

Development of a Library 2.0 service model for an African library

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Agenda

- University of Pretoria context
- Library's e-Information Strategy & Structure
- Variables that influence the role of academic libraries
- Web 2.0 & Library 2.0
- Development of a Library 2.0 service model

University of Pretoria Context



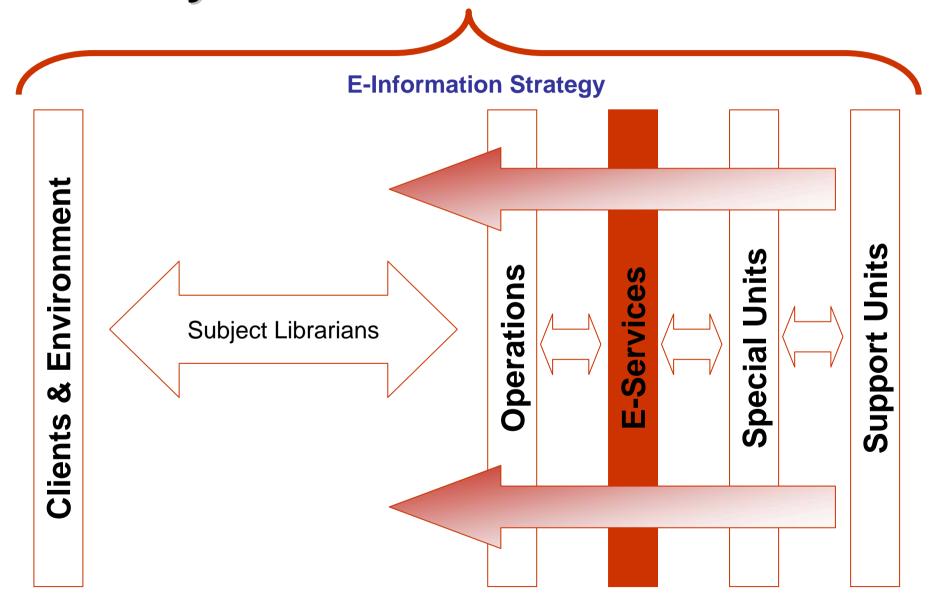
In 2006, student numbers were 49 226. The University has nine faculties and a business school (http://web.up.ac.za/)



Library's e-Information Strategy

- Integrated seamless e-Service
- Objectives
 - Support education innovation & research excellence
 - Optimal e-information (portal) services
 - Participate & contribute to national & international e-information phenomena
- Key sub strategies
 - Create e-information environment
 - E-Information plan
 - Learning/ e-learning & research/ e-research support strategies
 - Library structure, business processes, skills, facilities

Library Structure



Variables that influence the role of academic libraries

- Global library digitization projects, e.g. Google, European Union
- Impact of e-Research (a.k.a. e-Science (UK) or Cyber infrastructure (USA))

- Needs of Net-Generation students
- Possibilities created by Web 2.0 / Library 2.0 technologies
- These variables influenced the development of a <u>Library 2.0 service model</u> for the University of Pretoria Library Service

Web 2.0



Web 2.0

Web 2.0

Users build networks (professional, recreational etc.)

- People are the content of sites (O'Reilly)
- Emphasize online sharing and collaboration

2.0-style Service Examples

- Google Scholar & Scholar SFX
- User tagging, ratings & comments
- Mashups, Wikis, Blogs, RSS-feeds
- Community citation (CiteULike), photo and book services
- Websites with 2.0 characteristics: Flickr, eBay, De.licio.us (social bookmarking), MySpace, MyTube, LibraryThing



Community & Collaboration on the Web

"It's a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia and the million-channel people's network YouTube and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world, but also change the way the world changes."

Time's Person of the Year 2006: You. http://www.time.com/time/magazine/article/0,9171,1569514,00.html

Common traits of 2.0 services

- Interactivity
- Respects and leverages user contributions
- Complementary/ compatible/ cross-referential
- Treats info as a conversation
- Emphasis on ease of use
- Sharing use/reuse/remix/mashups encouraged

(Schneider 2007)

Library 2.0

"With Library 2.0, library services are frequently evaluated and updated to meet the changing needs of library users.

Library 2.0 also calls for libraries to encourage user participation and feedback in the development and maintaining of library services. The active and empowered library user is a significant component of Library 2.0."

With information and ideas flowing in both directions – from the library to the user and from the user to the library – library services have the ability to evolve and improve on a constant and rapid basis. The user is participant, co-creator, builder and consultant – whether the product is virtual or physical."

http://en.wikipedia.org/wiki/Library_2.0

Library 1.0 vs Library 2.0

- Closed collections
- Collection development
- Pre-organized catalogue
- Walk-in services
- "Read-only" catalogue
- Print newsletter mailed
- Easy = Dumb users
- Limited service options
- Focus on bringing them in
- Catalogue is core operation

- Open collections
- Library suggestion box
- User tagging
- Globally available services
- Amazon-style comments
- Team-built blog
- Easy = Smart systems
- Broad range of options
- Focus on finding the user
- User services are core

(Schneider 2007)

Key Library 2.0 concepts

- The library is everywhere
- The library has no barriers
- The library invites participation
- The library uses flexible, best-of-breed, componentbased systems

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The library is a human-centered organization

(Schneider 2007)



Library

that fits that suggests that learns that gathers that combines that organizes

Enable (e) Research

STAFF

Library is a framework for integrating change. into all levels of library operations

Creation of an Emerging Technology Committee with (e) learning

Library that LETS

The library invites participation

- 1. User-centricity
- 2. Technology-savvy environment

Integration

environment

- 3. Reaching of the patrons long tail
- 4. Content for more than one device
- 5. Component-based software, not monolithic ILS
- 6. Constant change
- 7. Use of Web 2.0 apps and services
- 8. Open standards

The library has no barriers

The library is human

OPAC

- Federated search.
- RSS for cataloging records & search results
- Records tagging
- User reviews

Social computing apps to meet users'. need when, where and how they need it.

> The library is everyw here.

> > Patron 2.0 = fromcontent consumer. to content creator

THE PHYSICAL LIBRARY

Loud spaces for collaboration & conversation Mobile devices for users

> The library uses flexible, best-of-breed systems

Enable e-Research

A New Science / Research Paradigm

- Thousand years ago:
 - **Experimental Science**
 - description of natural phenomena
- Last few hundred years:

Theoretical Science

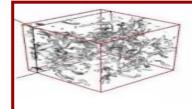
- Newton's Laws, Maxwell's Equations ...
- Last few decades:

Computational Science

- simulation of complex phenomena
- Today:
 - e-Science or Data-centric Science
 - unify theory, experiment, and simulation
 - using data exploration and data mining
 - Data captured by instruments
 - Data generated by simulations
 - Data generated by sensor networks
 - Scientist analyzes databases/files



$$\left(\frac{a}{a}\right)^2 = \frac{4\pi G\rho}{3} - K\frac{c^2}{a^2}$$

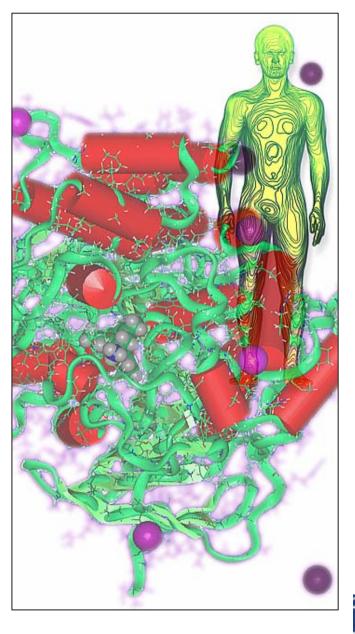


© 2006 Tony Hey

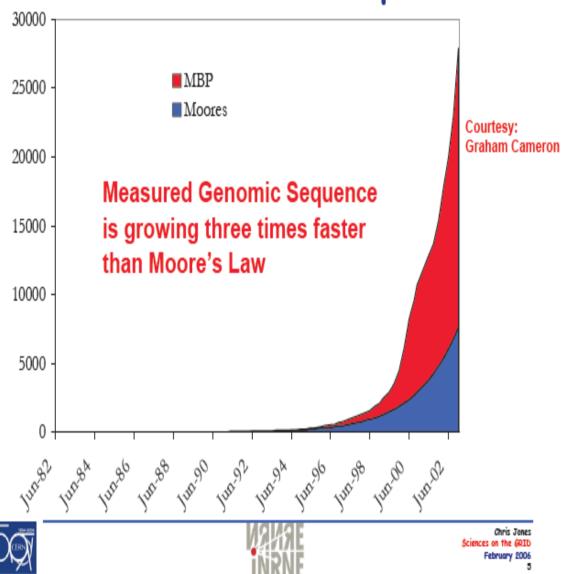
The e-Science / e-Research Data Life Cycle

- Data Acquisition
- Data Ingest
- Metadata
- Annotation
- Provenance

- Data Storage
- Data Cleansing
- Data Mining
- Curation
- Preservation



The Genomic Data Explosion



E-Research Support Service for SA

eResearch Board Governance & Management Function **eResearch Development &** eResearch Service Delivery **Innovation Immediately Future eResearch activities** Activities •SASLI+ Research Portal (incl global searching) National Research and **Education Network** Data Transfer and Sharing Innovative services (processes and protocols, 3As, Centre for High move to Service helpdesk) Performance Computing Delivery Open Access (Standards, common software, institutional repositories) •The eResearch Librarian (Training and re-orientation) Usually sub-contracted to competent agents in the system Digital Curation Services (Standards, software, marketing & training services) Lead Users Forum Portable & access constraints

Integrated VRE for Malaria Research in South Africa

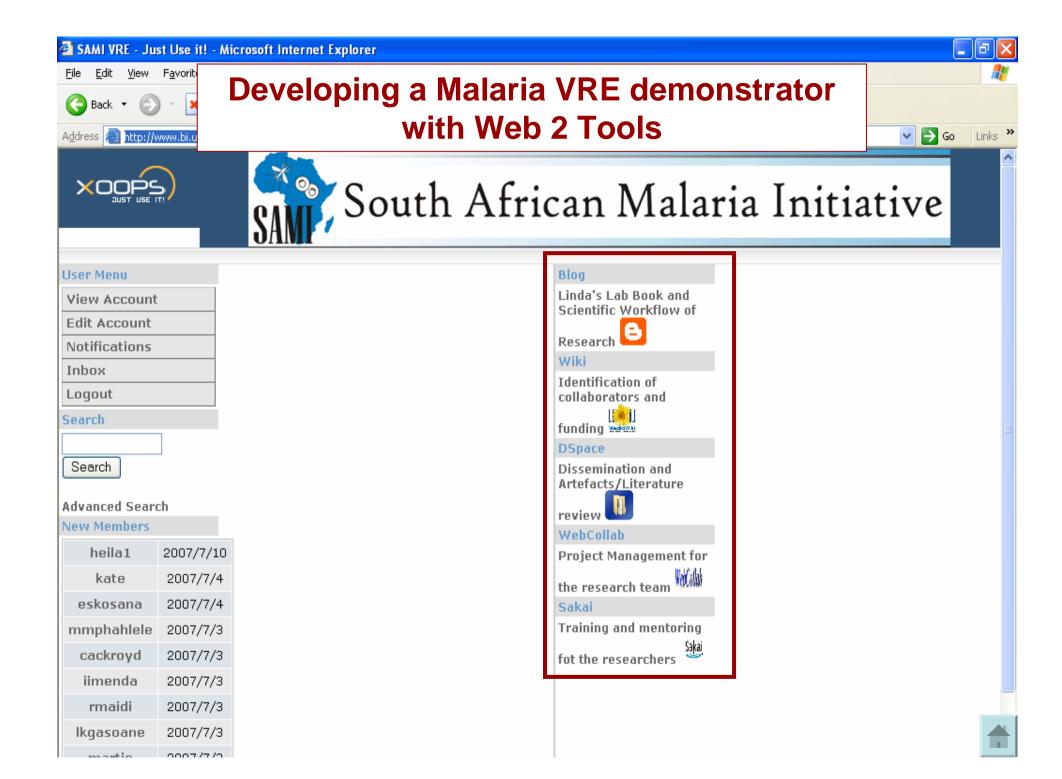
To improve research efficiency

To create a conceptual model of the entire research process in South African context

To surface the VRE needs/constraints across CSIR/UP boundaries – linked to a specific project

To identify the conceptual requirements for developing a pilot VRE





Creation of emerging technology committee



<u>Library e-Service Steering committee: terms of reference</u>

1. <u>Purpose</u>: The main purpose of this strategic steering committee is the **creation of the Library e-Service** and the **co-ordination of Library e-Activities** in support of UP research, teaching and learning.

2. Composition:

Library executive management team member responsible for Library e-Information strategy is ex officio chair

Library executive management are ex officio members

Chairs of Library e-Steering committees are ex officio members

Leader of Library IT unit is ex officio a member

Faculty library mangers (2 or 3) to facilitate innovation transfer

3. Terms of reference:

To co-ordinate the implementation of the Library e-Information strategy

To co-ordinate Library e-Services, e-Products & e-Initiatives on a strategic level

To create & align Library e-Steering committees e.g. Library Web steering committee, Library System steering committee

To co-ordinate the different e-Budget requests & spending e.g. IT budget, IT systems budget, Library strategic plan

To align Library IT policies & architecture with UP IT policies & architecture

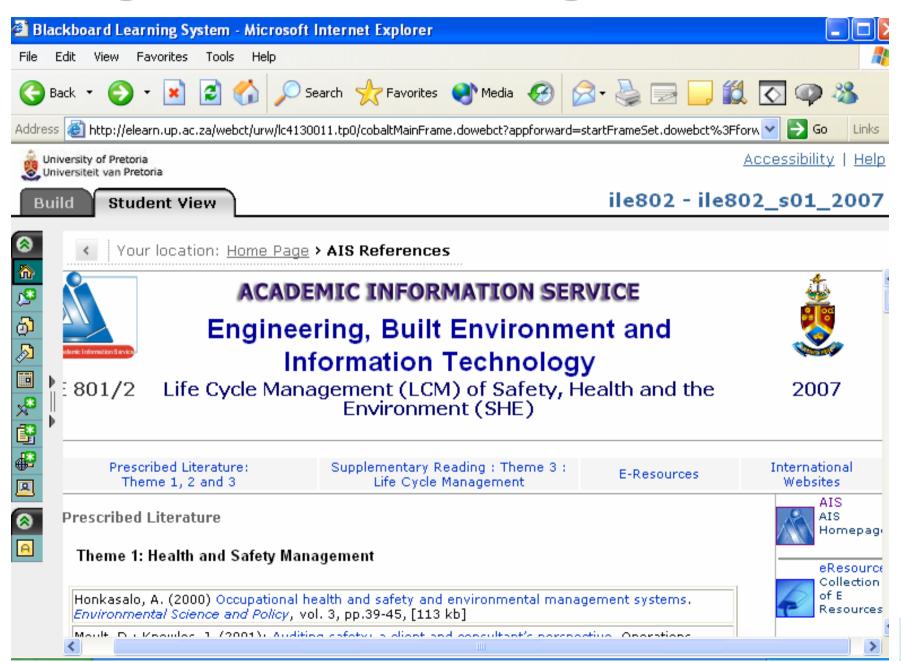
To create & maintain the necessary personal networks with UP, national, regional & international stakeholders, opinion leaders & experts

To be aware of & to implement new relevant IT trends & e-Applications

To communicate & market new e-Trends & e-Applications

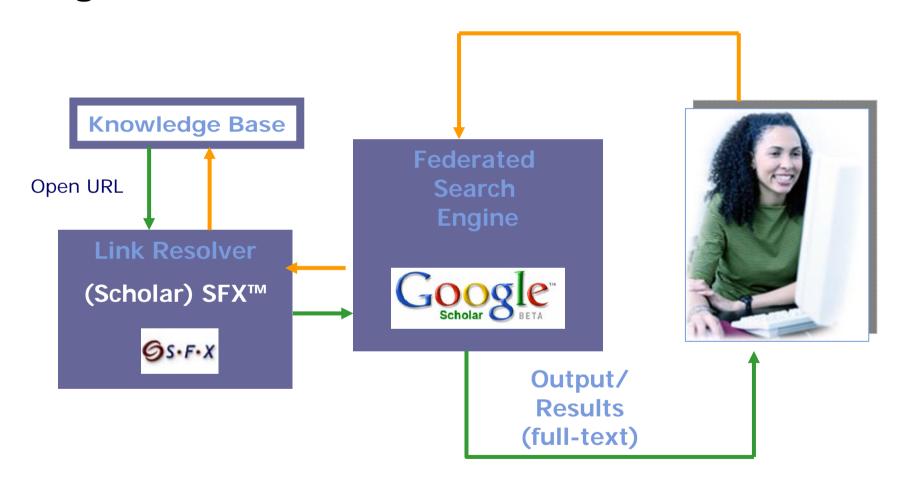


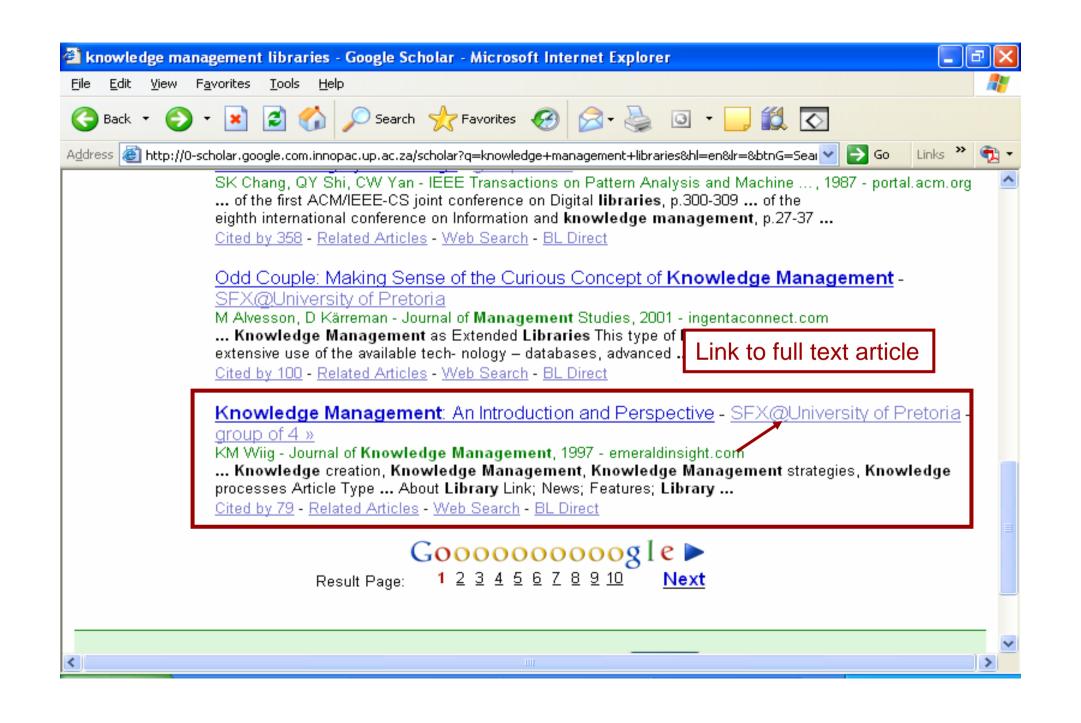
Integration with e-Learning environment

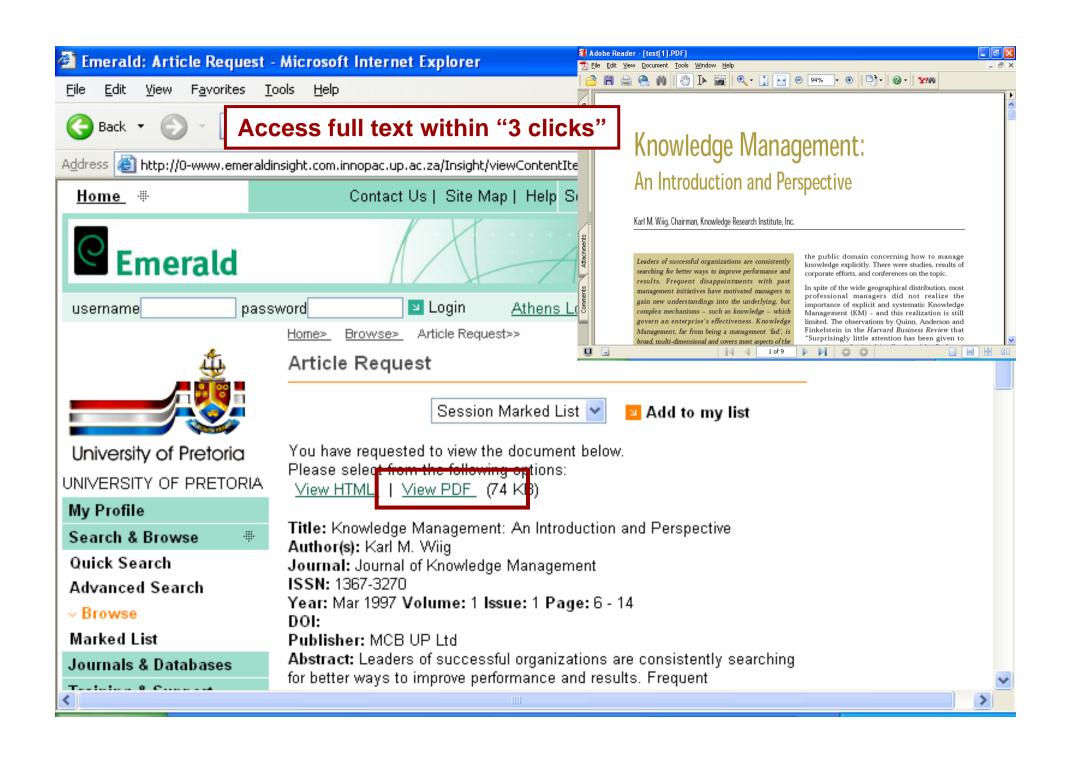


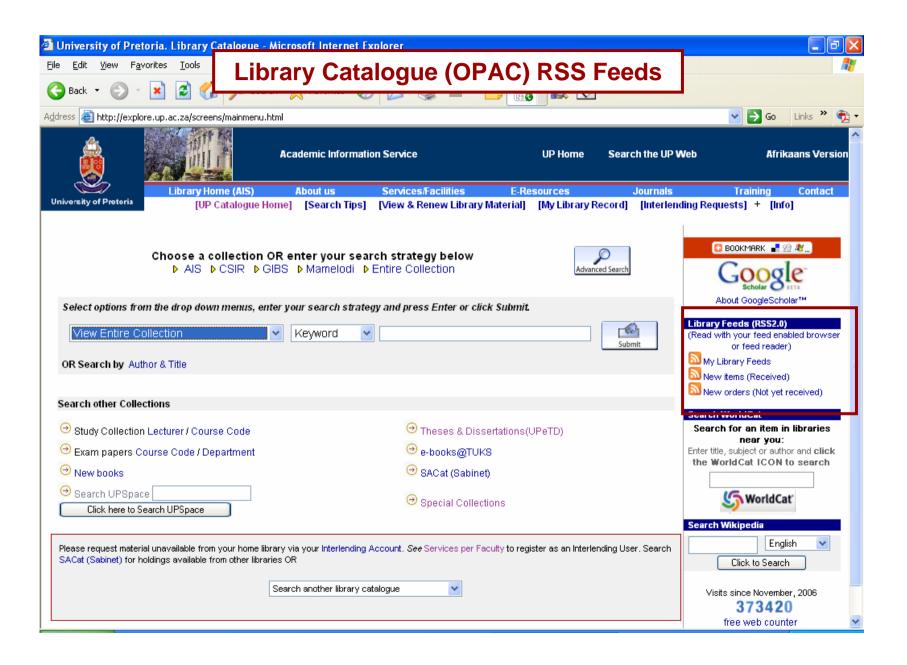
Federated search

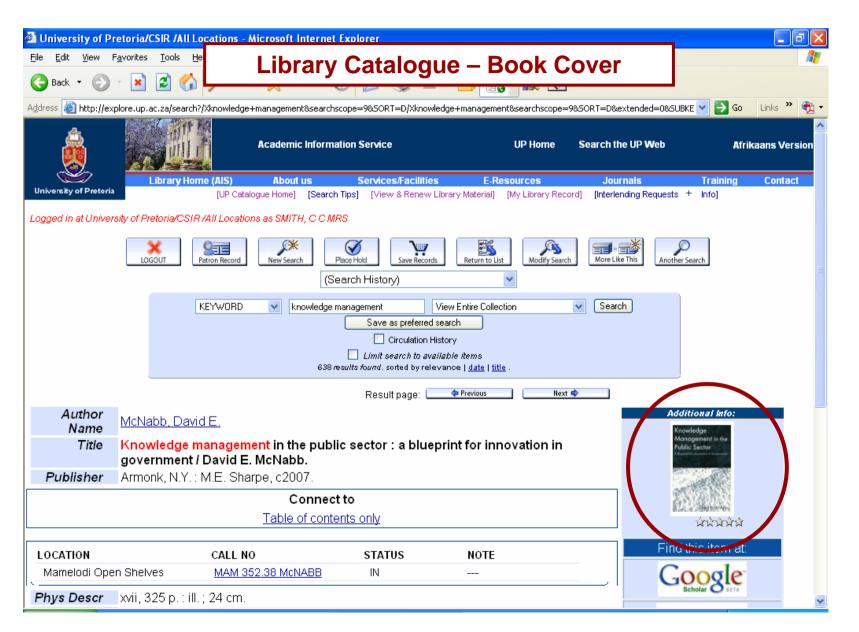
Google Scholar + Scholar SFX = Solution for Africa









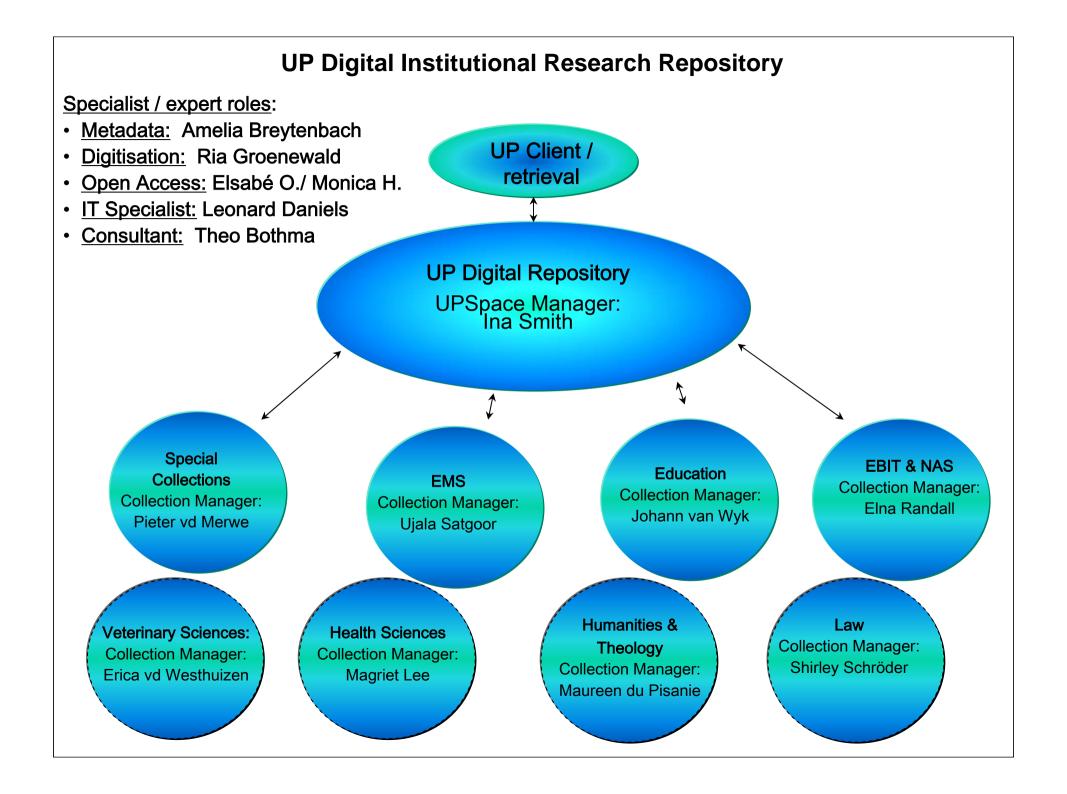




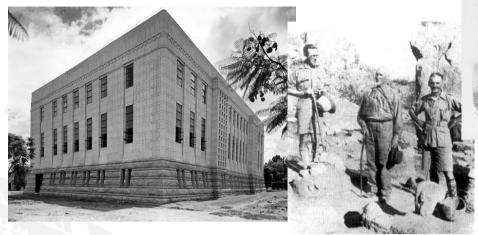
Patron 2.0 = from content consumer to content creator

Current best example is our academics' & students' involvement with collections on the University's digital research repository, **UPSpace**.

The Library is responsible for the management of this repository.



Examples UPSpace Content





The influence of high energy proton bombardment on the electrical and defect properties of single-crystal ZnO

> F.D. Auret¹, S.A. Goodman¹, M. Hayes¹, M. J. Legod and D. C. Look²

¹ Physics Department, University of Protoria, Protoria 0002, Souting Semiconductor Bareau ain Center, Weight State University, Doyle Materials and Montfoltering Directorials, Ast Force Research Lat

Received 6 June 2001

Published 20 September 2001 Online at stacks.iop.org/JPhysCM/13/8989

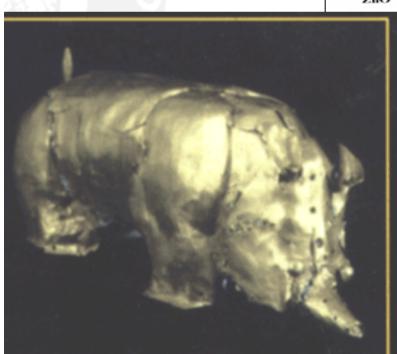
....

We report on the electrical and defect characterizatis formed on single-crystal ZiO, before and ofter into (1.8 MiN*) protons. Prior to bornbardment we obsatraps (E1+E4), with energies between 0.10 and 0.57 band, are present in the ZirO. High-energy proton two electron traps (Ep1 and Ep2), with extremely 1 of 2.4 and 1.9 cm⁻¹, respectively. Schooling barris severes leakage current deteriorated from 1×10^{-9} A to 1×10^{-9} A after bornbarding it with a dose of 4 Compared to GaN we found that ZirO is remarkably

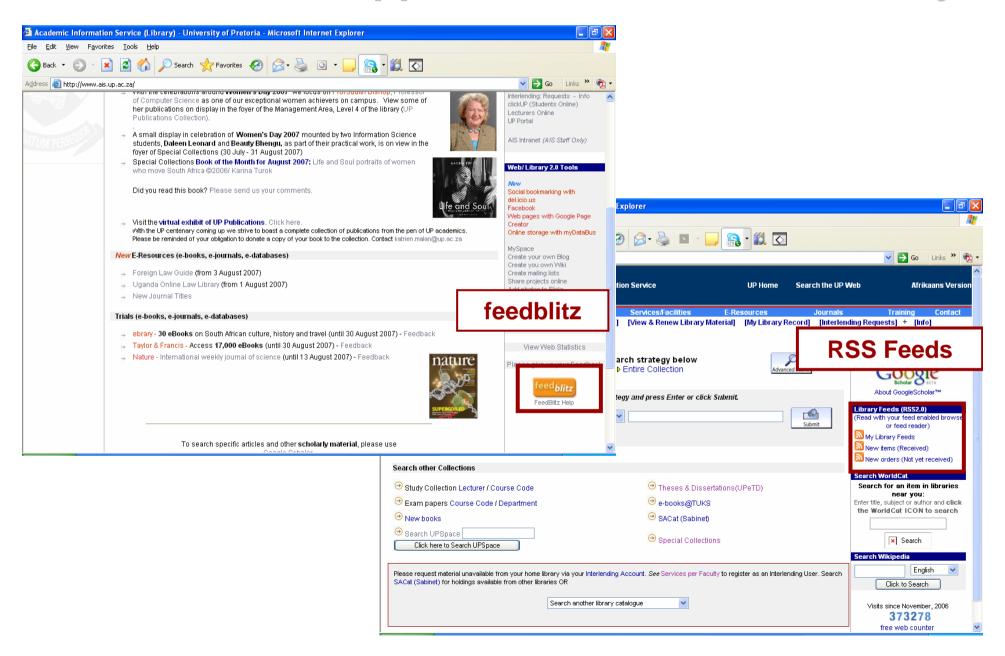
action

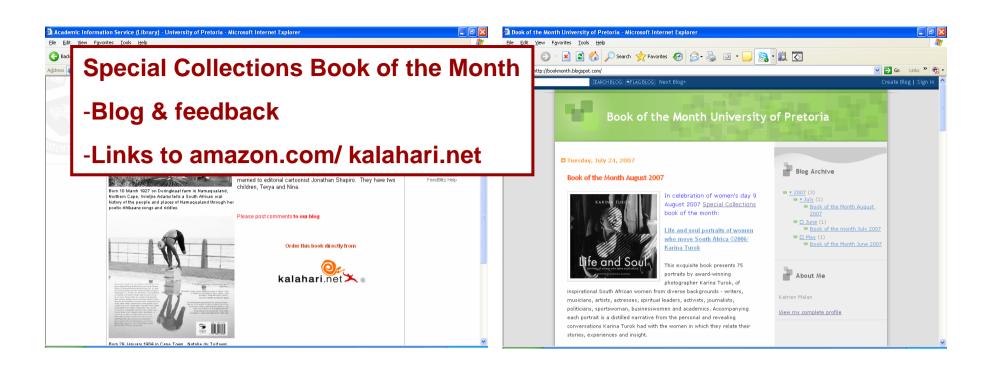
artistic semiconductor material with a high band gap, in adaets. It finds application in phosphors, paints, piecocoles current conducting films, the latter being important for ificon a recent neview, where the properties of ZaO are at an be used for several other, more sophisticated, electro-op that ZaO has an experimental direct band gap of 3.4 eV, lizing blue and ultra-violet (UV) high remitting devices, on, as well as daylight-blind UV detectors, is in the case for hermore, the large band gap of ZaO renders it suitable & lysts and as a substrate or buffer layer for the group III in licutions, these devices often have so operate at elevate "C. in harsh endiation conditions comprising energetic p ©University of Pretoria - Veterinary Science: Department Anatomy and Physiology

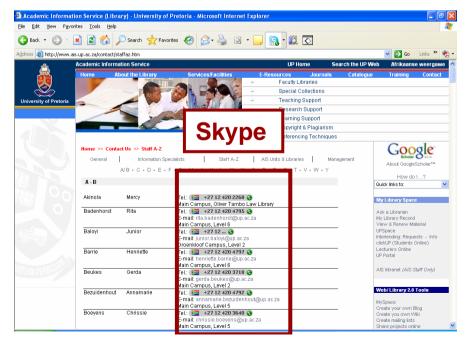


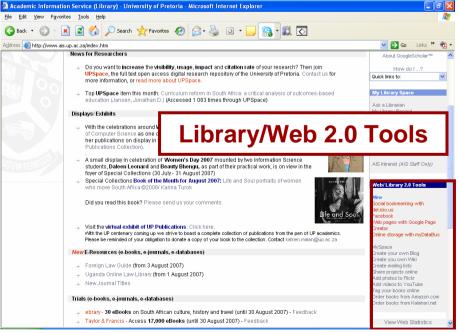


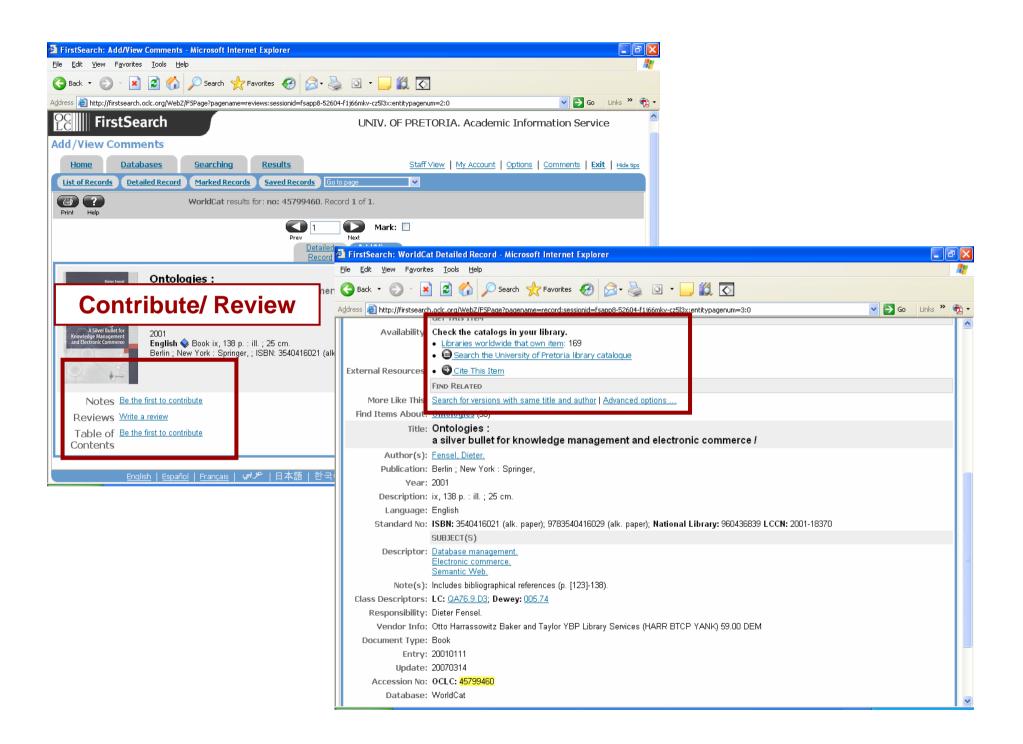
Use of Web 2.0 apps & services at our Library

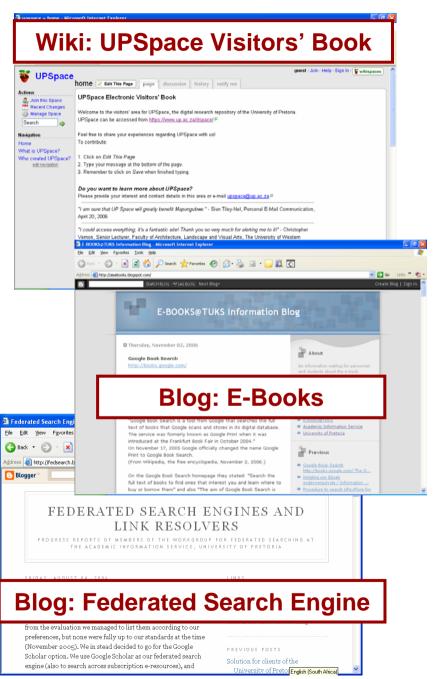


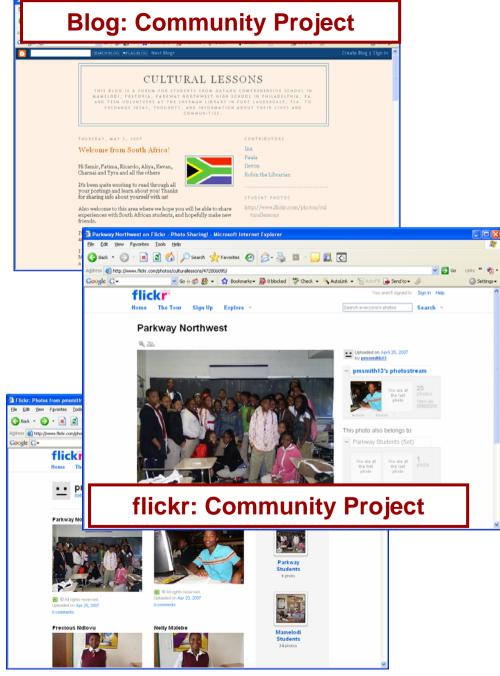




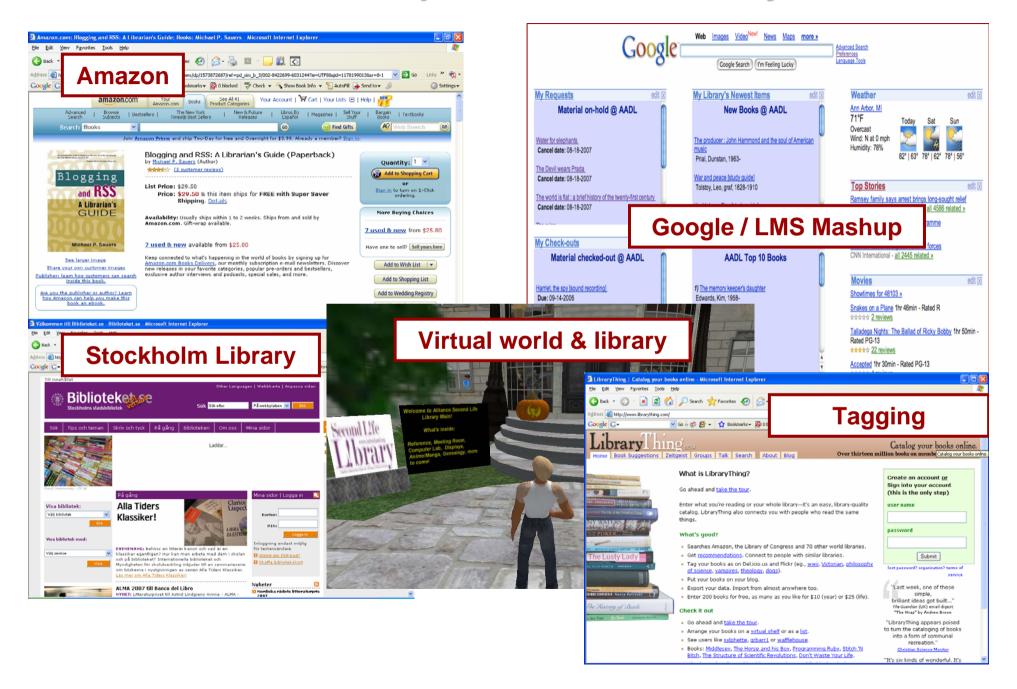




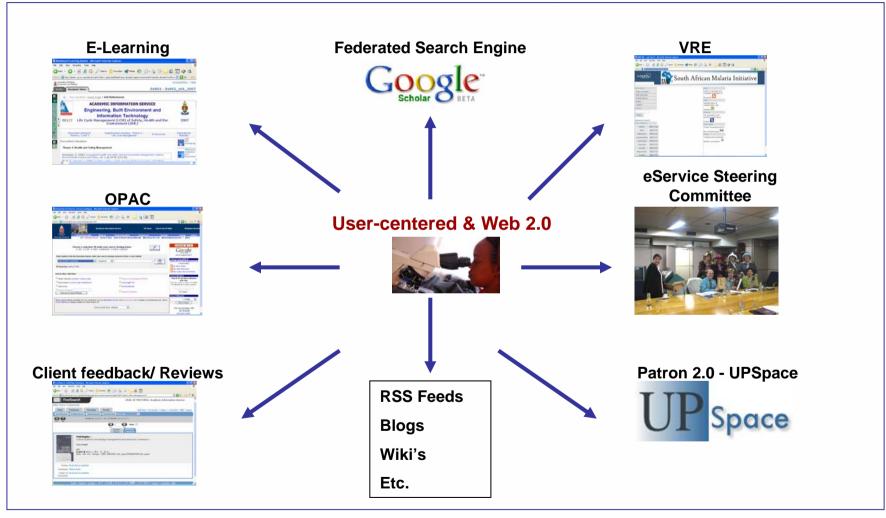




International examples of Web / Library 2 tools



In conclusion ... we are well on our way to become a Library 2.0 Library!



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