A Research-Output Repository Platform

Alex D. Wade
Research Program Manager
Microsoft Research

Digital Object Repository Systems in Digital Libraries (DORSDL2)
18 September 2008, Aarhus, Denmark

Goals

- Create a platform for building repositories
- Create a platform for exploring semantic computing
- Produce a collection of basic services and tools
- Enable a community-driven ecosystem for further development
- Provide freely available to the community

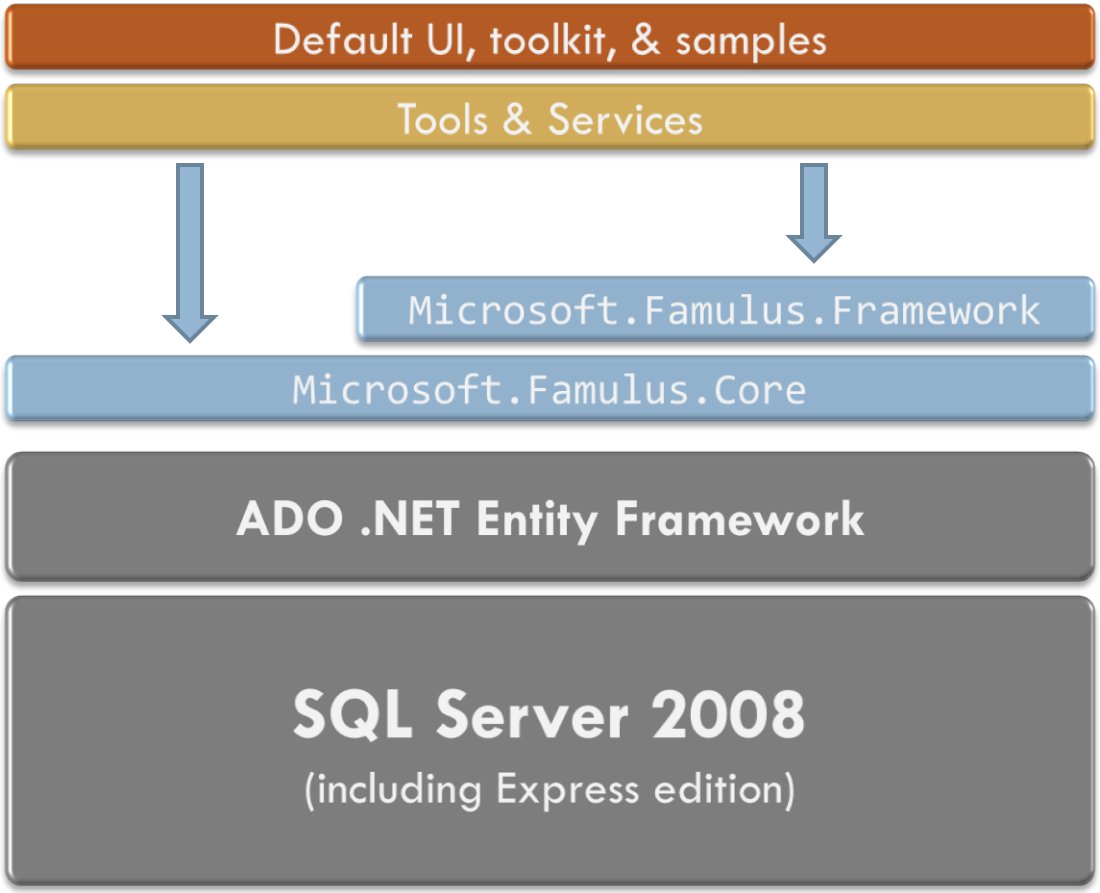
- Become the repository for Microsoft Research output
  - Surfaced on http://research.microsoft.com
  - Papers, Videos, Presentations, Lectures, References, Data, Code, etc

Motivation

- Customer Requests
- Internal MSR efforts
- Research
  - Collaborative filtering and social networks
  - Integration with other applications
  - Lots of other ideas!
- Microsoft product team leverage

"I told them we've already got one!"

Architecture



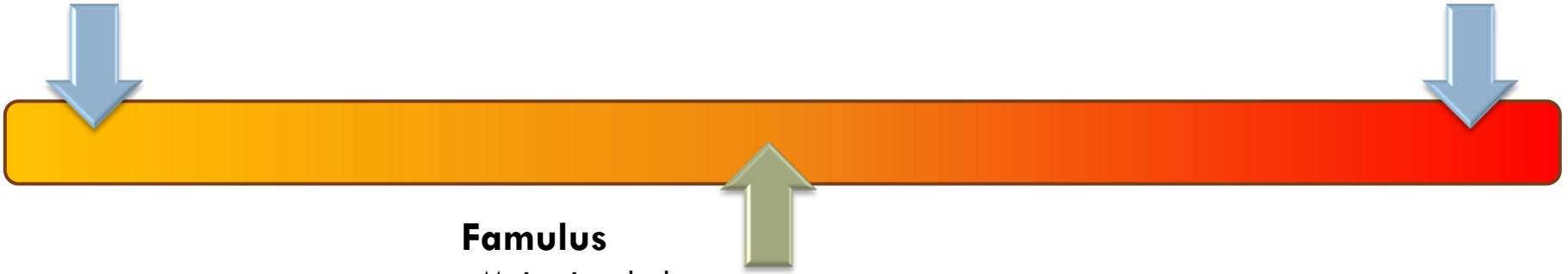
Core + Framework

A Semantic Computing Platform

- Promote the use of semantic relationships between objects
- Create hybrid between a relational database and a triple store in order to leverage the benefits of each model

Triplet stores
- Evolution friendly
- Poor performance
- No need to model everything in advance
- Semantic interpretation at the application level

Relational schema
- Evolution not so easy
- Great opportunities for optimization
- Model everything in advance



Famulus
- Maintain a balance
- Try to model the frequently used entities in our app domain
- Try to capture the frequently used relationships
- Allow for extensibility (Relationships, Attributes)

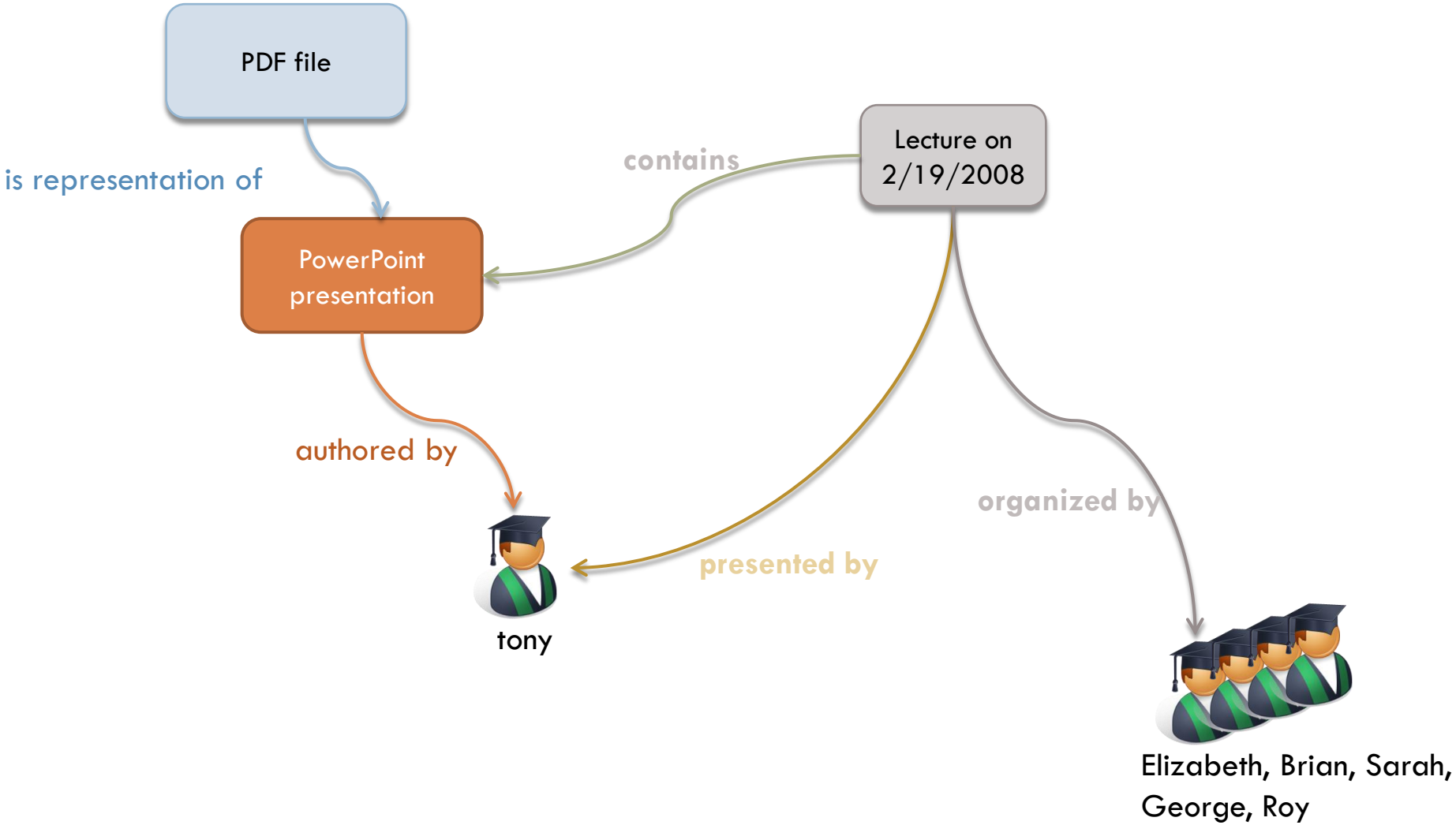
Core + Framework

- Core API
- Framework API
  - LINQ & SPARQL support for querying
- Initial Configuration
  - Schema defined via RDFs/OWL
  - Standard schema provided (paper, proceeding, author, institution, etc.)
- Easy Extensibility
  - Add new entity, property, relationship types
- Change History logging

An intuitive programming experience

```
Person tony = new Person();

Publication pub1 = new Publication();
pub1.Title = "Title1";

Publication pub2 = new Publication();
pub2.Title = "Title2";

pub1.Cites.Add(pub1);
pub1.Authors.Add(tony);

Tag tag = new Tag();
tag.Name = "keyword";
pub1.Tags.Add(tag);
```

Capturing Semantic Relationships



Services

Designed for Interoperability

- Import/Export tools
  - RDF/XML
  - BibTeX Service
- Syndication and Re-Use
  - RSS/Atom Syndication support
  - OAI-PMH Data Provider
  - OAI-ORE support
- Search
  - Simple Search API
  - Structured Query service
- Ingest/Publishing
  - Atom Publishing Protocol
  - SWORD

User Interface

- Default UI
- UI Toolkit
- Samples

Microsoft

15 : 48 GMT , Sunday

Research Output Repository Demo

Advanced Search

Home | Manage Scholarly Works | Manage Tags & Categories | Manage Person | Online Help

Popular Tags

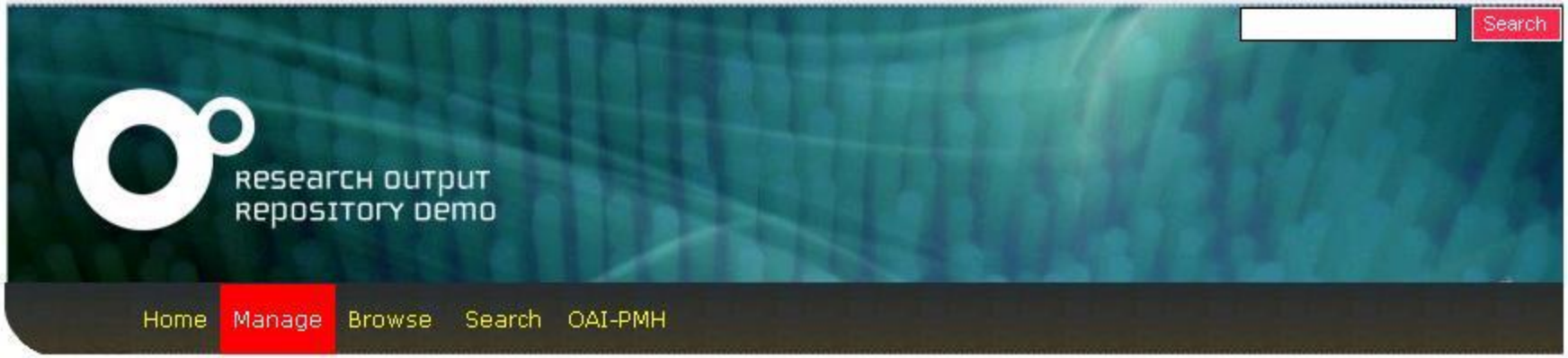
AJAX FOAF Web Standards Web 2.0 Syndication Open APIs Sematic REST :-) Affiliation RSS ATOM

Recently added Scholarly Works

Title	Description	Authors	Contributors

Recently modified Scholarly Works

Title	Description	Authors	Contributors

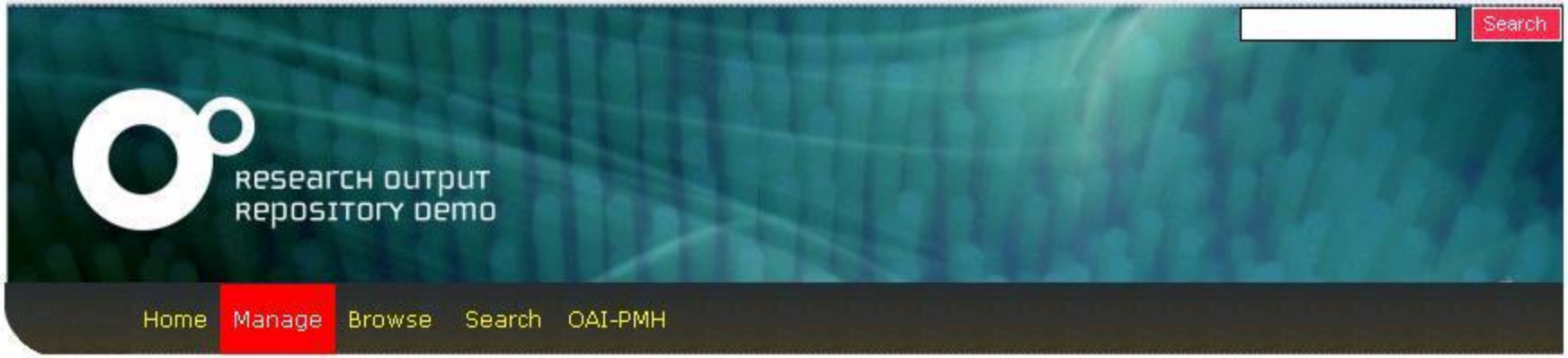


Navigation Link
Manage Scholarly Works
Add Scholarly Work
Resource Association
List Scholarly Work
Resource Details
Import Citations
Manage Tag
Add Tag
List Tag
Tag Details
Manage Category
Add Category
List Category
Category Details
Manage Contact
Add Contact
Add Person
Add Organization
List Contact Type

Select Resource Type

- Media
  - Audio
  - Image
  - Video
- Download
  - Code
  - Software
  - Data
- ElectronicSource
- ScholarlyWork
  - Publication
    - TechnicalReport
    - JournalArticle
    - Book

Next



Navigation Link
Manage Scholarly Works
Add Scholarly Work
Resource Association
List Scholarly Work
Resource Details
Import Citations
Manage Tag
Add Tag
List Tag
Tag Details
Manage Category
Add Category
List Category
Category Details
Manage Contact
Add Contact
Add Person
Add Organization
List Contact Type

Create Publication

Generic Properties

Title : *

DateAvailableFrom :

DateAvailableUntil :

DateValidFrom :

DateValidUntil :

Description :

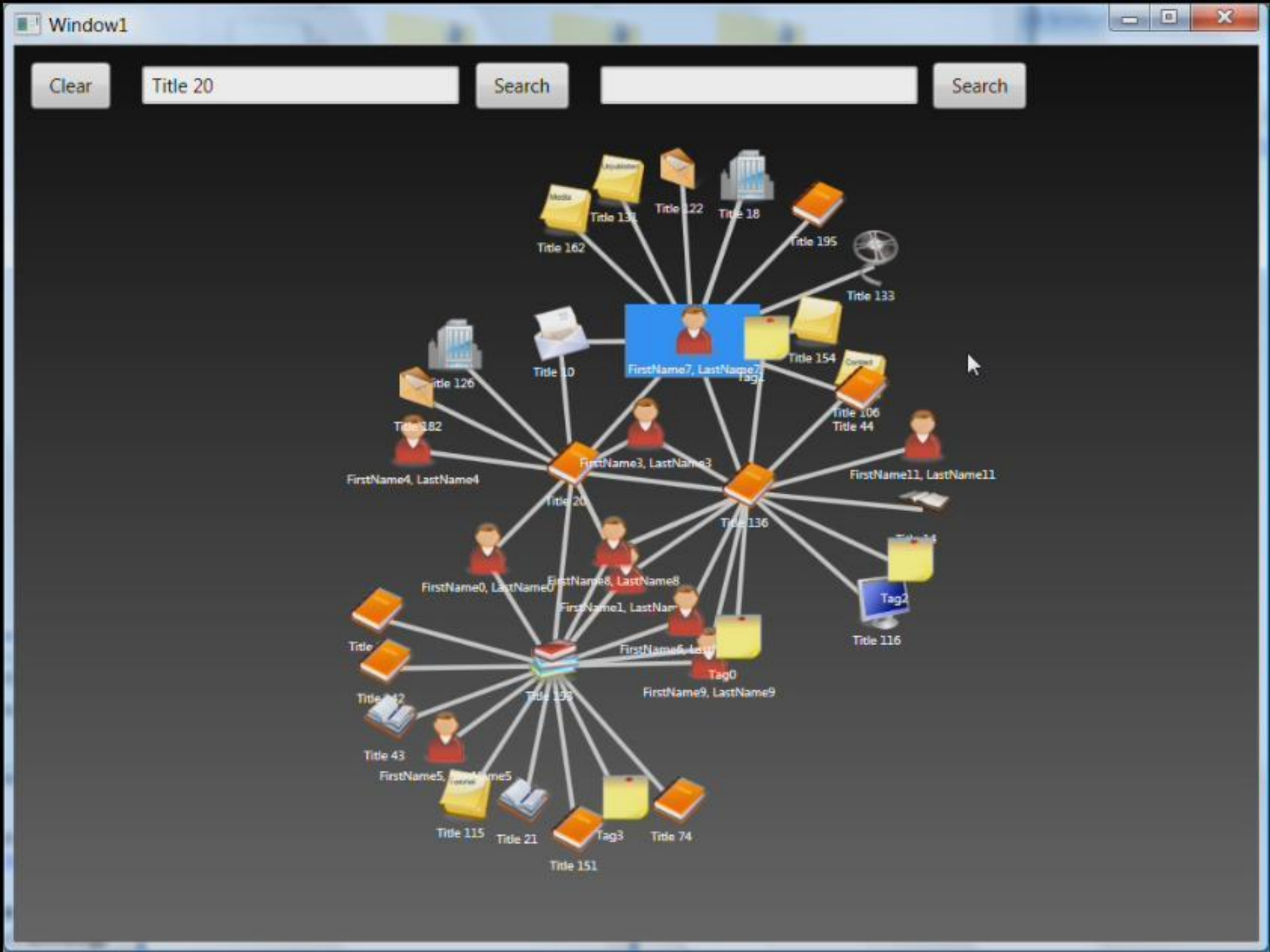
Notes :

Uri :

Scope :

UI Toolkit & Samples

- Toolkit
  - Visual Studio 2008 integration
  - Default UI composed of individual ASP.NET Web UI controls UI
- Samples
  - Gazer – graphical network browser
  - FacetLens – facet browser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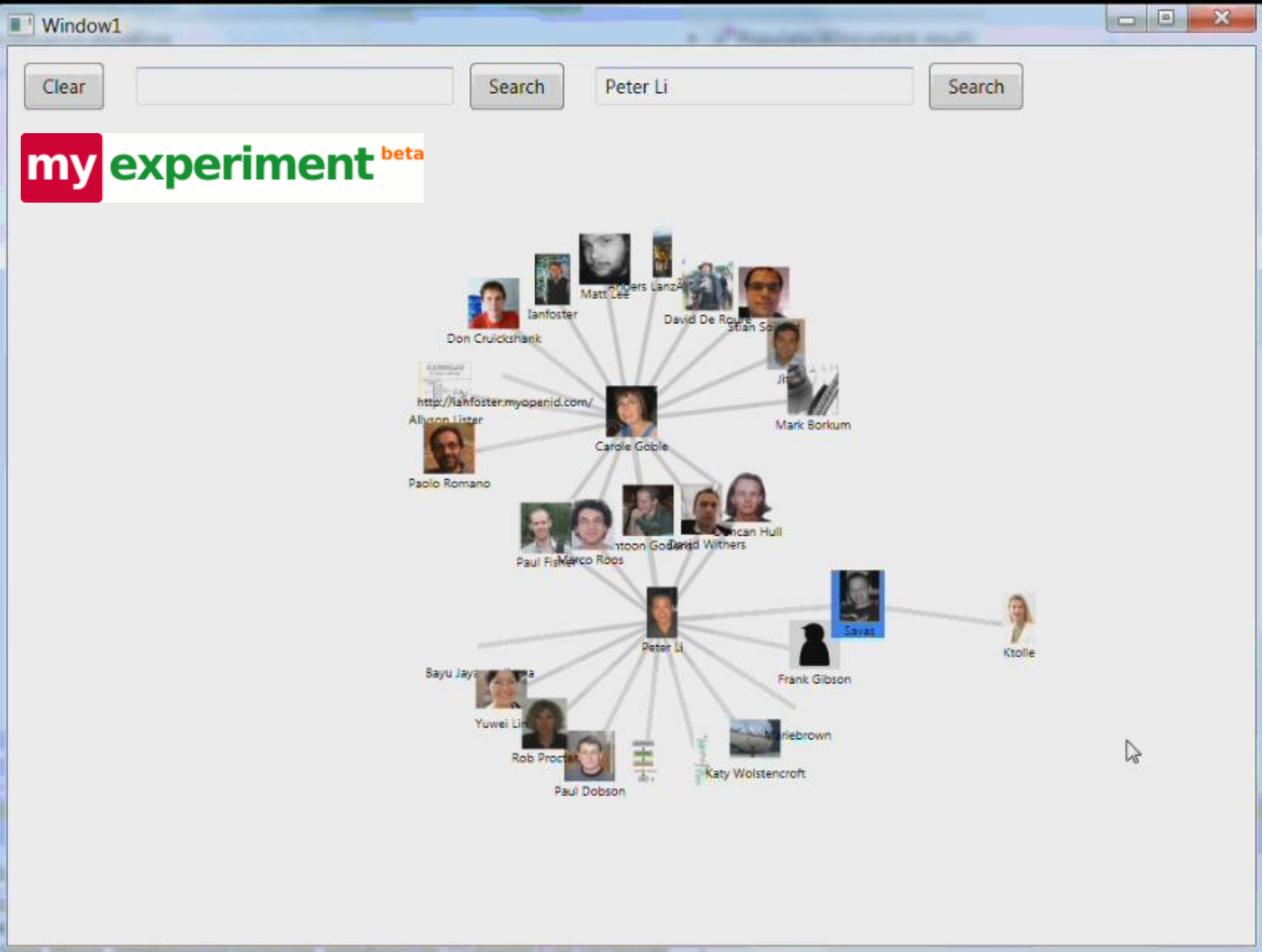
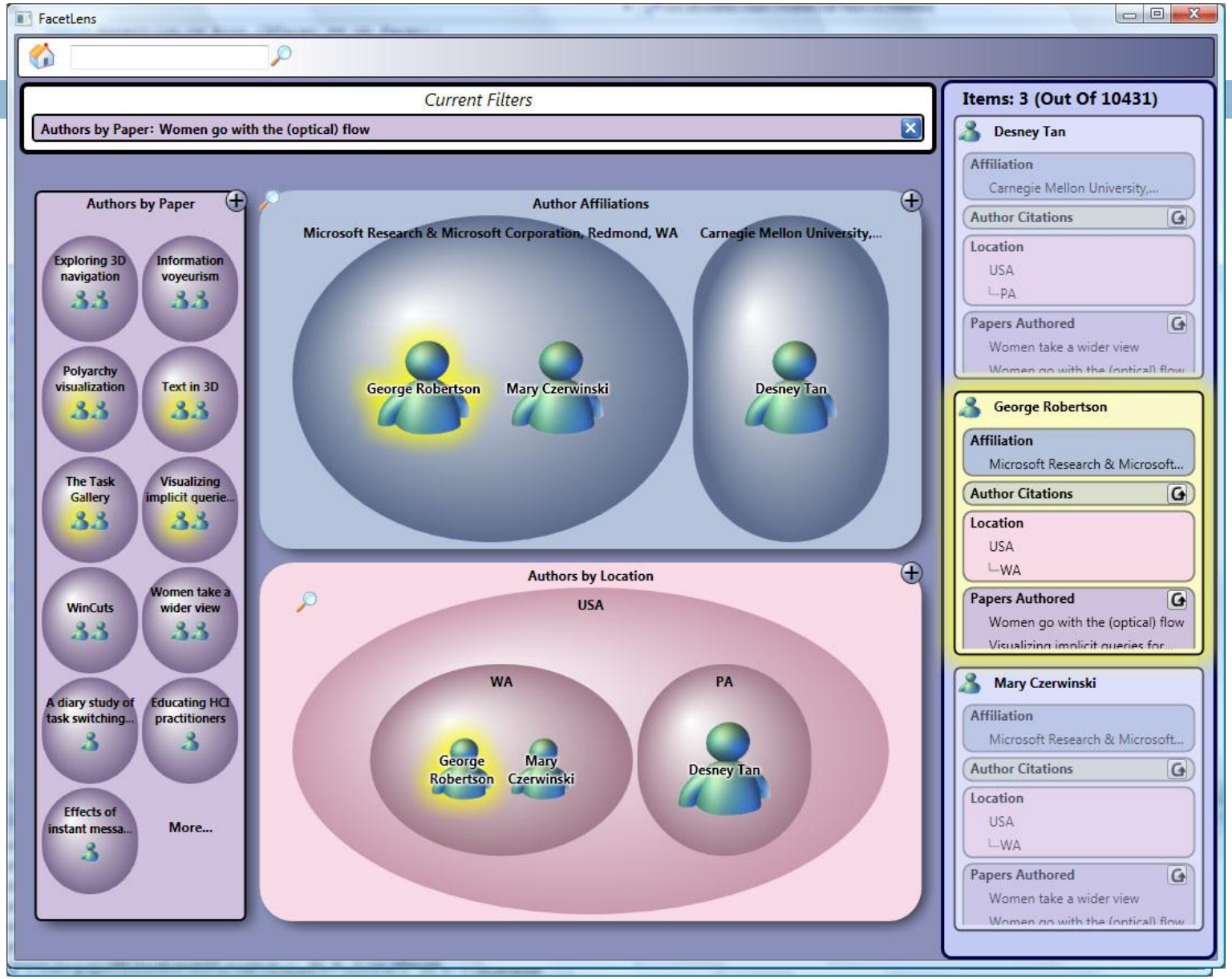
Title 20
Search
Search
Title 162
Title 18
Title 195
Title 133
Title 154
Title 10
Title 126
Title 182
FirstName4, LastName4
Title 106
Title 44
FirstName11, LastName11
Title 20
Title 136
FirstName0, LastName0
FirstName8, LastName8
Tag2
Title 116
Title
Tag0
FirstName9, LastName9
Title 43
Title 115
Title 21
Tag3
Title 74
Title 151


Window1
Clear
Search
Peter Li
Search
my experiment beta
Matt Lee
Ianfoster
Don Cruickshank
David De Roure
Carole Goble
Mark Borkum
Paolo Romano
Marco Roos
Peter Li
Savas
Ktolle
Frank Gibson
Yuwei Lin
Rob Procter
Paul Dobson
Katy Wolstencroft

FacetLens


FacetLens
Current Filters
Authors by Paper: Women go with the (optical) flow
Items: 3 (Out Of 10431)
Authors by Paper
Exploring 3D navigation
Information voyeurism
Polyarchy visualization
Text in 3D
The Task Gallery
Visualizing implicit querie...
WinCuts
Women take a wider view
A diary study of task switching...
Educating HCI practitioners
Effects of instant messa...
More...
Author Affiliations
Microsoft Research & Microsoft Corporation, Redmond, WA
Carnegie Mellon University,...
George Robertson
Mary Czerwinski
Desney Tan
Authors by Location
USA
WA
PA
George Robertson
Mary Czerwinski
Desney Tan
Desney Tan
Affiliation
Carnegie Mellon University,...
Author Citations
Location
USA
PA
Papers Authored
Women take a wider view
George Robertson
Affiliation
Microsoft Research & Microsoft...
Author Citations
Location
USA
WA
Papers Authored
Women go with the (optical) flow
Mary Czerwinski
Affiliation
Microsoft Research & Microsoft...
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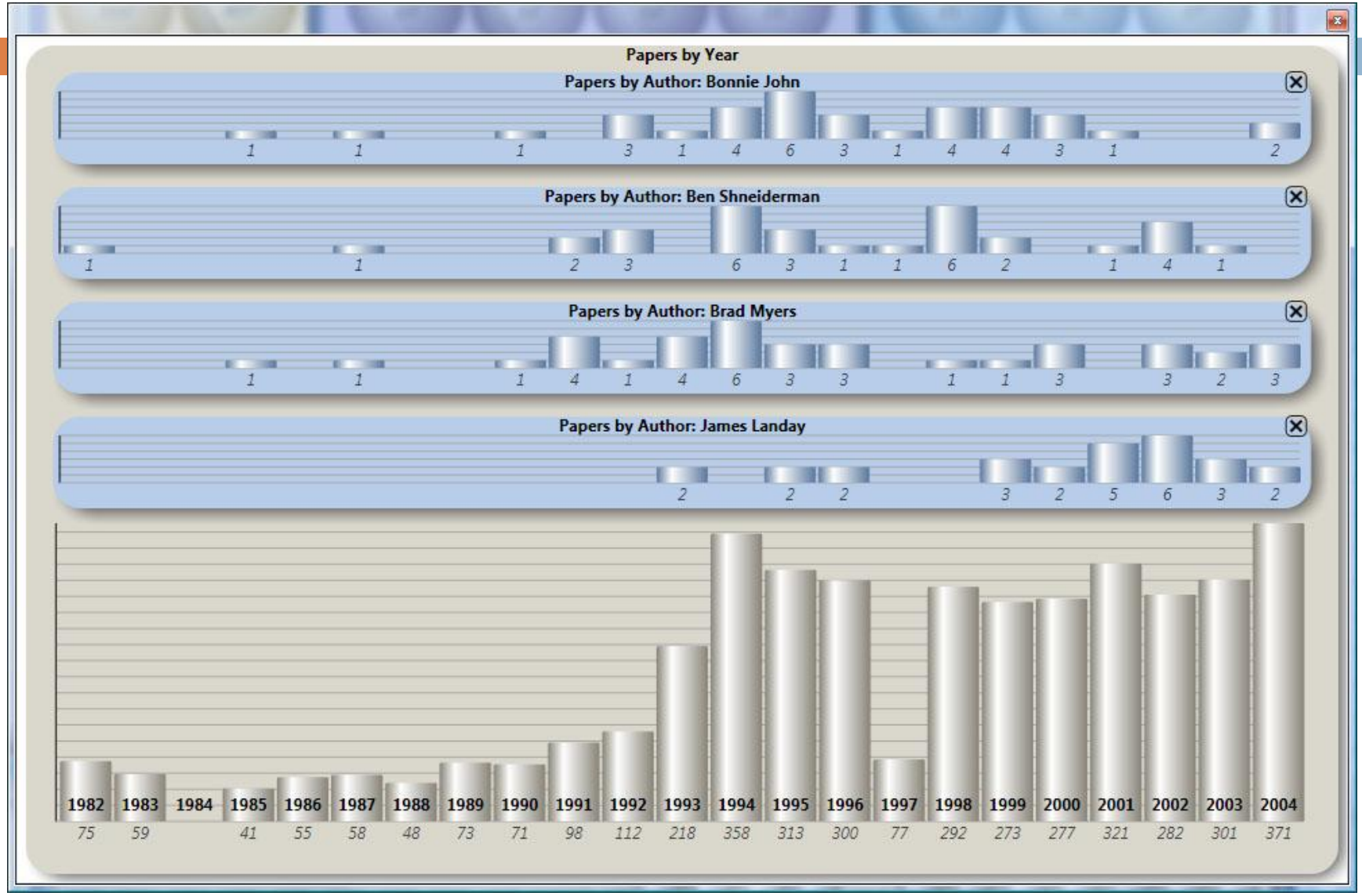
Location
USA
WA
Papers Authored
Women take a wider view

FacetLens


Papers by Year
Papers by Author: Bonnie John
1 1 1 3 1 4 6 3 1 4 4 3 1 2
Papers by Author: Ben Shneiderman
1 1 2 3 6 3 1 1 6 2 1 4 1
Papers by Author: Brad Myers
1 1 1 4 1 4 6 3 3 1 1 3 3 2 3
Papers by Author: James Landay
2 2 2 3 2 5 6 3 2
1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
75 59 41 55 58 48 73 71 98 112 218 358 313 300 77 292 273 277 321 282 301 371

Schedule

Date	Task
June 08	1st Milestone complete
July 08	Limited Tech Preview Release
September 08	2nd Milestone Complete
October 08	Public Beta Release
December 08	3rd Milestone Complete
Early 2009	Release

More Information:

- http://www.microsoft.com/scholarlycomm/
- scholar@microsoft.com

Related Applications

Bilingual viewer

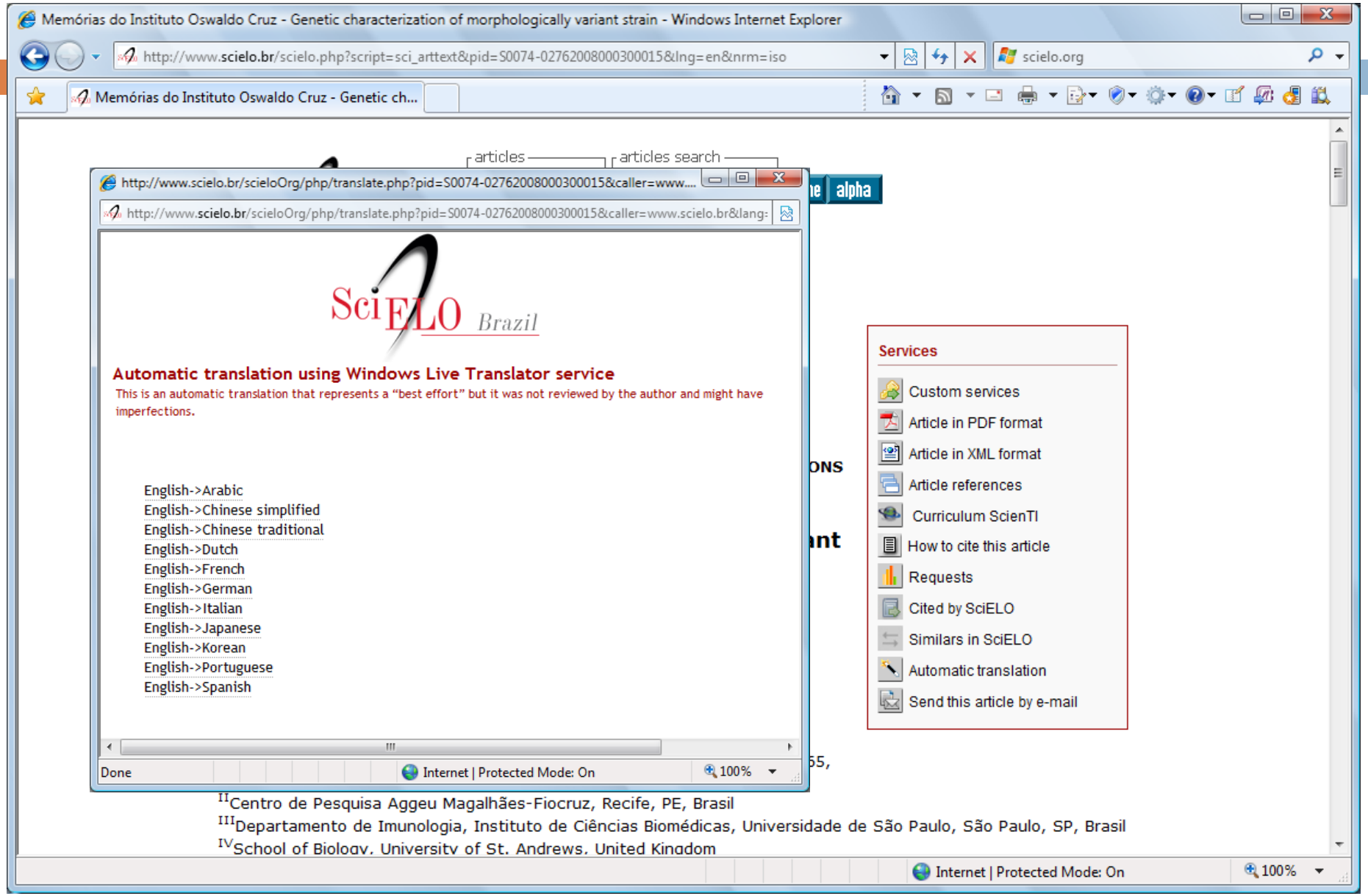
Research Information Centre VRE

eJournal Service

Article Authoring Add-in

Ingest Explorations

Bilingual Viewer



Bilingual Viewer

Translator - Translate a web page - Windows Internet Explorer

http://www.windowslivetranslator.com/BV.aspx?ref=AddIn&lp=en_pt&a=http://www.scielo.br/scielo.php?script=sci_ar

Translator - Translate a web page

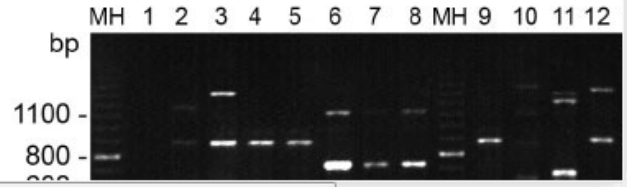
Windows Live™ Home Hotmail Spaces OneCare | MSN Search

Translate URL http://www.scielo.br/scielo.php?script=sci_arttext&pid=s0074-027 English - Portuguese Views Translator Home Add to Favorites

Original: English Go to original page **Translated:** Portuguese Is this translation helpful?

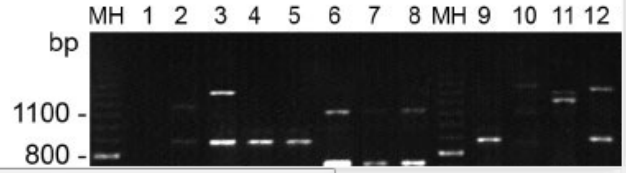
h, and then production of the fused protein GST-CEJA1 was induced with 0.1 r
thiogalactoside. The proteins were separated by SDS-PAGE, transferred onto a
probed with mouse serum infected with the wild-type *P. brasiliensis* strain.

The morphological differences and preservation lengths among the *P. brasiliens*
presented in Table. The morphological analysis and strain categorization was c
analysis, in order to avoid selection bias. The strains Pb 18 and 339 were main
typical morphology and are described as virulent (Kashino et al. 1990, Vaz et a
strain with typical morphology that had been kept under mineral oil, which was
it is virulent (Borba & Schäffer 2002). The Pb IOC variant strains were classifie
on the basis of: (I) large quantities of thin and thick filaments with dilatations
filaments with terminal and intercalary dilatations and yeast-like cells; (III) fev
quantities of budding yeast-like cells (Fig. 3). The primer OPF-08 was able to a
isolates Pb 18, 339 and Pb IOC 3698 presented very similar RAPD fingerprinting
that was not present in the morphologically variant non-pathogenic strains. Th
repeated on at least three different occasions to ensure reproducibility. The 1
significant genetic diversity, but by taking a threshold similarity coefficient of
into five groups (Fig. 2).



em seguida, a produção da proteína electrofundida que GST-CEJA1 foi induzida
thiogalactoside. As proteínas foram separadas por SDS-página, transferidas pa
e testadas com soro de mouse infectado com o tipo selvagem *brasiliensis p.* es

As diferenças de características morfológicas e a comprimentos de preservaçã
brasiliensis estudados aqui são apresentados no quadro . A categorização de a
feita antes para a análise de tipagem molecular, para evitar o preconceito de s
foram mantidas em agar slants, revelou a morfologia típica e são descritos com
1990, Vaz et al. 1994). PB COI 3698 foi a estirpe apenas com morfologia típica
mineral, que foi para um período de tempo de 16 anos, e é virulentos (Borba &
variante foram classificados em três grupos morfológicos base: (I) grandes qua
grossas com dilatations e rara levedura - como células; (II) espessos filamento
dilatations e células de levedura-semelhante; (III) algumas filamentos espesso
fermento gemulação dioxina células (Fig. 3). A primer OPF-08 foi capaz de co
isola PB 18, 339 e PB COI 3698 apresentado impressões muito semelhantes RAI
fragmento de 750 bp que era não presente nas estirpes não patogénicas morfo
de RAPD-PCR foram repetidas em pelo menos três ocasiões diferentes para ass
estirpes de *brasiliensis p.* 14 revelaram significativa da diversidade genética, m
similaridade de limiar de 72 %, foi possível dividi-las em cinco grupos (Fig. 2).



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Done Internet | Protected Mode: On 100%

British Library for Research

A one stop solution for carrying out **research studies** in planned & phased manner and **networking** with fellow community members

Plan The Research
Search for study ideas, plan the study, and apply for funding.

Network
Connect with fellow researchers for sharing ideas, resources etc.

Experiment
Use online tools to achieve faster results.

Publish
Disseminate the study results for the public.

Existing RIC Members

Username:

Password:

Remember Me

Login

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New to RIC?

Sign Up

Currently in beta evaluation, directed by The British Library.

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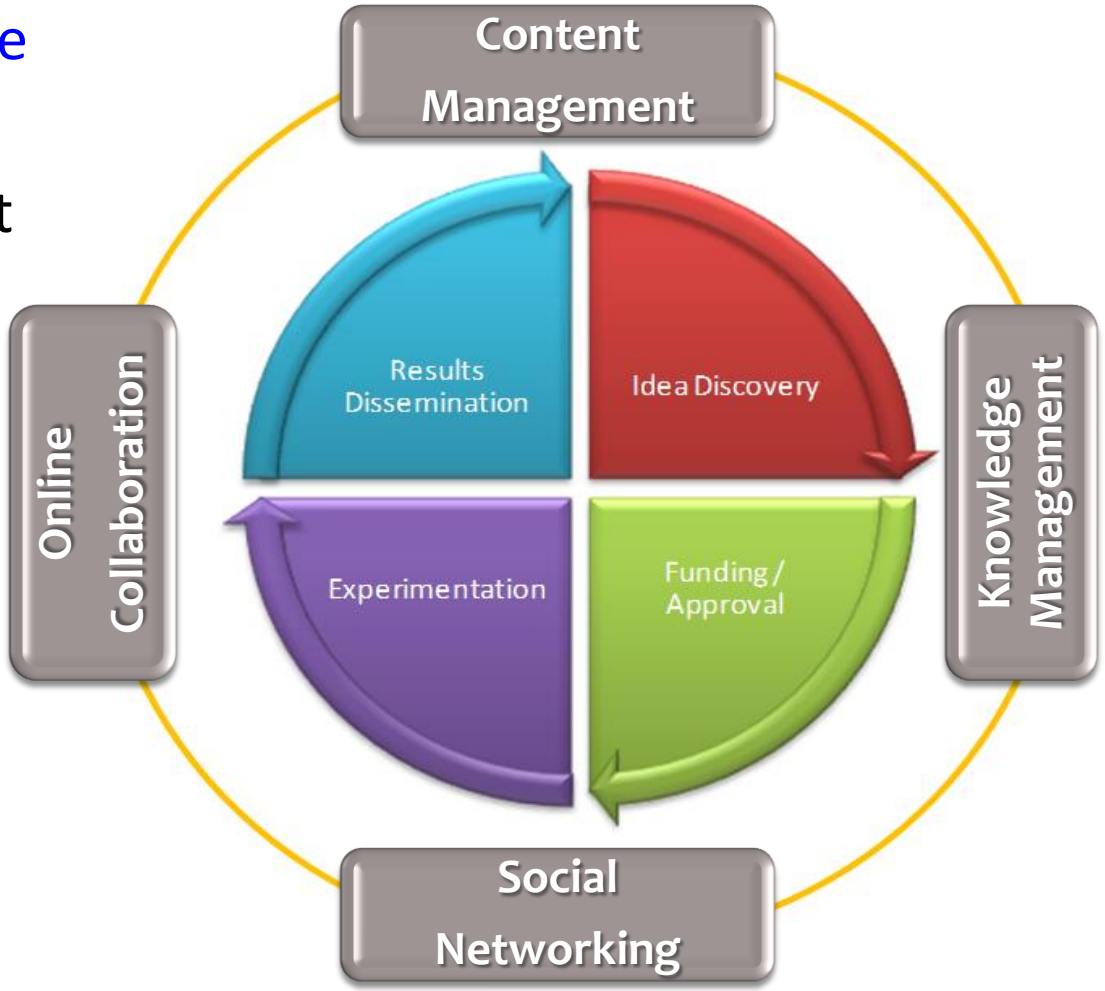
RIC Technology Categories

Approach

☐ Examine the convergence of these technologies.

☐We believe this will result in revolutionary changes in behavior and research efficiency.



- Content management
- Knowledge management
- Social networking
- Online collaboration

Microsoft eJournal Service

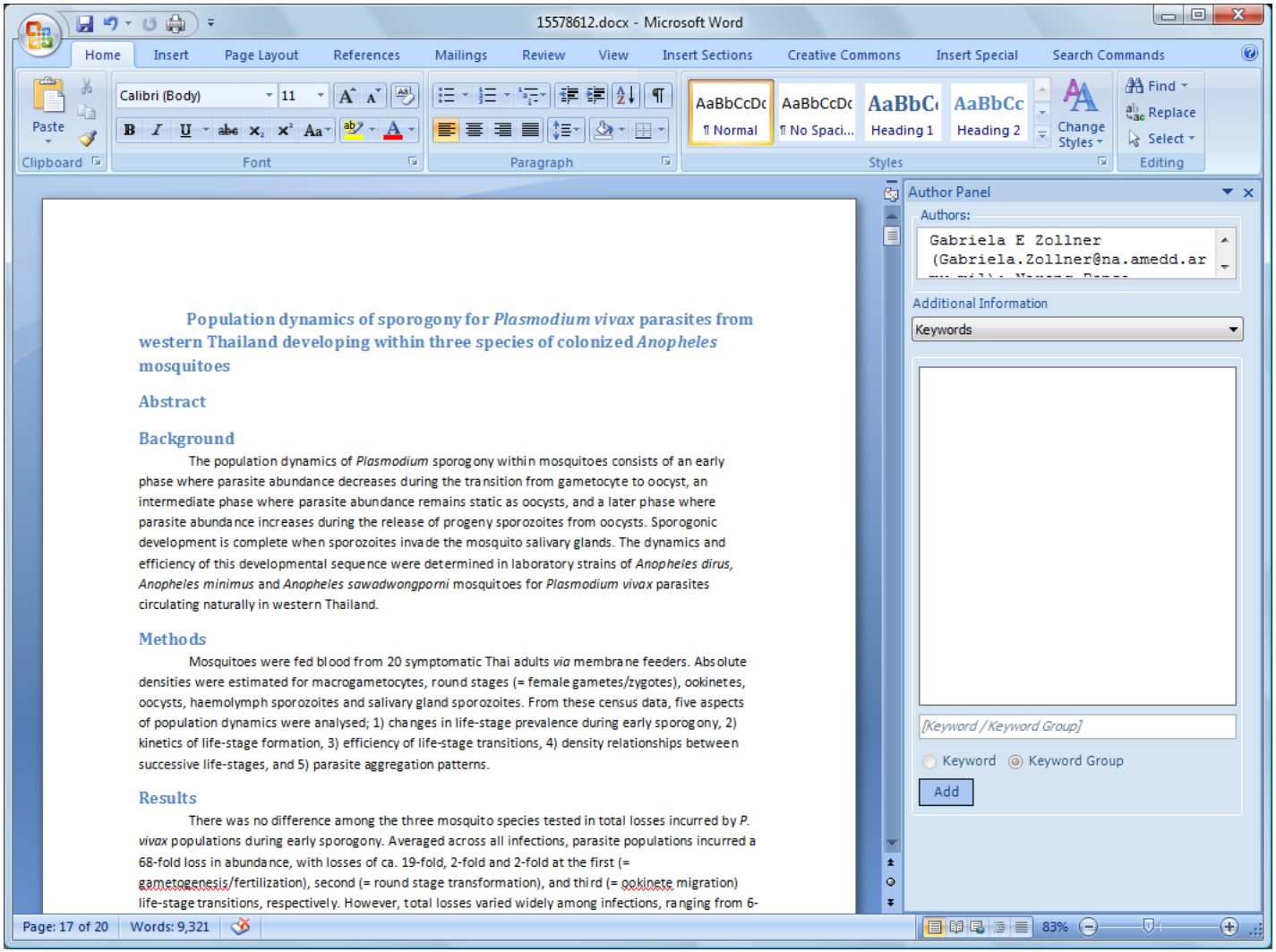
Goals

- Hosted solution to support scholarly societies and small/medium-sized publishers
- simplify self-publishing of workshop/ conference proceedings and small journals
- Make broader use of the peer review engine from MSR's Conference Management Tool (CMT)
- Engage with publishing ecosystem and enable third-party services (editorial, print-on-demand, etc.)
- Demonstrate interaction between CMT, eJournal Service, and Famulus (and other repositories)

Execution

- Built on Word 2007, SharePoint, and Office Live
- Beta version available now at http://journal.mssandbox.net/

Article Authoring Add-in for Word



Ingest Explorations

- Direct from within Word
- Event Handler for RIC/VRE SharePoint
- Desktop drag-to-folder

Questions?

Alex D. Wade

awade@microsoft.com

http://www.microsoft.com/scholarlycomm

Accelerating Time to Scientific Discovery

- A cross-disciplinary workshop designed to gather scientists from diverse research disciplines to discuss technological and computational solutions
- Held with IEEE International eScience Conference
- Keynotes by Tony Hey, Paul Watson, Geoffrey Fox, Peter Wittenburg
- Tutorials:
  - Technical Overview of Cloud Computing
  - Microsoft's Virtual Research Environment
  - Windows HPC 2008
  - Scientific Workflow Workbench (Trident)
- Panel, birds of a feather and unconference events
- Event is **Free!!**