Hydra for Managers

Open Repositories 2014

Helsinki, 9th June 2014

Let's start with you ;-)

- Please let us know
  - Whether you had heard about Hydra before today
  - Where you heard about Hydra
  - What you would like to learn this evening

Topics to discuss

- What is Hydra?
  - Where did it come from?
  - Defining Hydra's component activities
- Fit – The Value Proposition
  - Why Hydra?
  - When Hydra meets the parents
- Development and management
  - Managing a Hydra project
  - Hiring and training developers / getting technical help
- Engagement
  - Manager contributions
  - Manager community

Where did it come from?

- A collaborative project between:
  - University of Hull
  - University of Virginia
  - Stanford University
  - Fedora Commons/DuraSpace
  - MediaShelf LLC

- Aim to work towards an open source reusable framework for multipurpose, multifunction, multi-institutional repository-enabled solutions

- Timeframe - 2008-11 (but now extended indefinitely)

What is Hydra? Community

What is Hydra?

- A robust repository fronted by feature-rich, tailored applications and workflows ("heads")
  - *One body, many heads*
- Collaboratively built "solution bundles" that can be adapted and modified to suit local needs.
- A community of developers and adopters extending and enhancing the core

Hydra

Hydra is a Repository Solution

Hydra is a repository solution that is being used by institutions on both sides of the North Atlantic to provide access to their digital content. Hydra provides a versatile and feature rich environment for end-users and repository administrators alike.

Hydra is a Community

Hydra is a large, multi-institutional collaboration. The project gives like-minded institutions a mechanism to combine their individual repository development efforts into a collective solution with breadth and depth that exceeds the capacity of any individual institution to create, maintain or enhance on its own. The motto of the project partners is "if you want to go fast, go alone. If you want to go far, go together."

Hydra is a Technical Framework

Hydra is an ecosystem of components that lets institutions deploy robust and durable digital repositories (the body) supporting multiple "heads": fully-featured digital asset management applications and tailored workflows. Its principal platforms are the Fedora Commons repository software, Solr, Ruby on Rails and Blacklight.

http://projecthydra.org

Hydra is Open Source Software

Hydra software is free and open source, available under an Apache 2 license.

Why Hydra? A Shared Purpose

**"If you want to go fast, go alone, if you want to go far, go together"
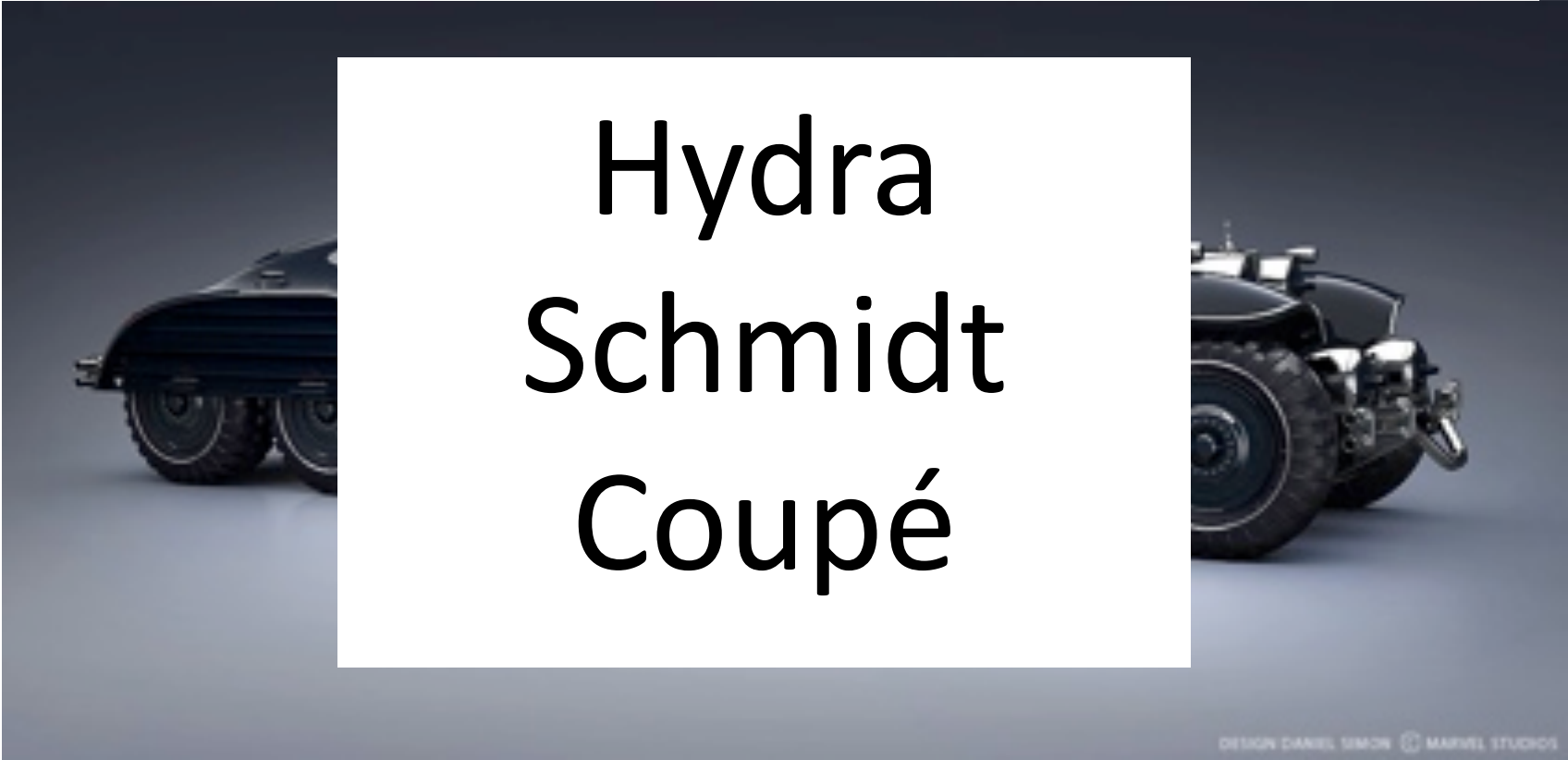African Proverb**

- Solving Problems through Partnership
  - We have a budget cut…
  - Your organization is clearly the best leader for…
  - We need…
  - Do more with less
  - Do it fast
  - Do it well
- Development of Flexible, Sustainable Technology
- Bolstering our Resources
  - Engagement
  - Training
  - Collaboration

Hydra Meets the Parents

- Tangibles
  - The Network
  - Community - this light is always on
  - Risk Reduction
  - Sum is greater than its parts – staffing, solutions
  - Puppies are not free
- Beyond the Surface – The Happiness Factor
  - Individual Growth
  - Rewards of Working for the Common Good

Getting involved with Hydra

- Getting involved with Hydra can be at different levels
  - Adopter
  - Developer
  - Partner
- Need to ask:
  - What involvement is required to enable you to meet your needs?
- But also,
  - What benefit can you gain from getting actively involved?

Hydra Schmidt Coupé

Made up from different components
functionality, community, technology and staffing

Functional

- Hydra development (Hydra heads) have demonstrated a wide range of capabilities for managing different types of content
  - And the flexibility to adjust to local needs
- Solution bundles are emerging to enable more rapid 'out of the box' implementation
  - But the software can also be adapted to fit needs
    - *(adaptations fed back make the solution richer!)*
- Functionality can also be built from the ground-up to meet needs

Functional

- Manage digital objects
  - Multiple formats
- Search
- Retrieve
- Access
- Preserve
- Store
- Interface can be what you want it to be
- Build functions and features on top of basic functionality

Technical

- Shared development platform through github
- Test-driven software development
  - Nothing gets in without full tests showing code does what it is supposed to
- Ruby on Rails offers a highly flexible environment for creating solutions and rapid development
  - Very well resourced global library of components (gems) to tap into
- Very active and responsive developer community
- Well structured code contribution and licensing

Hydra technical implementation

- Fedora
  - Fedora has durability as its basis
- Solr
  - Very powerful indexing tool, as used by…
- Blacklight
  - Prior development for OPAC
  - Adaptable to repository content (or any structured metadata)
- Ruby
  - Agile development / excellent MVC / good testing tools
- Ruby gems
  - ActiveFedora, Opinionated Metadata, Solrizer, etc.

Staff

- Staffing required will depend on your aims
- Hydra Partner staffing varies
  - 7-8 staff at Stanford, single developers at Rock'n'Roll and Hull
- Never limited by local staffing
  - Community input available additionally
- Vendor support available for initial implementation or specific development
- Good to blend technical and curatorial staff as part of development and operation

Financial – the petrol

- Hydra is open source software
  - Free to use, under the Apache 2.0 licence
- Investment will be according to scale of need
  - Developer resource
  - Repository management resource
  - Hardware / Training / Vendor support
- Additional costs in more active involvement
  - But worth investment to make progress together
- Save money cf. sustaining a local solution
  - And help others as others have helped you

Legal – the oil

- Apache 2.0 licence previously mentioned
- All contributions are made under a Contributor Licensing Agreement, granting a perpetual licence to the Hydra Project – based on Apache
  - Corporate
  - Individual
- All documentation is shared using a CC-BY-SA Creative Commons Licence
- Partners sign an MoU highlighting expectations and requirements of Partnership

Sustainability

- Hydra initially set itself up as a project for three years
- The project recognised the need to establish a community and mode of practice for the technology outcome to be sustained
- Community interest and now involvement have led to an indefinite continuation of Hydra
  - 3 -> 24 Partners in 4 years, plus other users
- Dynamic combination of the factors mentioned in this presentation, all underpinned by mutual desire to ensure Hydra's future sustainability

Development & Management

- Case studies
- Self Directed
  - WGBH
- Small - single institution or narrow focus
  - Hull
- Large – multi-institution, widely adopted
  - Hydramata – Notre Dame, Northwestern, Indiana, Cincinnati, UVa
  - Avalon – Northwestern and Indiana, but also widely adopted

So Why Hydra (again!)?

- The community (and the partners involved)
  - More than the sum of our parts
- The scope for collaboration
  - Identify and work together on common needs
- The Ruby on Rails codebase
  - Common software development process
- The modular make-up of components
  - Not siloed or tied down
- Strong open source foundational components
  - Established in their own right

Any puzzled looks?

- Have we answered your questions?
- What other questions do you have on what Hydra is and how it operates?

- Exercise:
  - You want to make the case for Hydra. What are your three top points to make?
  - How does the Hydra community model translate into your national environments?
  - What are the barriers?

Getting going

Getting going

- Once decided to pursue Hydra, how to get involved?
  - The same breakdown can be applied
    - Functional
    - Community
    - Technical
    - Staff
- The resources are there for you to go ahead and get going by yourself
- It would be great if you decided to join in and made progress with the community

Functional

- Decide on the aim and scope of your initial project
  - Start with a high level story, and breakdown into component stages of activity
- Decide on the metadata to be used and how objects within your collection(s) will be organised
- Define the workflow steps you need to achieve the stages you are aiming for

- Do ask others in the community if you have questions
  - hydra-users or hydra-tech lists

Technical

- Start with the github site for Hydra gem
  - http://github.com/projecthydra/hydra
  - Use the Dive into Hydra tutorial
  - Railsbridge tutorial also good for those new to Ruby
- Distinct heads and gems are available through the github site as well – http://github.com/projecthydra
- Use hydra-tech and the projecthydra IRC channel to see latest developments and ask questions
- Attend training
  - Hydra Camps - ~3 a year, at least one in Europe

Hiring & Training

- Hiring
  - Advertising- Enrolling in the Hydra Way
  - Individual Professional Growth
  - Career Networking
  - Wider Mission
- Training
  - HydraCamps
    - DCE – our preferred training partner
    - Training the Trainer
    - Basis - Documentation and Major Hydra Core Release
  - Online Tutorials
    - Rails Bridge
    - Getting Started with Ruby

Staff

- A certain knowledge set is required to work with Hydra
  - Technical knowledge through training and testing
  - Functional knowledge through awareness of collection(s) and how they should be curated
- Focus on working according to the Hydra Way
  - Enabling, for all concerned
  - Working together across institutions
- Work out what you need in-house and what you need to call on from outside
- NB. We have all worked through this – you are not alone

Community

- Make use of the available resources
  - Website
  - Wiki
  - Github
  - Email discussion lists
- Identify a Hydra Partner doing similar work and get in touch
- Identify need for vendor input and make contact to discuss options
- Come to events (like this one!) – also Hydra Connect

Community

- Hydra's community is vital for its ongoing development
  - Much effort continues to go into ensuring this grows sustainably
- It exists because we have a shared issue with regard to repository development
- Working together toward a shared purpose, and developing a shared approach
- Active discussion lists/meetings covering all topics
- We are a community that wants to know each other!
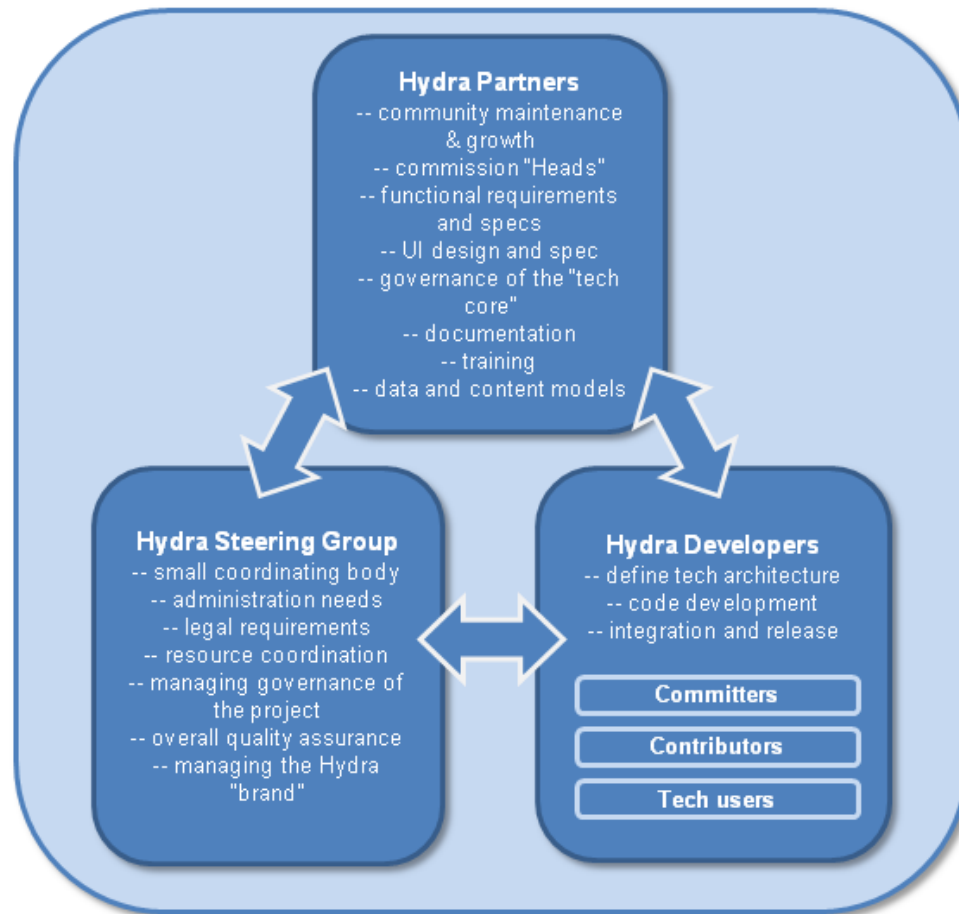- Community reduces risk and broadens knowledgebase

No single system can provide the full range of repository-based solutions for a given institution's needs,

…yet sustainable solutions require a common repository infrastructure.

No single institution can resource the development of a full range of solutions on its own,

…yet each needs the flexibility to tailor solutions to local demands and workflows.

The Community model…

Hydra Partners
-- community maintenance & growth
-- commission "Heads"
-- functional requirements and specs
-- UI design and spec
-- governance of the "tech core"
-- documentation
-- training
-- data and content models

Hydra Steering Group
-- small coordinating body
-- administration needs
-- legal requirements
-- resource coordination
-- managing governance of the project
-- overall quality assurance
-- managing the Hydra "brand"

Hydra Developers
-- define tech architecture
-- code development
-- integration and release

Committers

Contributors

Tech users

Engagement

- Get involved!

- How can a manager stay connected and find information?

- How can a manger contribute to the Hydra community?

Stay connected and find information

- Wiki page (DuraSpace)
  - Partner meeting notes
- Website
- Monthly Partner calls
- Partner listserv
- Hydra Partner meetings & Hydra Connect
- Other conferences with strong Hydra presence
  - Open Repositories
  - Code4Lib
  - DLF
  - Others (in Europe?)?

Contribute:
Many hands make light work……

- Communication to the larger community
  - Spread the word about Hydra
- Help with strategic planning
  - Particularly around community growth and management
- Meeting planning
  - Offer to facilitate or take notes!
- Speak up!
  - About issues you as a manager are facing

A word of (polite) warning

- Hydra is open source – anyone can use it freely

- Working with Hydra is not, though, free
  - As in 'puppies are not free'
  - It requires investment
    - Towards achieving a goal
    - Towards sustaining a solution

- Hydra recognises this and is seeking to provide a way to invest in a mutual direction of travel – come with us!

Thank you

...and questions

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