

Yarn

Working with Messages in Diverse
Formats and Protocols

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Apps and Network Data

“Every program attempts to expand until it can read mail. Those programs which cannot so expand are replaced by ones which can.”

- Jamie Zawinski's *Law of Software Envelopment*

Apps and Network Data

Every program attempts to expand until it can

- Read mail

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- Read mail
- Send mail

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- Send mail
- Download RSS feeds

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Apps and Network Data

Every program attempts to expand until it can

- Read mail
- Send mail
- Download RSS feeds
- Post to blogs
- And upload images to Flickr

Information Wants to be Decentralized

- Useful information is spread around the network
- Trends:
 - specialized, hosted services
 - open APIs

Strategies for Interop

1. All your data are belong to us
(Roach Motel)

Strategies for Interop

2. Teach your users to cut and paste

Strategies for Interop

3. Teach your app to talk to other services

Interop is Hard

- Learn spec
- Implement spec
- Learn how things work in the real world
- Implement corner cases and workarounds

Interop is Boring

- There's more than one way to do it
- Some more complex than others
- But they're all doing similar things

It's All About Messages

- From a person or application
- To a person, group, or application
- Contains:
 - Title (maybe)
 - Body
 - Links (maybe)
 - Metadata
 - Attachments (maybe)

It's All About Messages

- Email (MIME) message
- Blog post
- RSS <item>
- Atom <entry>
- Bookmark
- Google search result
- IM message
- etc...

Yarn

- a Python/Twisted library for working with messages
- standard API for reading, writing, and editing messages using many different protocols and formats
- plugin architecture

Yarn

- Originally developed for Hep, now an independent project
- <http://yarnproject.org/>
- Current release: 0.3

Hep is Not Dead

- It's just been on vacation
- New version based on latest Yarn coming soon

Yarn

Demo: Yarn Browser

Yarn Architecture

- Core classes provide common infrastructure
 - Standard client API
 - Connection sharing
 - Cache management
 - Metadata storage
 - Client-side searching
 - Query parsing

Yarn Architecture

- Plugins add support for specific things
 - Protocols (HTTP, POP3, IMAP, etc)
 - Formats (RSS, Atom, mbox, etc)
 - MIME type conversion (HTML to text, HTML to XHTML)

Yarn Core Classes

- `client.ResourceView`
 - client-side view of a local or remote resource
- `client.ConnectionManager`
 - shares connections between `ResourceViews`
- `resource.IConnection`
 - represents a connection to a set of remote resources

Writing an App using Yarn

Demo

Yarn Messages

- Preserve underlying data
- Convert on demand

Yarn Messages

Demo

Why use Yarn

- Support multiple protocols without any extra work
- Concentrate on more interesting problems
- Adding plugins is really easy

Where to use Yarn

- Integration
- Search
- Universal Personal Proxy (UPP)

Yarn Roadmap

- Code in SVN
- New release next week
- 1.0 Summer 2005

Yarn

<http://yarnproject.org/>