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Fostering team science and research discovery with linked open data: The role of VIVO in the worldwide research ecosystem

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<http://vivoweb.org>

Internal data sources
 Human Resource Directory
 Office of Sponsored Research
 Institutional Repositories
 Registrar System
 Course database
 Faculty Activity Systems
 Events and Seminars
 Institutional partners
 Core & center membership rosters

External data sources
 Publication warehouses: PubMed, PLoS, BioMed Central, Web of Science, Scopus, and more
 Grant databases: NSF/NIH
 National Organizations: AAAS, AMA, AMIA, CTSA, etc.

Manual editing
 Individuals and their proxies can supplement the profile with additional information.

VIVO provides data via the semantic web using an ontology for information representation and a standard (RDF) for data formatting. VIVO enables a new class of tools and data sharing, benefiting scholars and science.



Tools and data for global discovery & collaboration

VIVO Searchlight (vivosearchlight.org), finds people whose work is related to the material on any web page. Find experts for collaboration, media requests, foundation relations, and more.

Temporal visualizations allow understanding of publication and award history by individuals, groups, and organizations over time.

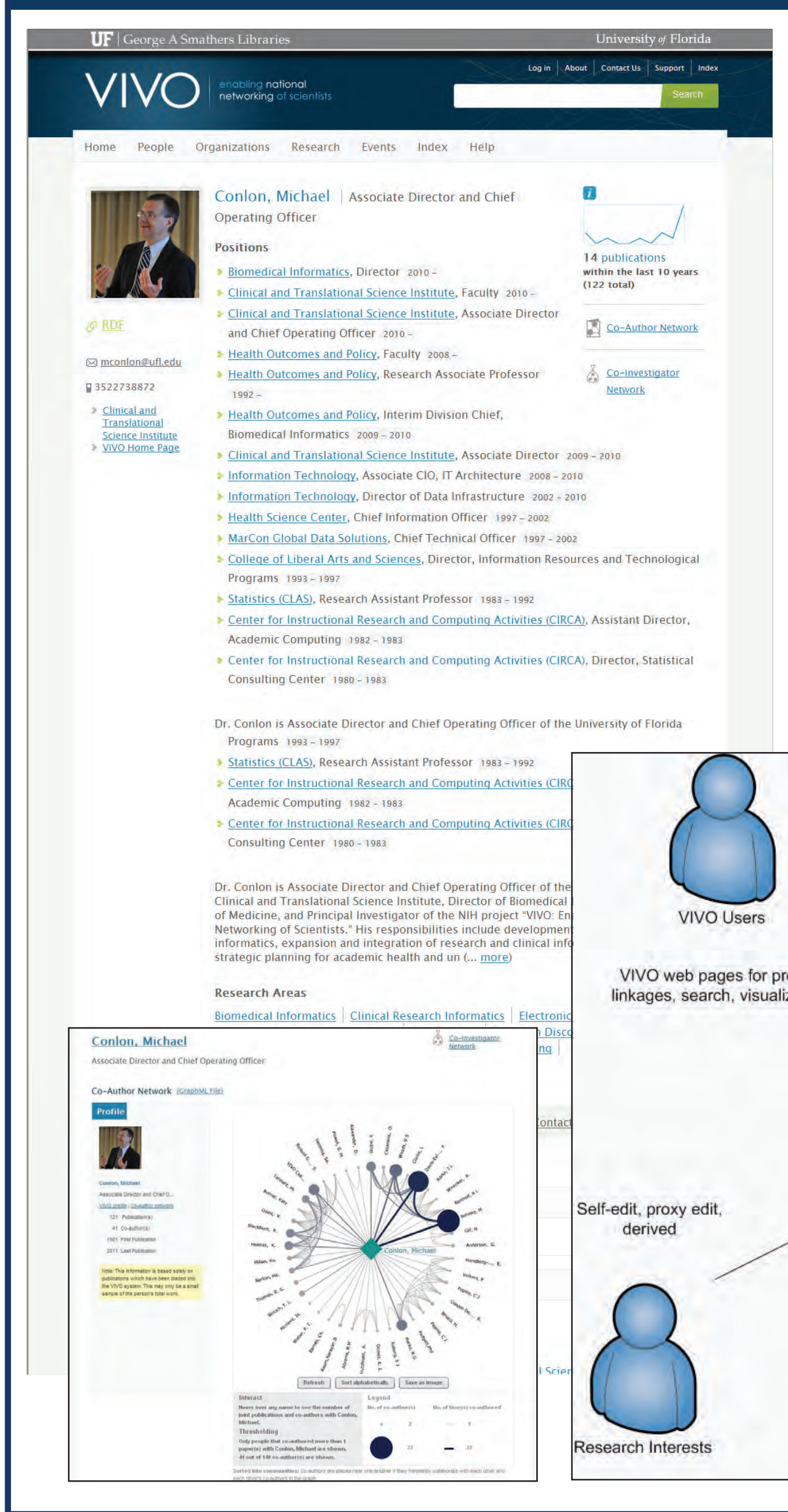
VIVO search (vivosearch.org) finds people, papers, grants, events and so on across VIVOS and other compatible systems.

Concept heat map displays works for selected groups in relationship to concept map of science.

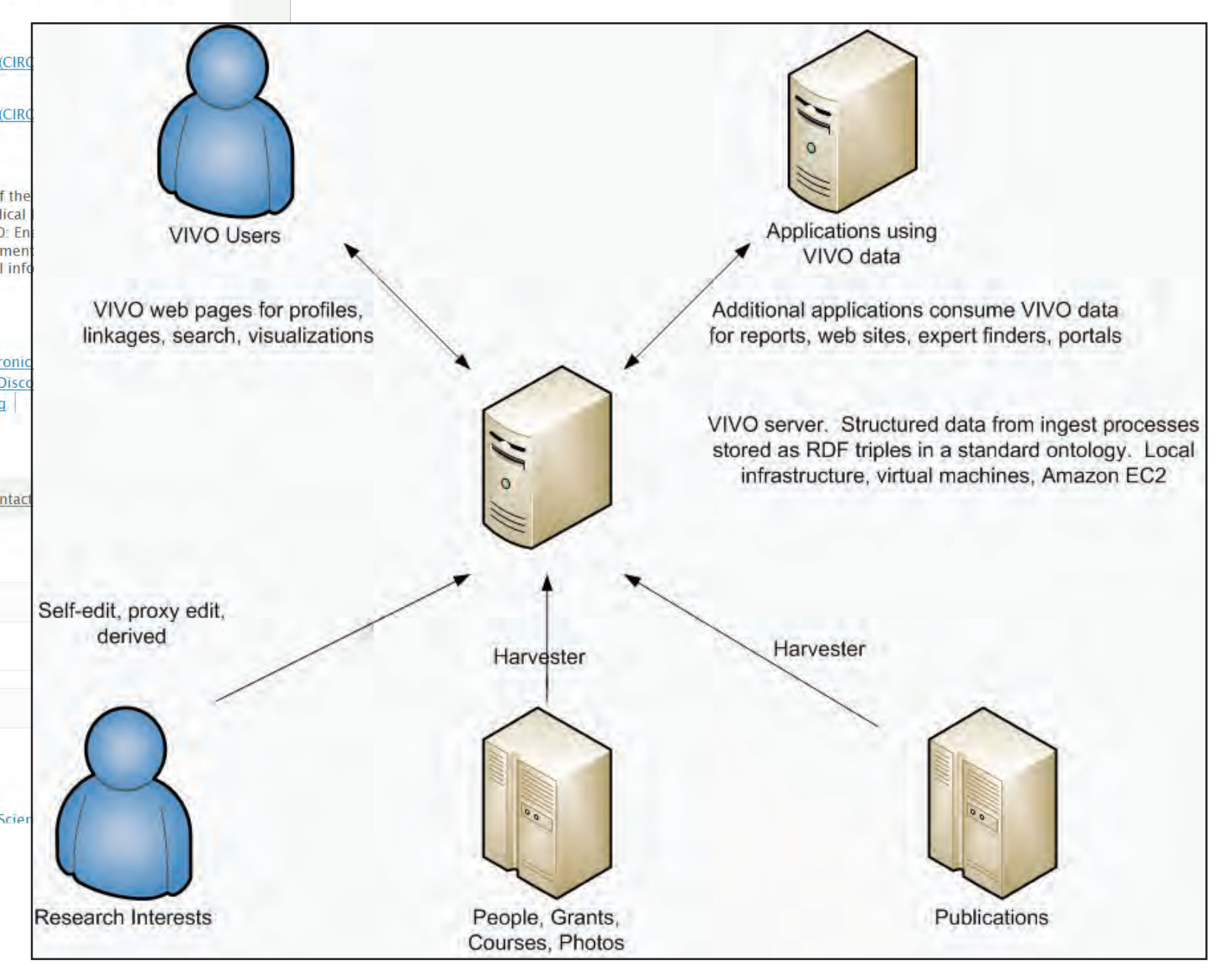
Collaboration explorer app consumes VIVO data and depicts co-authored papers across selected schools.

VIVO widgets for Drupal, WordPress and OpenSocial provide easy reuse of VIVO data.

What is VIVO?



VIVO provides new opportunities for discovery. Data can be reused and repurposed in a wide array of tools and settings by web pages, applications, and other consumers both within and outside the institution. Individuals may access the browse and search functionalities of VIVO anytime via the web. Researchers, scholars, students, administrators, funding agencies, donors, and members of the general public may all benefit from using VIVO.



VIVO, CTSA, and Research Networking

CTSA Recommendations and Best Practices for Research Networking¹
 The Research Networking Recommendations were approved by the CTSA Consortium Executive and Steering Committee on October 25, 2011.

VIVO aligns with Recommendations for Research Networking:

Recommendation: All CTSA should encourage their institution(s) to implement research networking tool(s) institution-wide that utilize RDF triples and an ontology compatible with the VIVO ontology.

Recommendation: Information in people profiles at institutions should be publicly available as data as a general principle, specifically as Linked Open Data. To ensure quality of information, authoritative electronic data sources versus manual entry should be emphasized. Institutions will vary in the amount of information that they will include and make publicly available but the value is enhanced by the quality and quantity of information.

Recommendation: Monitoring of the research networking landscape, technology, and tools should continue to be overseen by experts from the CTSA consortium (e.g., the Research Networking group of the Informatics KFC).

[1] <http://www.ctsacentral.org/recommendations-and-best-practices-research-networking>

Research Discovery

Research discovery is facilitated via content browsing and the structured data lends itself to a variety of applications that can make use of these data. A SPARQL query builder is part of the standard VIVO distribution and allows for end-user data requests from a VIVO implementation, enabling access to data for subsequent analysis, evaluation, and visualization of the research enterprise.

A Growing Community

Sites that will produce VIVO data include:
 The CTSA Consortium (60 sites), Harvard Profiles (30 sites), SciVal experts (eventually 20 sites), HubZero (4 sites), Loki, and other VIVO adoption sites.

Sites adopting VIVO include:
 American Psychological Association (154,000 members) USDA (120,000 staff, 50 land grant universities), eight Australian research universities, National Science Library of the Chinese Academy of Sciences, 50 sites in the US, and dozens of international sites across Puerto Rico, China, Australia, New Zealand, UK, Mexico, Costa Rica, India, Germany, Netherlands, Chile, and more.

The Federal Researcher Profile System, the Open Researcher and Contributor ID project (ORCID), Community of Science, Thomson-Reuters, Elsevier, Symplectic, Open Access publishers, and others exchange with VIVO.

Other Partnerships and collaborations of note:
 White House OSTP, NIH, NLM, NSF, USDA, FDP, EPA, FRPS, STAR Metrics, SciENCV, EuroCRIS, WellSpring Worldwide, DERI, Tim Berners-Lee, Jim Hendler, ConceptWeb Alliance, OpenPHACTS (EU), Linked Data, eagle-i.

Some community stats:
 Downloads (>16,000), contact list (>1,600)
 Four annual events: conference, workshop, hackathon, implementation fest

Get Involved

Contact us
 Would you like to learn more about VIVO and how it works? Interested in collaborating? Does your team have specific questions about supporting VIVO at your institution? Would you like to give us feedback or schedule a demonstration?
 Drop us a note at <http://vivoweb.org/contact>.

VIVO Open Source Community
 VIVO enjoys a robust open source, open community space on SourceForge. The site offers a wiki, focused listservs, and ways of connecting with other VIVO project members such as event listings and collaborative phone calls. The VIVO software and ontology are publicly available at the SourceForge site, along with content that supports implementation, adoption, and development efforts around the world.

For more information, visit <http://vivo.sourceforge.net>

Social Media
 Follow the project and receive updates:
<http://twitter.com/VIVOCollab>
<http://www.facebook.com/VIVOCollaboration>

Join us!
 We invite you to join us at a VIVO event this year to learn more and connect with others who are interested in VIVO, scholarly representation, collaboration and open research discovery.

2012 VIVO Implementation Fest:
 May 14-16, 2012
 University of Colorado - Boulder
<http://vivoweb.org/2012-vivo-implementation-fest>

Third Annual VIVO Conference:
 August 22-24, 2012
 Hotel InterContinental in Miami, FL
<http://vivoweb.org/conference>



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