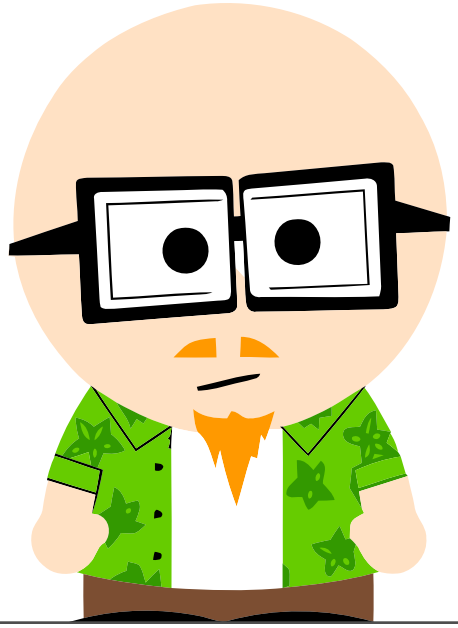
ORCID Technical Update
CNI Annual Meeting, 2011

Geoffrey Bilder

Interim Technical Director

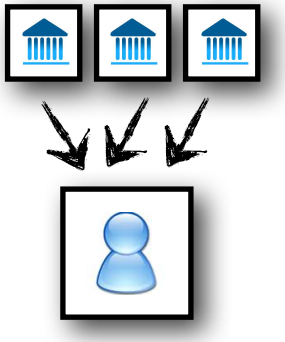


What do we mean by "Identity?"

Self-Asserted Identity

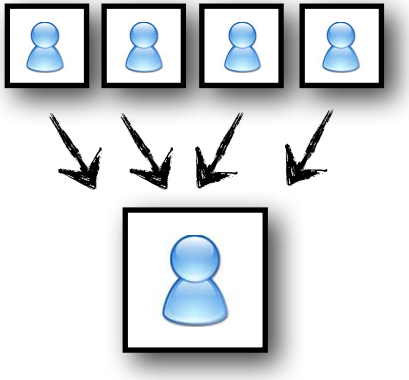
Self-Asserted Identity

Organisationally-Validated Identity



Organisationally-Validated Identity

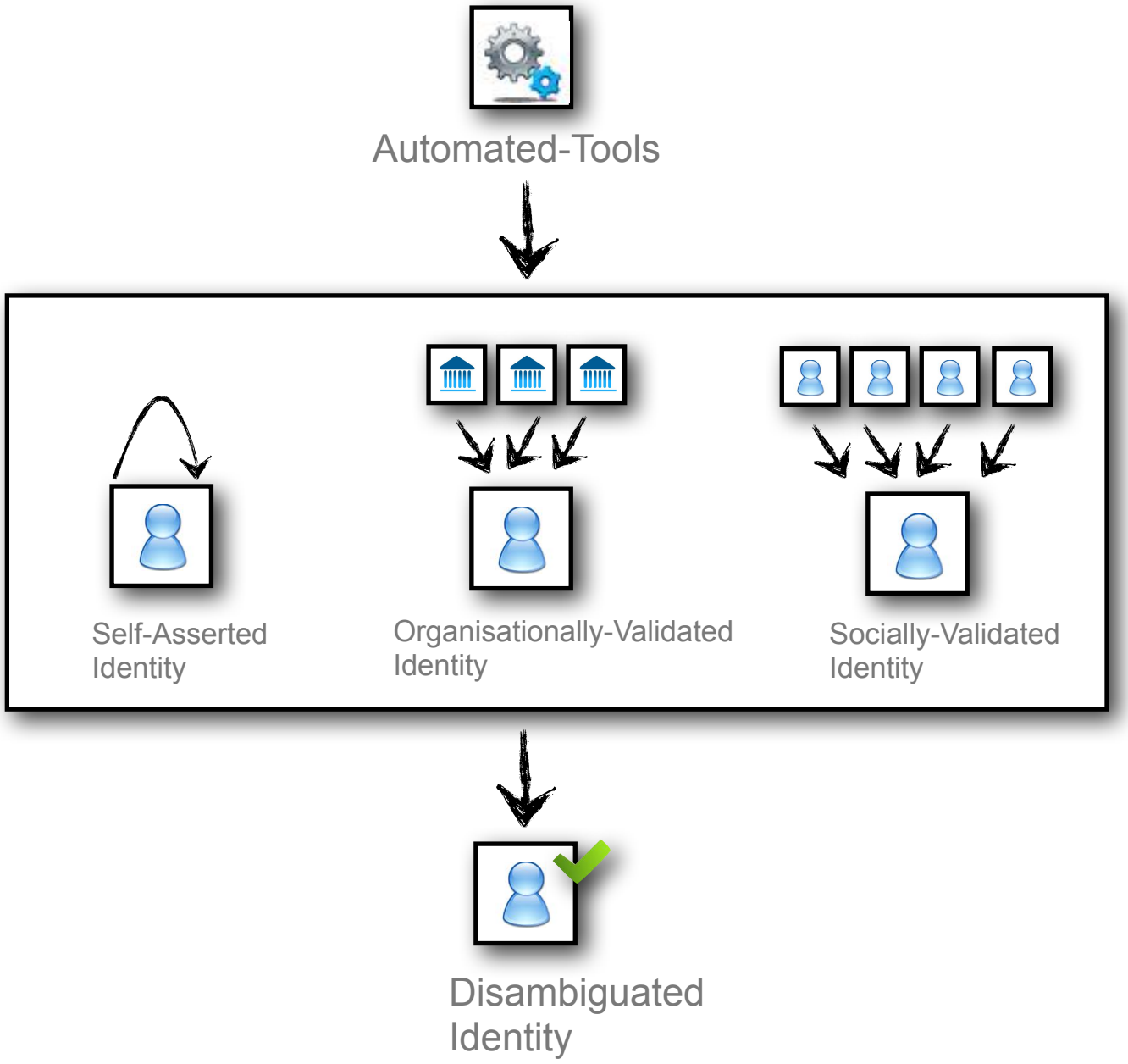
Socially-Validated Identity

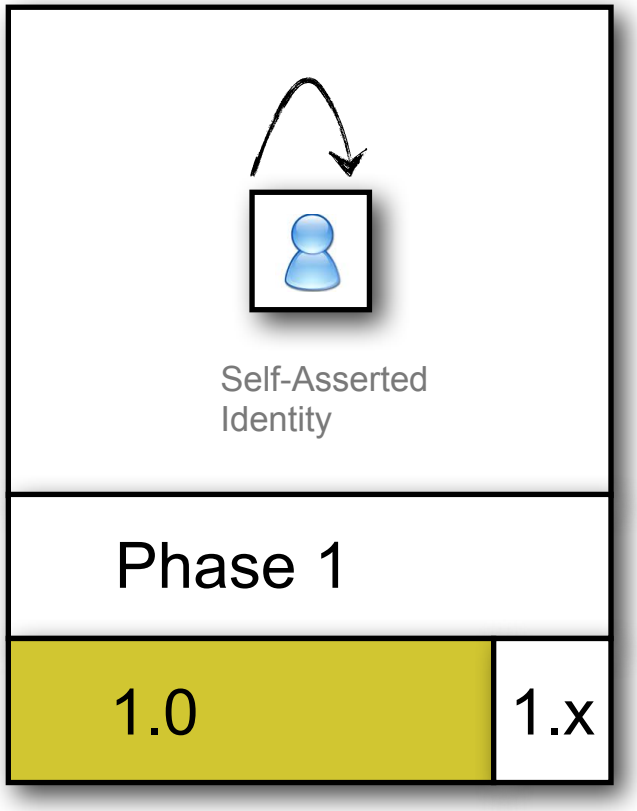


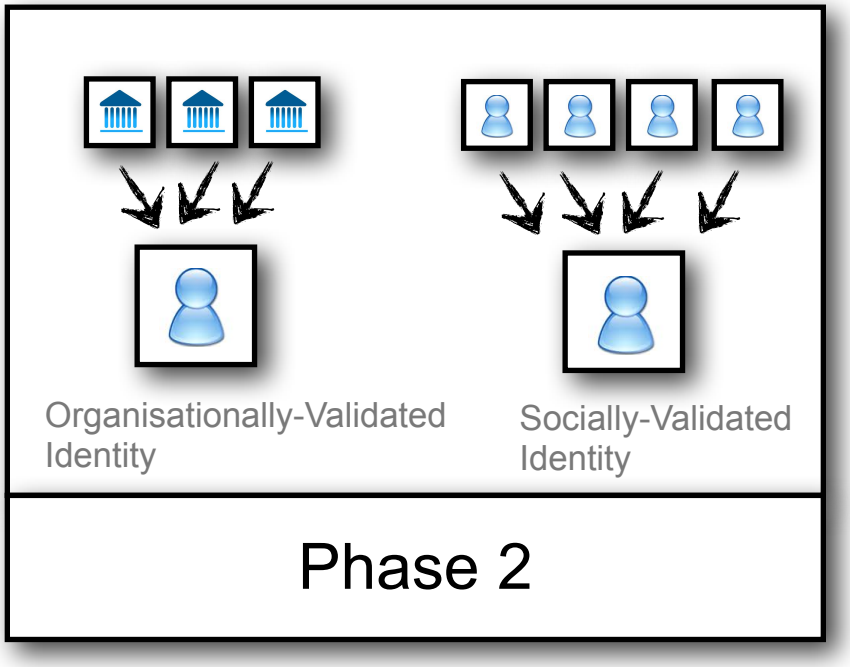
Socially-Validated Identity

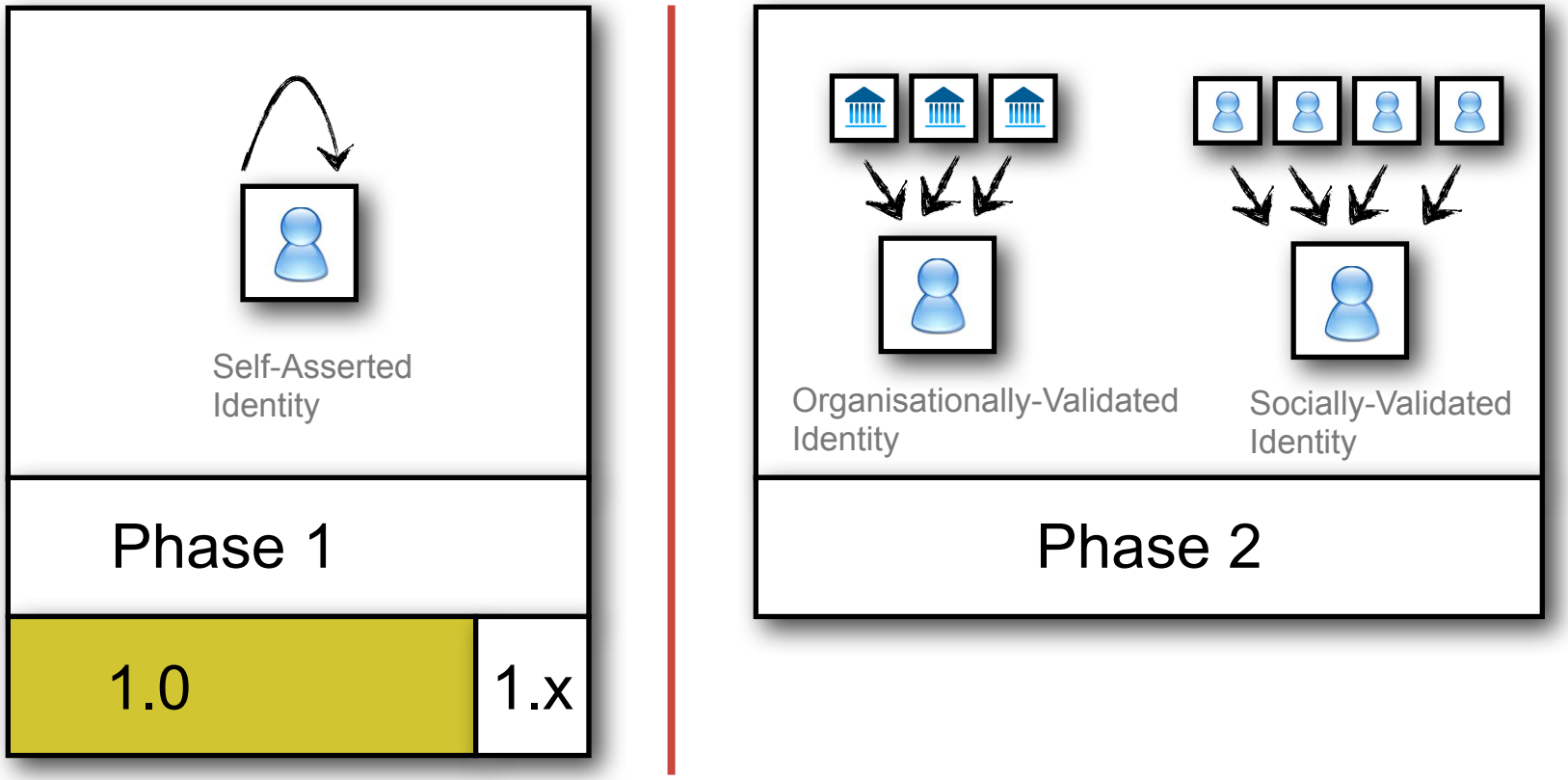
Kaliya Hamlin

http://www.identitywoman.net/the-identity-spectrum#utm_source=feed&utm_medium=feed&utm_campaign=feed


Automated-Tools
Self-Asserted Identity
Organisationally-Validated Identity
Socially-Validated Identity
Disambiguated Identity

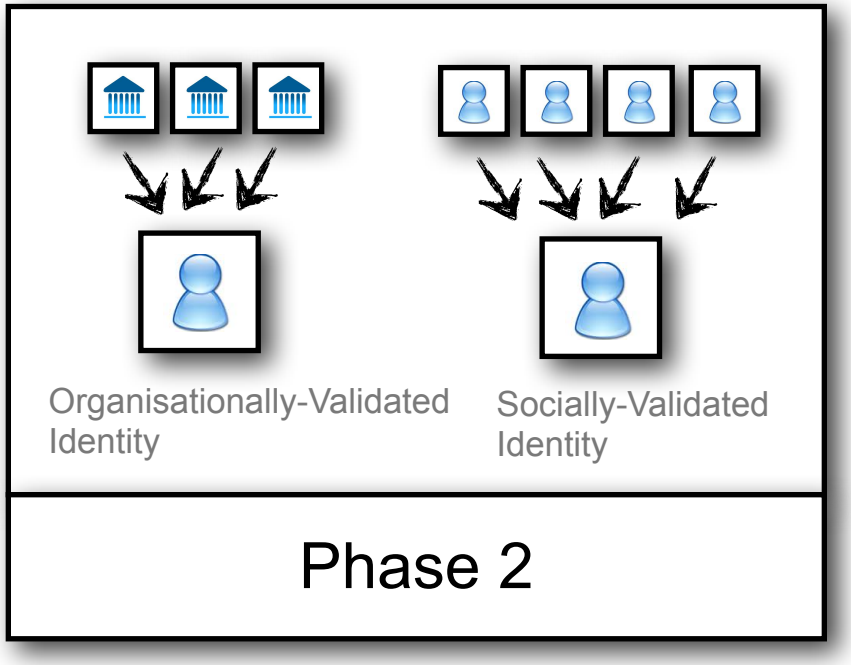

Self-Asserted Identity
Phase 1
1.0
1.x


Organisationally-Validated Identity
Socially-Validated Identity
Phase 2


Self-Asserted Identity
Phase 1
1.0
1.x
Organisationally-Validated Identity
Socially-Validated Identity
Phase 2

Launch

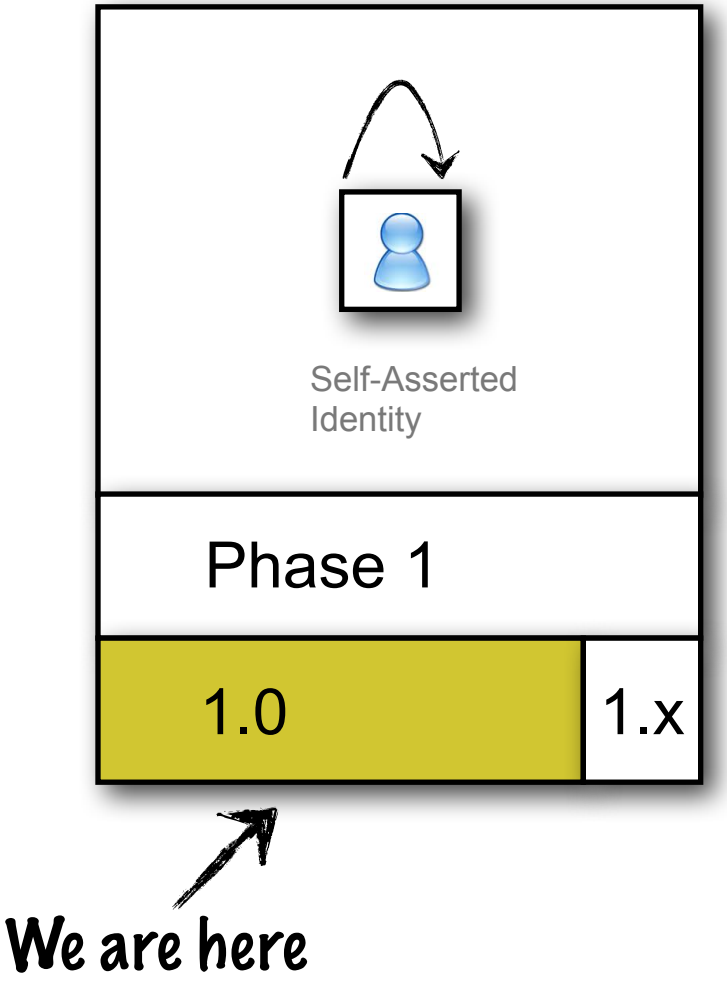
If you are interested in Phase 2....



"Disambiguation without de-duplication: Modelling authority and trust in the ORCID system"

http://www.orcid.org/node/615

But this is about phase 1.0...



Origins Phase 1.0...

March-July, 2010: Sandbox and Alpha Build

August, 2010: TR Code offered for ORCID effort

September, 2010: ORCID Audits TR Code

November, 2010: ORCID Adopts 10 Principles

ORCID Explores Tech Options / Negotiates Terms

Collaboration with VIVO

On behalf of ORCID, Gudmundur Thorisson, University of Leicester, led a grant from VIVO to work on explore how ORCID and VIVO can interact in the scholarly ecosystem.

- Broad aim = technology evaluation for ORCID
  - Get hands-on experience w/ VIVO platform
  - Can/should ORCID reuse VIVO technology? Lessons learned? Etc.
- Implementation objectives: extend VIVO system to enable
  - ***Searching for and adding publications from external bibliographic system***
  - ***Identification & exchange of profile information with external system***
- Other objectives
  - Investigate ontological approach (e.g. what can ORCID reuse/repurpose/ learn?)
  - Engage with VIVO community on technical level and build relationships

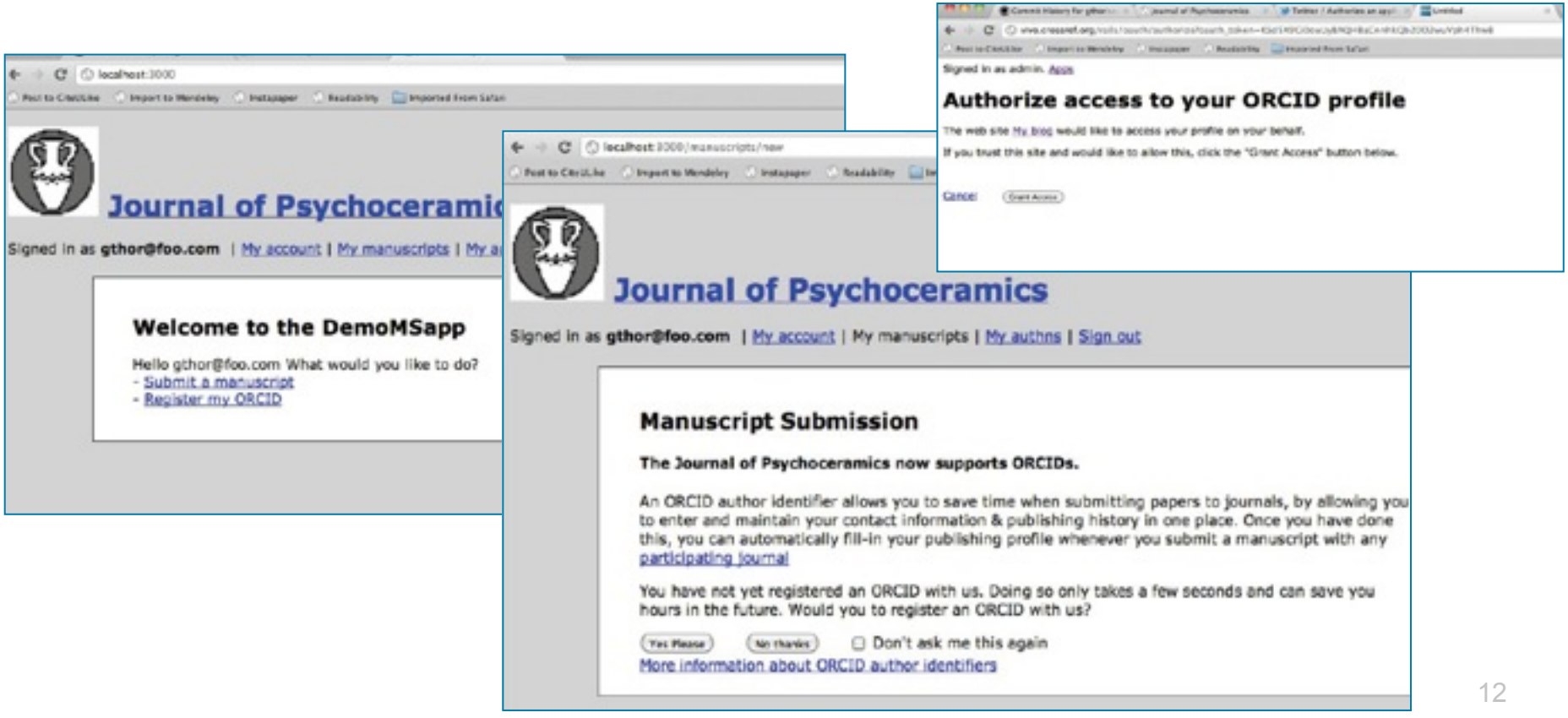
VIVO / ORCID Implementation

- **Objective 1:** ***enabling VIVO user to interactively search for & retrieve records from external bibliographic system and add to their profile***
  - JRuby apps running alongside VIVO servlets inside Tomcat
    - *Very* simple Sinatra app <-- 2x RESTful web service endpoints
    - Wrapper API around CrossRef's SIGG metadata search
  - <200 lines of client-side jQuery JavaScript
    - Interactive UI bits
    - Process biblio-RDF retrieved from DOI metadata service
  - Modify VIVO UI forms (JSPs) + deal with biblio-RDF
  - More useful reference listing in profile + other UI tweaks using Freemarker

- ***Objective 2: enabling VIVO user to identify him/herself to & exchange profile data with external service***
  - Embedded Rails app - runs alongside VIVO servlets
    - Turns VIVO into OAuth provider <-- works with existing VIVO authentication
    - Hooks into VIVO via *JRuby-Rack servlet integration (e.g. is user logged in?)*
    - Reuses existing Rails components, incl. *oauth-plugin for most of the OAuth API*
  - Standalone Rails app
    - Demo OAuth consumer app <-- mockup manuscript tracking system
    - Reuses existing Rails components, incl. *user registration/login/etc.*

VIVO / ORCID Sourcecode

Code: https://github.com/gthorisson/vivo-orcidextensions
Sandbox: http://vivo.crossref.org



August 15th, 2011

ORCID and Thomson Reuters have reached an agreement that enables ORCID to start building the ORCID service based on ResearcherID code. Thomson Reuters has provided ORCID with a perpetual license and royalty free use of ResearcherID code and intellectual property, giving ORCID the critical technology to create its system. The agreement also allows ORCID to build upon the ResearcherID code base under an open source model, speeding the organization's progress towards a registry of unique contributor identifiers and a disambiguation service.

Development Approach

Alpha
- Completed Spring 2010
- Self-claim oriented
- Limited light integration with a few participant services
- Demonstration capabilities transitioning to ORCID source code by end of year

Phase 1
- Development underway
- Development by Semantico under contract with ORCID
- Development led by Geoff Bilder
- Will provide core for future production service
- Will focus on currently active researchers

Phase 1.x and 2
Development 2012+
Will address assertions by wide group of third parties
Will extend capabilities for alternate roles and other types of contributions
Will provide mechanisms for automatic disambiguation of third party donated records

Phase 1 Features

Core ResearcherID.com functionality plus:

- Institutional seeding of profiles (i.e. batch upload, alerting)
- Delegated management of profiles
- Profile exchange into grant/manuscript submission systems
- Fine-grained control of privacy settings at the claim level
  - public="share with anybody"
  - protected="share with parties authorized via OAuth"
  - private="do not share"
- ORCID identifier resolution (both via GUI and REST API)
- Metadata search (both GUI and REST API)

Development Progress: Completed

Phase 1 development is underway. Key developments:

- Early June -Thomson Reuters has provided ORCID with a perpetual license and royalty free use of ResearcherID technology
- June – ResearcherID code delivered and ORCID github repository created
- July – Semantico selected to do Phase 1 development
- Early August – Semantico begins code “cleansing”
- Mid August – Thomson Reuters systems dependencies stubbed out, code compiles and passes 800+ code tests suite
- Early September – Trademark free cleansed code delivered to Thomson Reuters for validation and acceptance prior to open source licensing by ORCID, Inc.
- Early September – Semantico provides detailed code assessment and work plan to Geoff Bilder

Semantico Team

Declan Newman , Will Simpson and Liam Sheerin posing in front of ORCID code system

Semantico Code Assessment

Semantico used the code cleansing activity to validate previous due diligence, familiarize developers with the code, and confirm development plan assumptions.

- Created license audit
- Ported code to Maven / Jenkins automated build environment
- Substantiated code audit conducted September 13, 2010
- Assessment indicates that overall effort from original estimate remains the same
- Beyond planned replacements of bibliographic store, authentication, and services layers, Semantico has made the following detailed observations
    - Replacing bibliographic data store will be easier than anticipated using "vestigial" ResearcherID stand-alone database – provided with code
    - Reevaluated their original recommendation regarding move from iBatis to Hibernate
    - Will replace XML-RPC services with a Jersey-Based RESTful API
    - Will likely replace Struts with Spring MVC

Development Phase 1: Sprints

Sprint 1: Query API

ETA ~ 14-10-2011

Delivery mock query API that third parties can use to start integration work with manuscript/grant tracking, evaluation systems. Deliver deployable WAR.

Sprint 2: Deposit API

ETA ~ 21-10-2011

Delivery mock deposit API that third parties can use to start integration work with manuscript/grant tracking, evaluation systems. Deliver deployable WAR.

Sprint 3: Deposit API

ETA ~ 10-11-2011

Hook-up front-end to API backend.

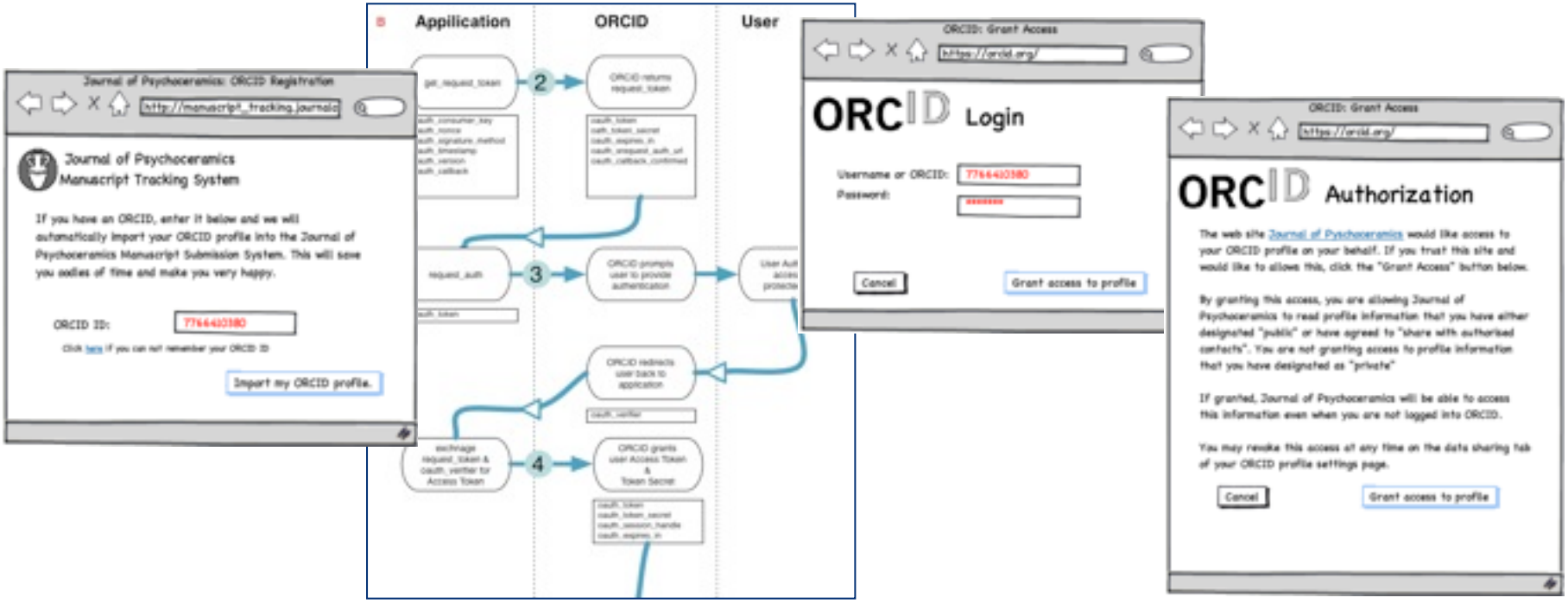
Sprint 4: Templating

ETA ~ 18-11-2011

Spring MVC/Security & FreeMarker integration.

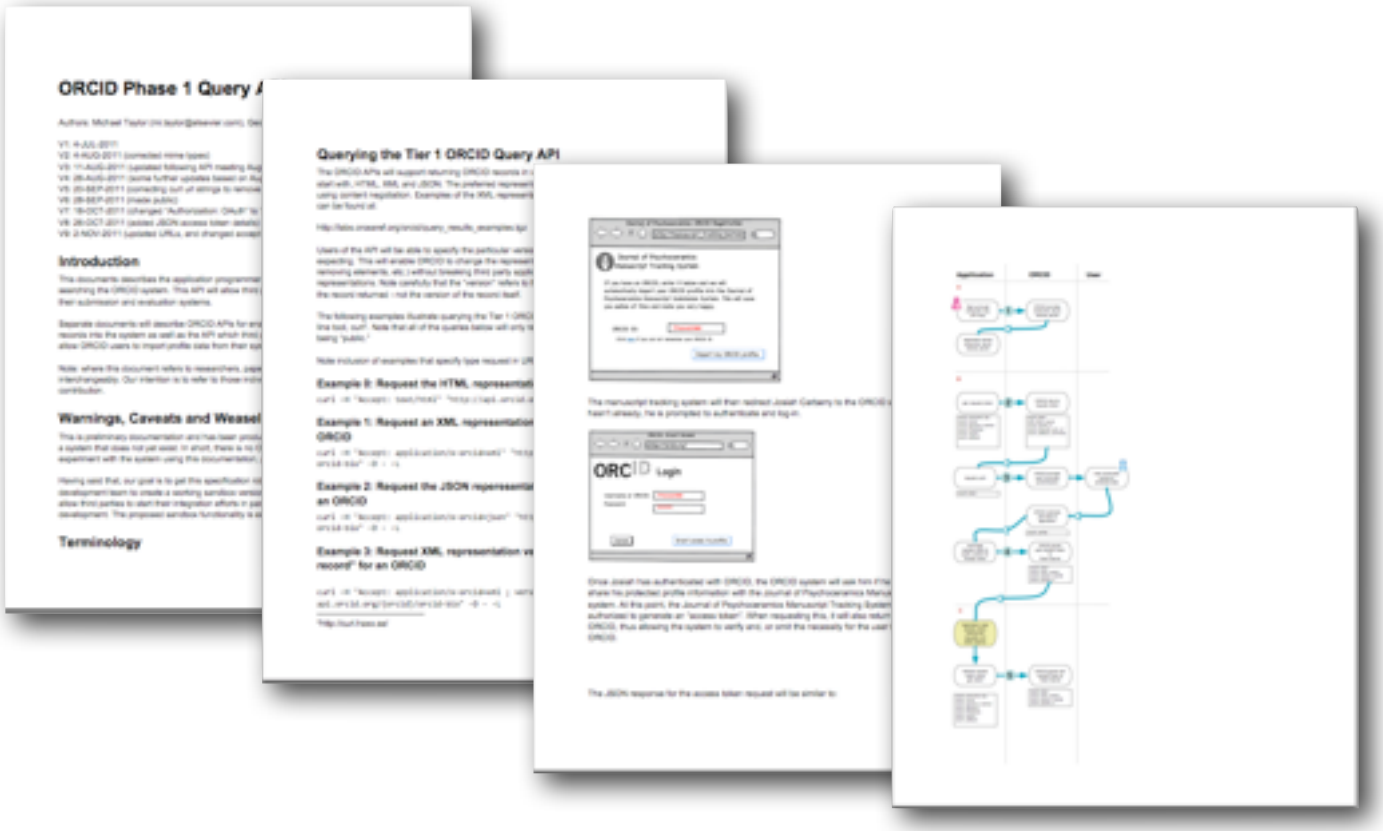
Development Approach: OAuth

- API document also addresses OAuth integration with external sites
- OAuth development will leverage work done by Gudmundur Thorisson on VIVO-ORCID mini-grant
- ORCID will provide a stand-alone server codeset with sample responses for integration development of community partner sites.



ORCID Phase 1 Query API Specification

http://goo.gl/ctWIR



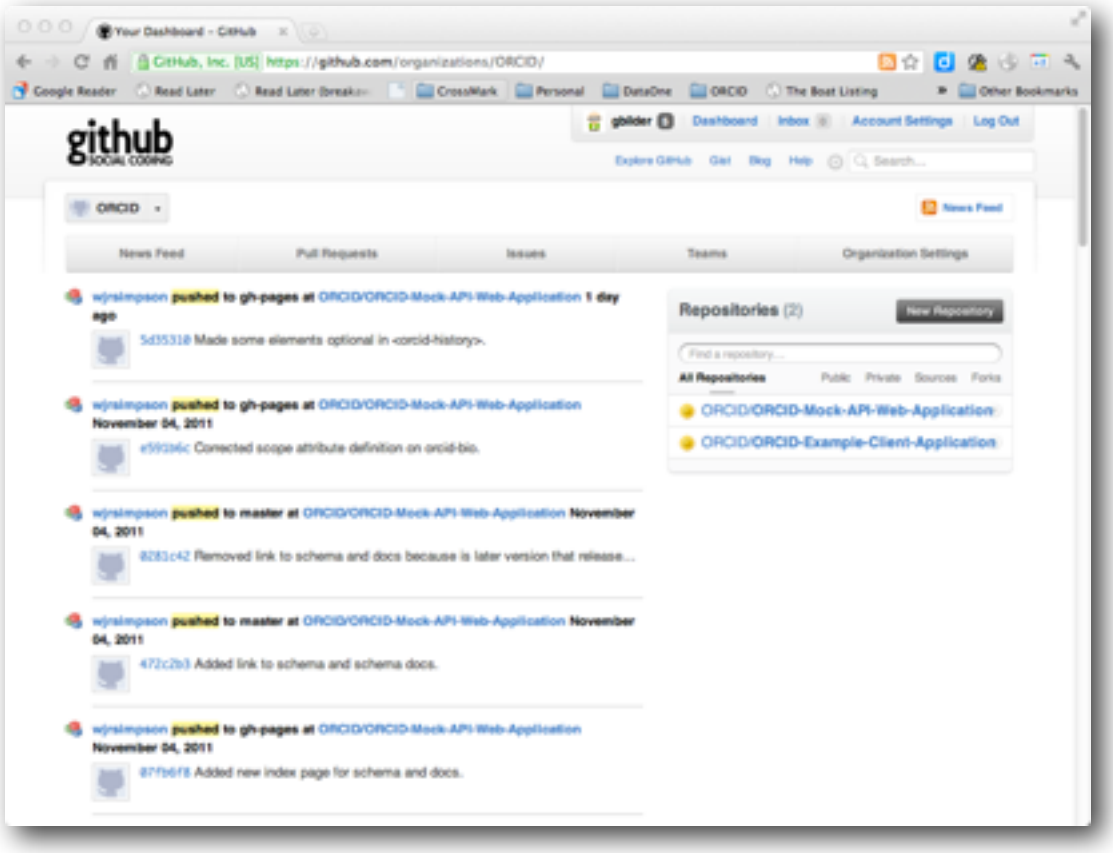
Query API supports the following query types:

Name	Key	Returned	Description
Bio	ORCID	Profile metadata	Given a party, give me name and affiliation data.
Works	ORCID	List of work metadata	Given a party, tell me what works they have contributed to.
Full	ORCID	Profile metadata, work metadata and ORCIDs	Given an party, tell me what works they have contributed to, name and affiliation data.
Work	Work identifiers (e.g. DOIs)	ORCIDs & associated metadata	Given a work, tell me what parties are responsible for it.
Search	ORCID, Work identifiers, or profile metadata	ORCIDs & associated metadata	Given whatever metadata I have, give me a ranked list of potential parties identified by that metadata.

November 2nd, 2011

The ORCID Phase 1 Query API Mockup

https://github.com/ORCID



ORCID Phase 1 Deposit/Write API

ORCID Deposit/Update API

Table of Contents

Page 1 o

Success result	<orcid-message> returned, containing just <orcid-wo details in the <orcid-works>, even if the researcher or marked them in ORCID as protected

User grants update access to biographical d

This call should be used when the client system wants to update contributor's biographical details.

OAuth scope	/orcid-bio/update
OAuth time frame	Single update, within 5 minutes
HTTP Method	PUT
URL	/{ORCID}/orcid-bio
Request body	<orcid-message> containing just <orcid-bio>
Success HTTP code	200 OK
Success result	<orcid-message> containing just <orcid-bio> returne updated in database.

User grants permission to add a new work

This call is used when the client system wants to add a new work t contributor's list of works.

The client system should ask for confirmation from the researcl before adding a work, to avoid adding duplicate works to the list. process should include showing the current list of works for the use

So, the scope /orcid-works/create inherits /orcid-works/read-pe full current list of works can be shown to the user.

OAuth scope	/orcid-works/create
OAuth time frame	Single create, within 5 minutes
HTTP Method	POST
URL	/{ORCID}/orcid-works
Request body	<orcid-message> containing just <orcid-work>
Success HTTP code	201 Created

Page 6 of 18

XML message structure

The structure of ORCID API response reflects the use cases, and the security model. In others words, a request for authorisation to read or update a set of fields corresponds to a single XML element in the response.

The XML elements that correspond to OAuth scopes are 'first class citizens' in the ORCID XML.

XML element	Description	Notes
<orcid>	The Open Researcher & Contributor Identifier	Immutable
<orcid-history>	The history of the record within ORCID	This is maintained internally by ORCID so would never be updated directly by external client systems. It is a basic log of when the profile was created, etc.
<orcid-bio>	The biographical details of the researcher or contributor	The researcher or contributor can grant update access to the whole of their biographical details.
<contact-details>	The contact details of the researcher or contributor	The researcher or contributor should have the option to make their biographical details available to the public API, without exposing their personal contact details.
<external-identifiers>	Identifiers from systems other than ORCID	We should allow for the possibility of cross-posting of identifiers from other systems. In this case the researcher or contributor would only want to allow an external identifier to be added, without exposing access to any other data.
<orcid-works>	The works by the researcher or contributor	The researcher or contributor can choose to grant access for adding a new work – this is analogous to posting the new work to their Twitter time-line. Also, the researcher or contributor can grant the client system full control over their entire list of works.

Page 12 of 18

crossref

Full Read/Write API Mockup On Github Soon!

https://github.com/ORCID

ORCID ID Syntax Finalised

Opaque, numeric, non-sequential, with a ISO/IEC 7064:2003, MOD 11-2 check-sum and expressed as HTTP URI.

http://orcid.org/0137-1963-7688-2319

http://orcid.org/0243-4126-4084-6509

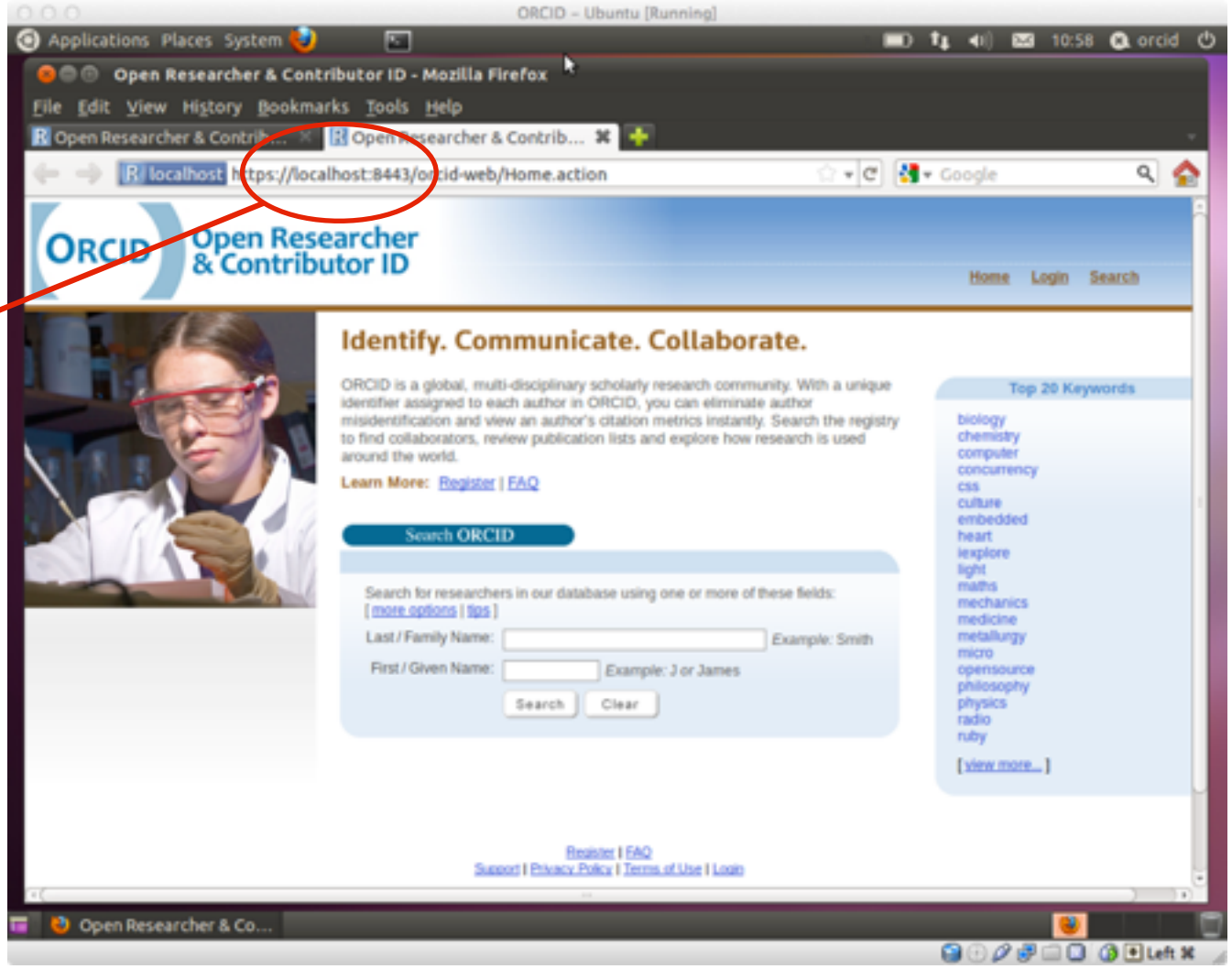
http://orcid.org/1792-3336-9172-961X

"Structure of the ORCID Identifier" http://goo.gl/zAF7I

Gratuitous Screenshots

ORCID Phase 1 in Development

Running on "localhost"



Applications Places System 10:58 orcid

Open Researcher & Contributor ID - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib...

localhost https://localhost:8443/orcid-web/Home.action

Google

ORCID Open Researcher & Contributor ID

Home Login Search

Identify. Communicate. Collaborate.

ORCID is a global, multi-disciplinary scholarly research community. With a unique identifier assigned to each author in ORCID, you can eliminate author misidentification and view an author's citation metrics instantly. Search the registry to find collaborators, review publication lists and explore how research is used around the world.

Learn More: Register | FAQ

Search ORCID

Search for researchers in our database using one or more of these fields:
[more options | tips]

Last / Family Name: *Example: Smith*

First / Given Name: *Example: J or James*

Search Clear

Top 20 Keywords

biology
chemistry
computer
concurrency
css
culture
embedded
heart
iexplore
light
maths
mechanics
medicine
metallurgy
micro
opensource
philosophy
physics
radio
ruby

[view more...]

Register | FAQ
Support | Privacy Policy | Terms of Use | Login

Open Researcher & Co...

Applications Places System 10:56 orcid

Open Researcher & Contributor ID - Mozilla Firefox

File Edit View History Bookmarks Tools Help

localhost https://localhost:8443/orcid-web/SelfRegistrationCheck.action

ORCID Open Researcher & Contributor ID

Close

Notice:

Your ORCID invitation is on its way. Please check your inbox.

Thank you for your interest in ORCID.

Register | FAQ
Support | Privacy Policy | Terms of Use | Login

[Open Researcher & C... Open Researcher & Co...

Applications Places System 11:01 orcid

Open Researcher & Contributor ID - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib...

localhost https://localhost:8443/orcid-web/ProfileGet.action

ORCID Open Researcher & Contributor ID

Home | My Researcher Profile | Refer a Colleague | Logout | Search

Personal Information | My Affiliations | Password | Options | Return to My Researcher Profile

Update your information. Optionally, use the "public" setting to indicate which information to display on your Profile page. Clear a public check box to make that information private. Note: Click the "Submit Changes" button on each page. * required fields.

Submit Changes on this Page | Cancel

Public (Master)	First / Given Name:	Joisah *	**Public (Master):** Clear the "Public (Master)" check box to make your information private. Only you, when logged in, will be able to view your information.
	Last / Family Name:	Carberry *	
	Middle Initials:	S	**Name:** Your name will be searched and displayed on your profile page.
	ORCID ID:	A-1001-2011	**ORCID ID:** This is your unique identification.
Public	Other Names Used by You:	Add J. Carberry J. S. Carberry jcarberry Remove	**Other Names:** If you've published under different names or if you are known by more than one name, enter Other Names. These will be searched if made public.
Public	URL:	http://www.orcid.org/orcid-web/A-1001-2011	**URL:** The URL can be used to link directly to your profile page.

Open Researcher & C... | username-password.t...

Applications Places System 11:08 orcid

Open Researcher & Contributor ID - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib...

http://localhost:8080/orcid-web/Workspace.action

Google

ORCID Open Researcher & Contributor ID

Home | My Researcher Profile | Refer a Colleague | Logout | Search

Carberry, Joisah

Manage Profile | Preview Public Version

ORCID ID: **A-1001-2011**

Other Names: **J. Carberry; J. S. Carberry; jcarberry**

E-mail:

URL: **http://www.orcid.org/orcid-web/A-1001-2011**

Role:

Subject: **Anthropology; Archaeology; Area Studies; Arts & Humanities - Other ; Astronomy & Astrophysics; Behavioral Sciences; Biophysics**

Keywords: **psychoceramics; bilocation; high-energy metaphysics**

Description: Enter a Description

My URLs:

My Institutions (more details)

Primary Institution: Brown University

Sub-org./Dept: Psychoceramics

Role: Professor

Joint Affiliation:

Sub-org./Dept:

Role:

Past Institutions:

My External Identifiers:

Publications

0
View Publications
Manage | Add

0
View Publications
Manage | Add

: View

Add Publications

Welcome to your ""

The "" is an area to which you can add publications that you have authored.

To add publications, click the **Add** link located in the menu on the left-hand side of your screen, or by clicking on the **Add Publications** above.

You have the ability to make your "" public to visitors of ORCID for promotion of your scholarly output. Click on the **Manage Profile** button at the top-right corner of the page to change the public and private settings of your data. Note that

Open Researcher & C ... ne-password.t...

Applications Places System 11:09 orcid

Open Researcher & Contributor ID - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib...

localhost https://localhost:8443/orcid-web/ViewHomePageProfileSearch.action;js

Google

ORCID Open Researcher & Contributor ID

Home | My Researcher Profile | Refer a Colleague | Logout | Search

Search ORCID | Top Keywords

Show Search Options

Results

Researchers: 1 result(s) Page 1 of 1 Go Sort by: Name

	Name	Institution(s)	Researcher ID	Keywords	Other Names
1.	Joisah Carberry	Brown University	A-1001-2011	psychoceramics , bilocation , high-energy metaphysics	J. Carberry , J. S. Carberry , jcarberry

Researchers: 1 result(s) Page 1 of 1 Go

Register | FAQ
Support | Privacy Policy | Terms of Use | Logout

Open Researcher & C ...e-password.t...

Applications Places System 11:11 orcid

Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib... | https://localh...rcid-support/

localhost https://localhost:8443/orcid-support/

ORCID

Support utility

Search

Edit Researcher | Admin Contact

Enter the ORCID or the E-mail Address:

ORCID:

- or -

E-mail Address:

Search Clear

Mozilla Firefox [username-password....

Applications Places System 11:12 orcid

Mozilla Firefox

File Edit View History Bookmarks Tools Help

Open Researcher & Contrib... | Open Researcher & Contrib... | https://localh...Profile.action

localhost https://localhost:8443/orcid-support/ViewProfile.action

ORCID

Support utility

Search

Edit Researcher | Admin Contact

The information below was provided by the registered user. Use this information to verify that the caller is actually this registered user. Then verify their e-mail address is correct

- You can e-mail the user their password by clicking the "E-mail Password" button.
- If the user's e-mail address has changed, then edit the e-mail address and click the "Save E-mail and Send Password" button.

Lock | Delete

	Status:	CONFIRMED	
Public (Master)	Last / Family Name:	Carberry *	**Public (Master):** Clear the "Public (Master)" check box to make your information private. Only you, when logged in, will be able to view your information.
	First / Given Name:	Joisah *	
	Middle Initials:		**Name:** Your name will be searched and displayed on your profile page if made public.
	ORCID:	A-1001-2011	**ORCID:** This is your unique identification.
Public	URL:	http://www.orcid.org/orcid/A-1001-2011	**URL:** The URL can be used to link directly to your profile page.
Private / Public / Registered Users Only	Email Address:	* E-mail Password / Save E-mail and Send Password	**Email address:** Enter your Email address so orcid.org can contact you. You can choose to make your Email public to all visitors to your page, or just to registered researchers.

Mozilla Firefox | [username-password....

Thank You

gbilder@crossref.org

Disambiguation without de-duplication: Modelling authority and trust in the ORCID system
http://www.orcid.org/node/615

The ORCID Phase 1 Query API Specification
http://goo.gl/ctWIR

The ORCID Phase 1 Query API Mockup
https://github.com/ORCID

The ORCID Phase 1 Deposit/Write API Specification
http://goo.gl/MDob1

Structure of the ORCID Identifier
http://goo.gl/zAF71