

# Engineering for Free Network Services

Evan Prodromou, Control Yourself, Inc.  
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**identi.ca**

# Who the...?

- Evan Prodromou
- Free Software since 1995
- Wikitravel
- Identi.ca
- autonomo.us

# What do we want?

- To use Network Services in a way that preserves our freedom in the same way that

# Free Network Services

- Franklin Street Statement
  - Free Software + Free Data = Free Service
- Open Software Service Definition
  - Free Software
  - Free Culture/Data
  - Open Standards

# The Sandwich

## **Server**

- Operating System
- Web Server
- Database Server
- Programming Language

**Services Harnessing Internet Technology**

## **Client**

- Operating System
- GUI Framework
- Browser
- Plugins

# What we can do

- Make tasty Free Software replacements for services harnessing Internet technology
- Use them ourselves
- Encourage their use

# Our advantages

- The Right Thing
- Longevity
- Paranoia
- Selfishness
- Greed
- Pride

# Structure

- Principles for building Free Network Services
- Using example of [Identi.ca](http://identi.ca)/[Laconica](http://Laconica)



# 1. Be pragmatic.

- We're doing this *now*.
- Use existing technologies.
- Use the structure of the Internet as it exists.

## 2. Use a Hub-and-Spoke Architecture.

- AKA “client-server”.
- Most desktop/laptop/netbook computers don't have a universal permanent address.
- Most “servers” do.
- You can put a client and a server on the same machine if you want to.
- Example: SMTP server

## 3. Use the Web.

- It works.
- It scales.
- It's rich.
- It's ubiquitous.
- Very smart people are working on it.
- Installations drop by  $\sim 3$  orders of magnitude.

## 4. Use the FNS-savvy License.

- Affero General Public License v3 (AGPLv3)
- Make software license easily visible.

## 5. Build in licensing.

- Use a Free Culture license by default
- Let users pick their own licenses (emphasizing Free Culture ones)

## 6. Use DNS and URLs for Identity.

- Example: email addresses
- Example: XMPP
- Example: Blogs
- Example: OpenID URLs

# 7. Build in federation early

- Prodomou's principles:
  - If your software has a social aspect, it should support distributed sociality
  - All software has a social aspect
- OpenID for authentication
- OAuth for authorization

## 8. Support open standards.

- Makes it easy to build compatible software.
- FOAF for social graph
- Atom/RSS
- RDF where possible.



## 9. Be semantic.

- Support microformats, RDFa, as many feed formats as possible.
- Meet 3rd-party processors halfway or more.
- Smart data neutralizes the advantage of proprietary/patented/really smart software.

# 10. Be SEM Savvy.

- Gets more people to see your software
- Gets more people to use your software
- Use sitemaps ([sitemaps.org](http://sitemaps.org))
- Use ping servers
- Make everything addressable
- Use good descriptions, H1s, status codes
- **Bonus:** easier for 3rd-party tools to use

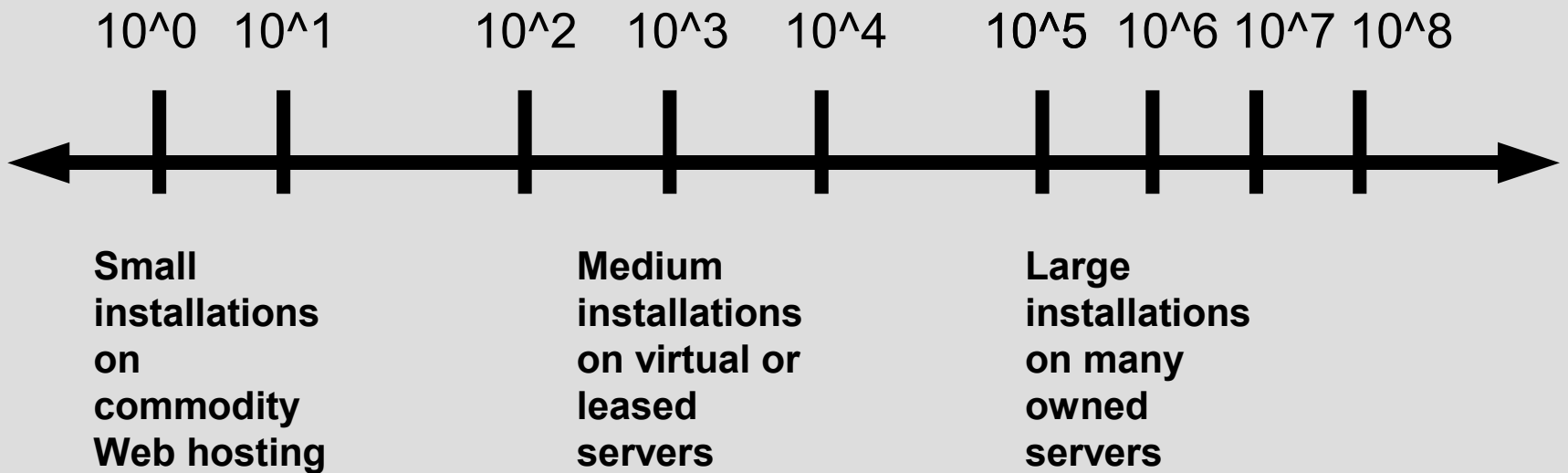
# 11. Build 0.x protocols.

- Do something dead simple and obviously stupid to get it started.
- Example: HTTP/0.9
  - GET URL => <data>
- Example: OpenMicroBlogging 0.1

# 12. Support a range of usage.

- Download for individual usage
- Hosted service for communities
- Major service for individuals

# 13. Build to scale.



# 14. Data dumps.

- Make a dump available of *all* public data.
- Make a dump available of each user's private data to that user.

# 15. Data feeds.

- Make feeds available by default.
- Push feeds to aggregators.
  - Search
  - Directory
  - Archive

# 16. Support other Free Network Services.

- We advance faster if we work together.
- OpenStreetMaps
- Geonames
- Search Wikia



# 17. Engage with proprietary services.

- Find users where they are.
- This is the environment we have now.
- As we fill out the Free Network Services ecology, this becomes less necessary.

# 18. Make it easy to share the source.

- Have a source link on the site by default.
- Have links to plugins on a “versions” page (like MediaWiki).

# 19. Provide a remote API.

- Stimulates third-party development
- Allows “mashups”
- Allows desktop/laptop/mobile clients

## 20. Provide a plugin system.

- Stimulates contribution.
- Makes it easy to integrate.
- Gives people a reason to install your software.

# 21. Support themes/skins.

- People like sexy-looking Web sites.
- Site owners like putting their mark on the site.
- “Lite” theming through CSS.
- “Heavy” theming through e.g. template engines.

## 22. Be international.

- “Everybody there speaks English.”
- Let non-English speakers drive the competition.
- Our translation resources are a huge advantage.
- Use wikis for documentation.

## 23. Make it easy.

- Your competition is *very easy*.
- Installation should be really simple.
- Setting up an account on an existing server should be cheap or free.
- Setting up an instance on a hosted service should be reasonably priced and quick.

# 24. Use PHP/MySQL

- C and POSIX for Unix-like systems
- Build a healthy Free Software community
- Install on commodity hosting
- (Should this change? Make it change!)



# Further

- <http://autonomo.us/>
- <http://identi.ca/evan>
- [evan@controlyourself.ca](mailto:evan@controlyourself.ca)