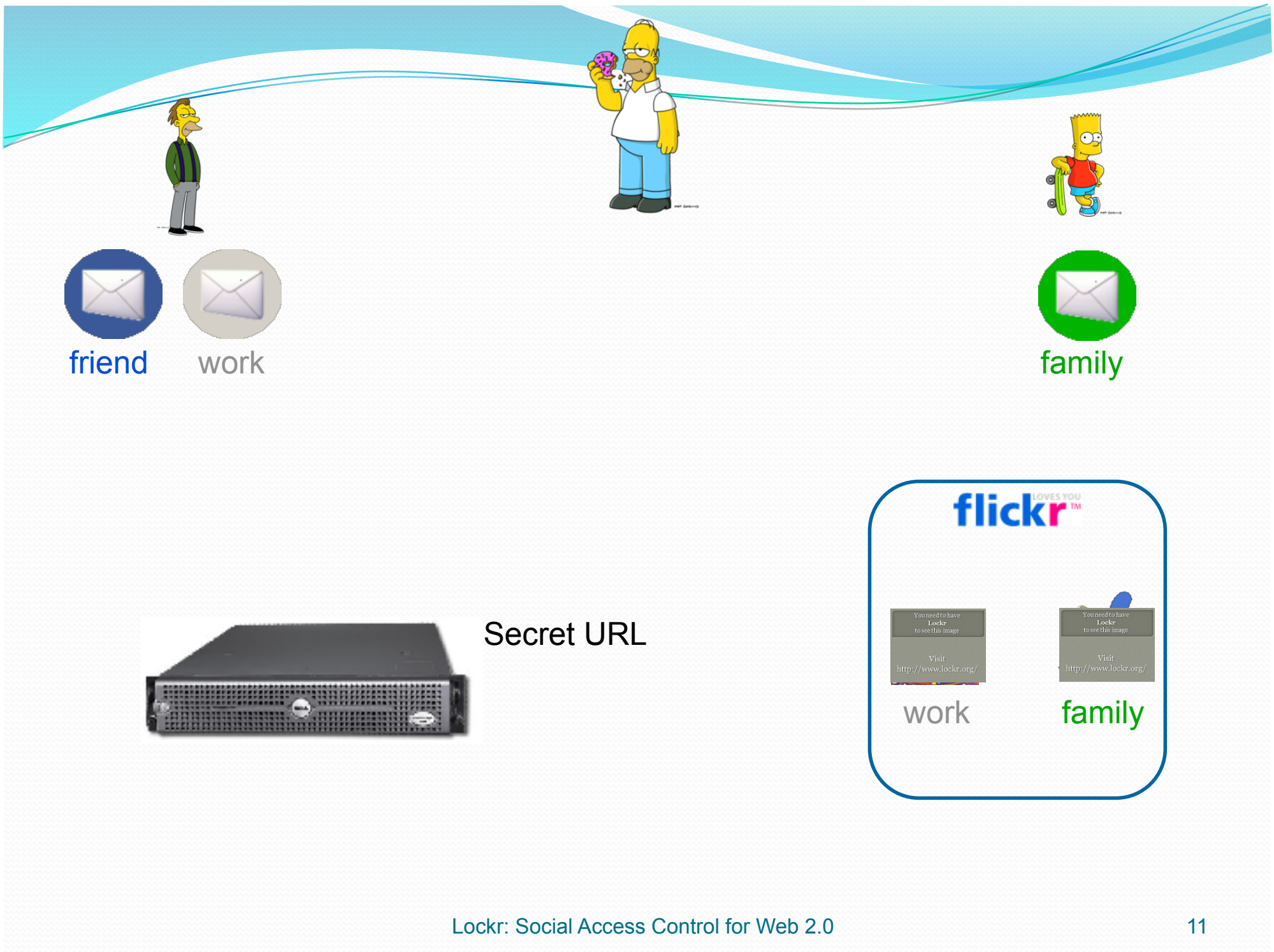
Lockr for BitTorrent

- Available as a plugin for Vuze (formerly Azureus)
- BitTorrent access control with **social torrents**
 - Social torrents contain social ACLs
- Protected content is exchanged only if both peers accept each others' passes

Lockr for Flickr

- Ideal implementation needs server support
 - A browser plugin sends passes to the server
 - Server verifies passes and reveals protected content





Lockr Makes Sharing Easy

- Same pass is valid across different systems
- Lockr eliminates redundant copies of one's social net.
- Lockr doesn't need a globally trusted party
 - No need for a third-party to authenticate/authorize
 - Users just need to trust content host to enforce ACLs

Conclusion

- Lockr makes sharing personal content easy
 - Lets users get rid of content/registrations mgmt. hassle
- Lockr's design is based on two simple observations
 - Social relations should describe access control policies
 - Social networks & content sharing should be decoupled

<http://www.lockr.org/>

Questions?

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