Development & Implementation of an e-Information Strategy for a University Library

Presented by Heila Pienaar & Ina Smith

2nd Africa Libraries & Information Management Systems Conference 2007
Content

• Development
  – Context
    • Changing role of academic libraries
    • Impact of eResearch
    • Information needs of Net Generation students
  – eInformation strategy business plan
  – Integration with the library’s and university’s strategic plan
  – Some of the processes, results, products of this strategy

• Implementation
  – Digital research repository
  – Federated search engine & Link resolver
  – Library 2.0 tools

• The next stage …
Context: Changing role of academic libraries

- Traditional **purpose** of academic libraries: to provide **access** to trustworthy, authoritative knowledge

- Information-seeking and behaviour are changing drastically > Web / Net

- In Dec 2004 Google started to digitize 4 big libraries’ holdings (“tipping point”)

- **With everything on the Net – what is left for academic libraries?**

- **Possibilities:**
  - Providing learning spaces;
  - Creating metadata;
  - Virtual reference;
  - Info literacy;
  - Managing licenses;
  - Digitization & digital repositories ([Educause](https://www.educause.edu))
Gartner Hype Cycle 2006 Higher Education
## Years to mainstream adoption

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<th>Benefit</th>
<th>Years to Mainstream Adoption</th>
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*As of June 2006*
Context: Impact of eResearch

- eResearch (SA & Australia) / Cyber-infrastructure (USA) / Grid (Europe) / eScience (UK)

- “… to describe large-scale, distributed, collaborative science enabled by the Internet and related technologies …”

- “… a collection of distributed computing resources (data repositories, specialized scientific equipment, computing power, knowledge services) that appears to users as one virtual system …” (Educause)
Role of university libraries in eResearch

• In the SA context the implication of eResearch for information support has been investigated at a high level

• Result: **SARIS** (SA Research Information Service) Report ([http://www.sajim.co.za](http://www.sajim.co.za))

• The proposed eResearch support service is important to university libraries, as they can implement many of the initiatives
eResearch Support Service for SA

**eResearch Development & Innovation**

**Future eResearch activities**
- Research Portal (incl global searching)
- Data Transfer and Sharing (processes and protocols, 3As, helpdesk)
- Open Access (Standards, common software, institutional repositories)
- The eResearch Librarian (Training and re-orientation)
- Digital Curation Services (Standards, software, marketing & training services)
- Portable & access constraints

**Activities**

- Innovative services move to Service Delivery

**Immediately**
- SASLI+
- National Research and Education Network
- Centre for High Performance Computing
- Usually sub-contracted to competent agents in the system

**Governance & Management**

**eResearch Board**

**Lead Users Forum**

**eResearch Service Delivery**
Context: Info needs of Net Gen students

• Technology has led to more modernisation than transformation of the library, resulting in some major disconnects between many of today’s academic libraries and Net Gen students.

• The most common disconnect between many of today’s academic libraries and Net Gen students is students’ dependence on Google or similar search engines for discovery of information resources, rather than consultation of library web pages, catalogues, and databases as the main source of access (Educause).
eInformation Strategy Business Plan

• A business plan for the AIS (library) eInformation Strategy was formulated for the period June 2004 – December 2005

• Content:
  – Introduction
  – Strategic context
  – Vision & mission of the library
  – Strategic objectives
  – Information products & services
  – Marketing
  – Staff issues
  – Resources needed
  – Recommendations & implementation
Integration with the library’s strategic plan

The content of the **business plan** was integrated in the library **strategic plan** 2005 – 2010:
## Vision, Mission, Values

<table>
<thead>
<tr>
<th>Vision</th>
<th>We strive to be leaders in providing world-class solutions to information and knowledge challenges for achieving academic excellence.</th>
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| Mission| The AIS leads and facilitates  
- Information and knowledge management  
- Information literacy  
- Designing and establishment of e-information services  
- Establishment of a gateway to global information  
- Effective scholarly communication |
| Values |  
- We generate positive energy for academic business success  
- Professional behaviour, ethics and values are our hallmark |
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<th>AIS STRATEGIC INITIATIVES</th>
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- **2006**: Restructuring AIS IT Architecture to integrate with UP Systems redesign
- **2007**: Learning Centre Phase 2
- **2008**: Enhance InfoLiteracy & Life-long Learning Skills
- **2009**: Federated Search Engine
- **2010**: Develop new Research Support Role for Information Specialists, Research Portal

- **Research & eResearch Support**: Implement Institutional Digital Research Repository, Open Access to Scholarly Material, Redesign Planning and Implementation
The AIS eInformation Strategy

The aim of this strategy is the creation of an integrated seamless eService for the University of Pretoria

Objectives

- To support education innovation and research excellence at UP;
- To deliver optimal eInformation portal services (workflow) to our clients, and
- To take part in and make a contribution to international and national eInformation phenomena, e.g. open access, digital preservation, eScience, content management.

Key sub strategies in order to meet these objectives

- The creation of an eInformation environment for our clients;
- Development of an eInformation plan as part of UP's eStrategy;
- Development of learning/eLearning & research/eResearch support strategies;
- The adjustment of the AI's structure, business processes, skills and facilities to support the eInformation strategy.

The eInformation environment sub-strategy consists of the following projects: integrated systems, integrated interface, academic tools, digital reference, ICT infrastructure, e-sources, e-dissertations, academic digital repositories, e-publication and digital preservation.
Integration with the university’s strategic plan

• “… promotes scholarship through the creation, advancement, application, transmission and preservation of knowledge …”

• “… ensuring that the university’s library and information services can give academics access to the information they need …”

• “eResearch and the library
  – Digitization of rare sources;
  – Archiving research data;
  – Development of Virtual Research Environments (VREs)
  – An institution-wide academic digital repository”

• “ICT is an essential and important strategic resource for the University’s scientific work, its management of knowledge …”
Some of the processes, results, products (1)

- The strategy is part of my portfolio as a member of the AIS (library) executive

- An eInformation Steering Committee was created with several portfolios and specific terms of reference

- Organisational redesign consultants are helping the library to change to a new structure to support the eInformation Strategy
Academic & Information Service

Clients & the Environment

Operations

eServices

Special Units

Support Units
Some of the processes, results, products (2)

- **UP Executive** supports this strategy (budget & strategic plan)

- **New UP management structure** – library now part of the academic environment – reports to vice-principal responsible for research & postgraduate studies

- **Marketing event** of library e-products
AIS eProducts Marketing Event
AI eProdukte Bemarkingsfunksie

Tree of Knowledge
Baobab (Kremetart) Tree

14 - 31 August 2006

Marketing Event of Library e-Products

- More about the "Tree of Knowledge"
- About the AIS eProducts Marketing Event
  - eProducts to be introduced during this event
  - Photo Album of this event on UPSpace
- A tree is born ...
- Invitation to attend the event

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Tel.: +27 12 420 2805 (o/h)
Some of the processes, results, products (3)

- UP academics & departments are positive about the UPSpace repository
- UP students & academics are happy with Google Scholar initiative
- Both Google Scholar/ ScholarSFX & DSpace are free (open) source software
- The library web site has been revamped
- The library and IT are aligned in terms of standards & architecture
- Library staff are being retrained/ reskilled
“Practising what we preach”

or

Implementing the eStrategy
Supporting teaching, learning, research

- E-Products
  - Federated Search Engine
  - Digital Research Repository
  - Library 2.0
Federated Search Engine & Link Resolver

“Only librarians like to search; everyone else likes to find.”

- Roy Tennant -
Needs of the “Net Generation”

- “Growing up digitally” generation
- Multi-tasking
- Prefer **Google** to library searches
- **Simple** search interface (“Google”-like)
- Want **speedy answers** & full gratification immediately
- “Three clicks”
- **Quality** matters less than process
What is a “Federated Search Engine”?

- Global search OR Meta search OR Broadcast search
- **Same-time searches** of different e-resources
- Blends: E-journals, library catalogue, subscription databases, e-books, digital repositories, web pages
- Single searchable point
- **Link Resolver** links references with full text
  
  http://www.exlibrisgroup.com/sfx_scholar.htm
Google Scholar + ScholarSFX = Solution
About Google Scholar™

“Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources:

• Peer-reviewed papers;
• Theses;
• Books
• Abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations.”
Lookout for the following:

- **Library Search** – link to library catalogue
- **SFX@University of Pretoria** – link to full text article
knowledge management libraries

Stand on the shoulders of giants

Google Home - About Google - About Google Scholar

©2007 Google
Information Technology for Knowledge Management - group of 9

Knowledge repositories Communities of and libraries knowledge workers sititory, access, integration, and Shared workspace management Knowledge work process ...
Cited by 211 - Related Articles - Web Search - Library Search

Recent trends in hierarchic document clustering: a critical review - group of 4
P. Willett - Information Processing and Management: an International ... 1998 - portal.acm.org

Heppenbrouwers, Beyond information searching and browsing: acquiring knowledge from digital libraries, Information Processing and Management: an International ...
Cited by 430 - Related Articles - Web Search - Library Search

The SMART Retrieval System—Experiments in Automatic Document Processing
G. Salton - 1971 - portal.acm.org

... international conference on Knowledge discovery and ... Indexing genomic sequence libraries, Information Processing and Management: an International ...
Cited by 823 - Related Articles - Web Search - Library Search
Information technology for knowledge management
by Uwe M Borghoff; Remo Pareschi

Type: English - Book
ISBN: 36437646 97836437646 0 OCLC: 38478453

Subjects: Information technology | Information resources management | Kennismangement | Informatietechnologie.
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<td>3. <strong>UNIV. OF PRETORIA, Academic Information Service</strong></td>
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Knowledge Management: An Introduction and Perspective

Karl M. Wig, Chairman, Knowledge Research Institute, Inc.

Leaders of successful organizations are consistently searching for better ways to improve performance and results. Frequent disappointments with past management initiatives have motivated managers to gain new understandings into the underlying, but complex mechanisms - such as knowledge - which governs an enterprise's effectiveness. Knowledge Management, far from being a management fad, is here to stay, multi-dimensional and ever-present aspects of the public domain concerning how to manage knowledge explicitly. There were studies, results of corporate efforts, and conferences on the topic.

In spite of the wide geographical distribution, most professional managers did not realize the importance of explicit and systematic Knowledge Management (KM) - and this realization is still limited. The observation by Quinlin, Anderson and Finkelstein in the Harvard Business Review that "Surprisingly little attention has been given to...

Title: Knowledge Management: An Introduction and Perspective
Authors: Karl M. Wig
Journal: Journal of Knowledge Management
ISSN: 1367-3270
Year: Mar 1997 Volume: 1 Issue: 1 Page: 6 - 14
DOI:
Publisher: MCB UP Ltd
Abstract: Leaders of successful organizations are consistently searching for better ways to improve performance and results. Frequent
Google access statistics for last 6 months

April: 42201
May: 55081
June: 35021
July: 50652
August: 131166
September: 155583
Benefit all!!

- Google Scholar & ScholarSFX **free of charge** for eIFL countries
- Guide Google-users back to valuable **high quality library resources**
- Utilise **expensive** library subscription databases more fully
- Increase library **presence**
- Address **client needs**: “three clicks” to full text
- **Save time**
- **Reduce workload** on staff
- **Training** of clients
- Staff acquire **new skills**
- **Free of charge** on campus; at home – Internet connection

“If you can’t beat them, join them!”
“Offering [Google Scholar™] as an option will not deny our students the choice of using a specific database and advanced features.

But refusing to offer that option will deny them an alternative that may suit their needs better than database-by-database searching.”

- James Rettig, Univ of Richmond -
Digital Research Repository (UPSpace)

- Set of services
- Management & dissemination of digital materials
- Organisational commitment
- Stewardship
- Long-term preservation
- Organisation, access, distribution
  (Lynch 2003)
Digital Repository Model
About DSpace

- Open Source Software [http://dspace.org](http://dspace.org)
- Excellent e-workflow
- Lucene search engine (full text is searchable)
- Meet variety of digital archiving needs
- Variety of file formats can be archived
- OAI-PMH Compliant
- Alerts ("Subscribe") / Recommend
- Encourage dialogue & knowledge sharing
- Limit access
- Licenses, copyright, rights sufficiently addressed
- Statistical reports
- User-friendly
Collections in UPSpace

- Scholarly research material
- Historical (archival) material
- Popular research material
- Conference proceedings & presentations
- Speeches
- Collections donated
https://www.up.ac.za/dspace/
Calls for government to stop food price fixing

Government committee recommends that an investigation be launched into monopolies run by big retailers and wholesalers

By Dawn Macfadyen

The government has been asked to act against profiteering food suppliers and retailers after an investigation found substantial evidence of monopolies and influencing of prices.

A report by the department of agriculture’s food price monitoring committee, released in Pretoria on Friday, said there was less competition in the food sector, which made it difficult for smaller players to operate as retailers, or as food processors and distributors. Some companies were setting high prices and hiring consumers through bundling or advertising, then charging higher than normal profits, the report said.

"The competition committees should take on the food sector and analyse prices," said Jan Kriel, the chairperson of the food price monitoring committee.

Kriel said the committee’s findings should provide a useful base for a thorough investigation by the competition commission. "The data obtained has allowed us to work out to ensure effective policing of the competition environment," the committee’s report said.

The report said government was asked to consider establishing an arm’s length grain traders to allow weekly reports on production to avoid unnecessary volatility in the agricultural commodity market.

It was asked to act fast to help emerging players in the food chain and to focus on the development of an effective transport network so that the environment would become more competitive and prices cheaper.

The report said there was fierce competition in the food market with everything based on economies of scale, small margins, but high volumes and returns. "This structure makes it difficult for smaller players to enter this market, either as retailers, or as food processors and distributors. Smaller players do not have the scale of operations to compete in the game. Volumes in commodity prices and in the exchange rate also have a clear impact on smaller suppliers and manufacturers, who find it difficult to absorb such shocks."

The report said the fragmented and monopolistic competition in the food business was simply illustrated by the behaviour of individual firms in the sector. Some firms were able to influence prices through bundling, product differentiation, price discrimination, market manipulation and advertising, that were higher than others in a competitive market.

Kriel warned that the price of bread and milk was likely to increase, although the materials in their production, such as wheat for bread, had come down.

The report's findings came against a backdrop in which most of the major retailers in the country, including Shoprite, which operates Checkers, Hypermarket and OK, had increased the prices of the foods or services they produced or sold.

The report warned that the government was asked to consider establishing an arm's length grain traders to allow weekly reports on production to avoid unnecessary volatility in the agricultural commodity market.

It was asked to act fast to help emerging players in the food chain and to focus on the development of an effective transport network so that the environment would become more competitive and prices cheaper.
The influence of high energy proton bombardment on the electrical and defect properties of single-crystal ZnO

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Received 8 June 2001
Published 20 September 2001
Online at stacks.iop.org/JPhysCM/13/9989

Abstract
We report on the electrical and defect characterization of Au Schottky diodes formed on single-crystal ZnO, before and after irradiating with high-energy (1.8 MeV) protons. Prior to bombardment we observe that several electron traps (E₃–E₄), with energies between 0.10 and 0.57 eV below the conduction band, are present in the ZnO. High-energy proton bombardment introduces two electron traps (E₅₁ and E₅₂), with extremely low introduction rates (n) of 2.4 and 1.9 cm² s⁻¹, respectively. Schottky barrier properties such as the reverse leakage current deteriorate from 1 × 10⁻⁹ A for an unirradiated diode to 1 × 10⁻⁷ A after bombarding it with a dose of 4.2 × 10¹⁴ cm⁻² protons. Compared to GaN we found that ZnO is remarkably resistant to high-energy proton bombardment.

1. Introduction
ZnO, a wurtzite semiconductor material with a high band gap, is presently used in many diverse products. It finds application in phosphors, paints, piezoelectric transducers, varistors and transparent conducting films, the latter being important for the photovoltaic industry. However, from a recent review, where the properties of ZnO are summarized [1], it is clear that ZnO can be used for several other, more sophisticated, electro-optical applications. Based on the fact that ZnO has an experimental direct band gap of 3.4 eV, it can play an important role in realizing blue and ultra-violet (UV) light emitting devices, such as light emitting diodes and lasers, as well as daylight-blind UV detectors, as is the case for GaN with a similar band gap. Furthermore, the large band gap of ZnO renders it suitable for the fabrication of solar cells, catalysts and as a substrate or buffer layer for the group III nitride based devices. For space applications, these devices often have to operate at elevated temperatures, typically above 200°C, in harsh radiation conditions comprising energetic particles. Further practical
GAELIC / SALIT Interlending Project
2005

Introduction and background to the project
Final Report of the Project
Executive Summary Report
Notes to read with the Annexures
Annexures
Library Profiles
Presentation to the GAELIC Governing Board on 2 August 2005
Video: ILL Industrial Play presented at two workshops (7 & 28 September 2005)
ILL Code of Practice
Acknowledgements
Benefit all!!

- University of Pretoria
- Researchers/Scholars
- Subject Librarians
- Community
Highlights during 2006

- Successful deployment of UPSpace
- Collaboration & input from librarians, faculty, UP management
- UPSpace Statistics
  - Institutional Archives Registry (750 – 7 in SA)
  - DSpace Instances (180+)
- Digibook 10000RGB Scanner
- Visits to UK & USA
- 60 Minute Workshops
- Registered with search engines & repositories worldwide
- Success: Communication, Support, Updates, Knowledge sharing, Enthusiasm
“This project has transformed my life as a Dean in three ways. First, it made me aware of the **power of technology** in managing the multiplicity of written tasks—media articles, media interviews, newspaper columns, intellectual pieces—that simply drift into spaces where I can never find these original writings.

Second, it made me aware of the **efficiency of dissemination** of ideas in this information age if one simply took the time to create such a web space.

Third, it made me aware of the **power of collaboration** between academic authors and the academic information services (library)—something that I had not explored until now. I am deeply grateful to the persistence of my academic library colleagues in opening up this new world in the life of a busy Dean”
Library 2.0

“With Library 2.0 library services are constantly updated and reevaluated to best serve library users. Library 2.0 also attempts to harness the library user in the design and implementation of library services by encouraging feedback and participation.”

“Continue to examine and improve services and be willing to replace them at any time with newer and better services.”

“Library 2.0 is not a closed concept.”

(Wikipedia)
Blogs

“A blog is a user-generated website where entries are made in journal style and displayed in a reverse chronological order. Blogs often provide commentary or news on a particular subject, such as food, politics, or local news; some function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs.”

(Wikipedia)

http://www.blogger.com/start
Solution for clients of the University of Pretoria

During our thorough dynamic summative and formative (and independent) evaluation we only looked at commercial products - from the evaluation we managed to list them according to our preferences, but none were fully up to our standards at the time (November 2005). We in stead decided to go for the Google Scholar option. We use Google Scholar as our federated search engine (also to search across subscription e-resources), and

FEDERATED SEARCH ENGINES AND LINK RESOLVERS
PROGRESS REPORTS OF MEMBERS OF THE WORKGROUP FOR FEDERATED SEARCHING AT THE ACADEMIC INFORMATION SERVICE, UNIVERSITY OF PRETORIA

FRIDAY, AUGUST 04, 2006
Wiki’s

“A wiki is a website that allows the visitors themselves to easily add, remove, and otherwise edit and change available content, typically without the need for registration.” (Wikipedia)

http://www.wikispaces.com/
Web Feeds

“A web feed is a data format used for serving users frequently updated content. Content distributors syndicate a web feed, thereby allowing users to subscribe to it. Making a collection of web feeds accessible in one spot is known as aggregation.”

(Wikipedia)

http://www.feedblitz.com/
Web Feed on library web

Welcome back! Please update your library registration details for 2007 - click here for more information

- Power Supply for your Notebook Laptop is now available @ the library (Main Campus), Level 3. Inquiries: Tel. +27 12 420 2235/6

- Interlending - Please remember to update your details for 2007, or register to be able to request books/articles from other libraries. Click here

- 2007 Library Hours & Calendar now available

- Book of the month for January 2007: The Romance of Cape Mountain Passes /Graham Ross

- Visit OCLC FirstSearch for seamless electronic access to dozens of databases and more than 10 million full text and full image articles.

To search specific articles and other scholarly material, please use Google Scholar.

To search the library web, use the search box below.
The next stage …

• **Managing & archiving research data**
  Collaboration with the **UK Digital Curation Centre (DCC)** to obtain expertise on the management and curation of the research data cycle has been initiated.

• **Investigate the viability of Virtual Research Environments (VREs)**
  AIS & CSIR Information Services have formulated a **project proposal**: “Identifying the requirements of a specific VRE in a SA context” in order to create a conceptual model & develop a prototype VRE.

  “A key characteristic of a VRE is that it **facilitates collaboration** amongst researchers and research teams providing them with more **effective means** of collaboratively **collecting, manipulating** and **managing data**, as well as **collaborative knowledge creation**.”
Bibliography

Thank you!

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This presentation available on:

UPSpace

https://www.up.ac.za/dspace/