

Theo Bothma, Heila Pienaar & Monica Hammes

# Towards open scholarship at the University of Pretoria



BOBCATSSS

Zadar, Croatia

28 – 30 January 2008

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# Co-authors

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Dept. of Library Services



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and Quality Assurance  
Dept. of Library Services



# Overview



- Introduction
- South African Research Information Services (SARIS) project
- E-strategies at the University of Pretoria
- UPeTD
- UPSpace
- Implications
- Conclusion

# Introduction



- Open access literature
  - is freely available
  - is online
  - is scholarly and royalty free
  - can be used with minimal restrictions

(Bailey 2006)

- Self-archiving, open access journals and institutional repositories

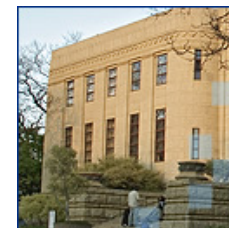
# Institutional repository



“University-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution.”

(Lynch 2003)

# Transformation in research practice



- More multidisciplinary, more collaborative, and more global
- “E-research [...] also refers to large-scale, distributed, national, or global collaboration in research.”

(O'Brien 2005)

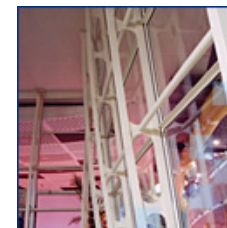
- Characterised by the use of information and communication technology

# South African Research Information Services (SARIS) project



- National research and development strategy for SA published in 2002
- Renewal in information services sector
- Extremely high costs to SA research institutes and university libraries to access the global research literature

# National and global policy shifts and innovations

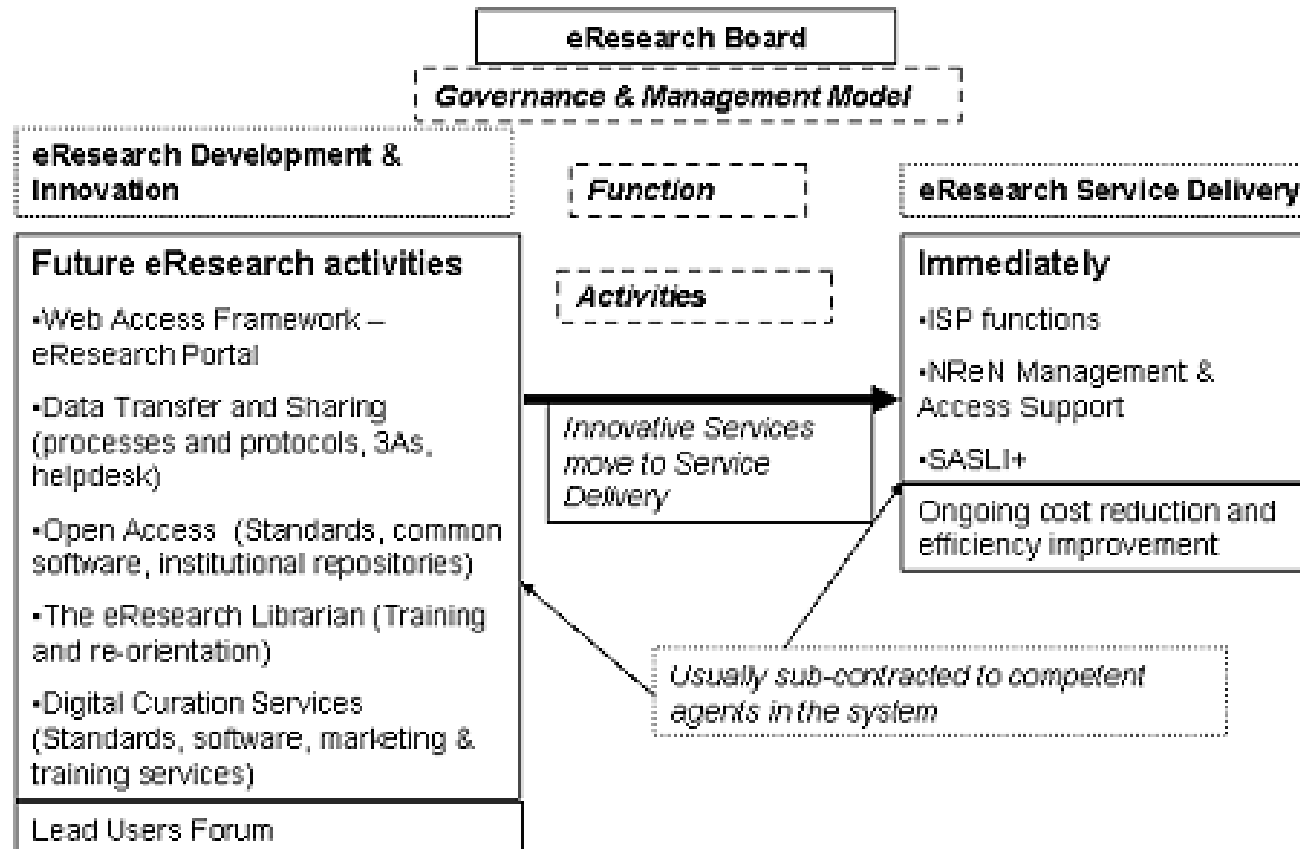


- The move of many commercially published scholarly journals and other text resources to digital format accessible via the Internet
- The open access movement in scholarly discourse
- Various government initiatives aimed at ensuring that the results of publicly funded research are readily available to the public
- Reports indicating new patterns in research and scientific communication and training
- Widespread introduction of national and international research and education networks, providing low-cost, high-bandwidth communication between research and educational institutions
- Digitization of important collections of objects and data, including documents
- The emergence of digital curation as essential to ensuring that valuable data are preserved and made accessible for the duration of their scientific and scholarly useful life
- The formation of international research networks

(Page-Shipp 2006)



# SARIS Project Outcome: Proposed Structure for eResearch Service for SA



# E-strategies at the University of Pretoria



- Internationally recognised South African teaching and research university
  - We believe it to be essential that the opportunities afforded us by these developments should be fully exploited
  - The University of Pretoria will enhance the impact of its research and leverage the potential of its academic staff, students and networks of cooperation

# Department of Library Services



- Support education innovation and research excellence at UP;
- Deliver optimal e-information portal services to our clients, and
- Take part in and make a contribution to international and national e-information phenomena, e.g. open access, digital preservation, e-Science, content management

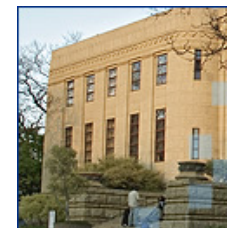
# Key sub-strategies



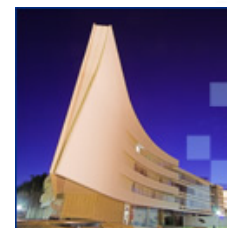
- The creation of an e-information environment for our clients
- Development of an e-information plan as part of UP's e-strategy
- Development of learning/e-learning & research/e-research support strategies
- The adjustment of the AIS's structure, business processes, skills and facilities to support the e-information strategy

# Projects

- Integrated systems, integrated interface, academic tools, global / federated searching, digital reference
- ICT infrastructure
- e-resources
- e-dissertations, academic digital repositories, e-publications and digital preservation



# UPeTD

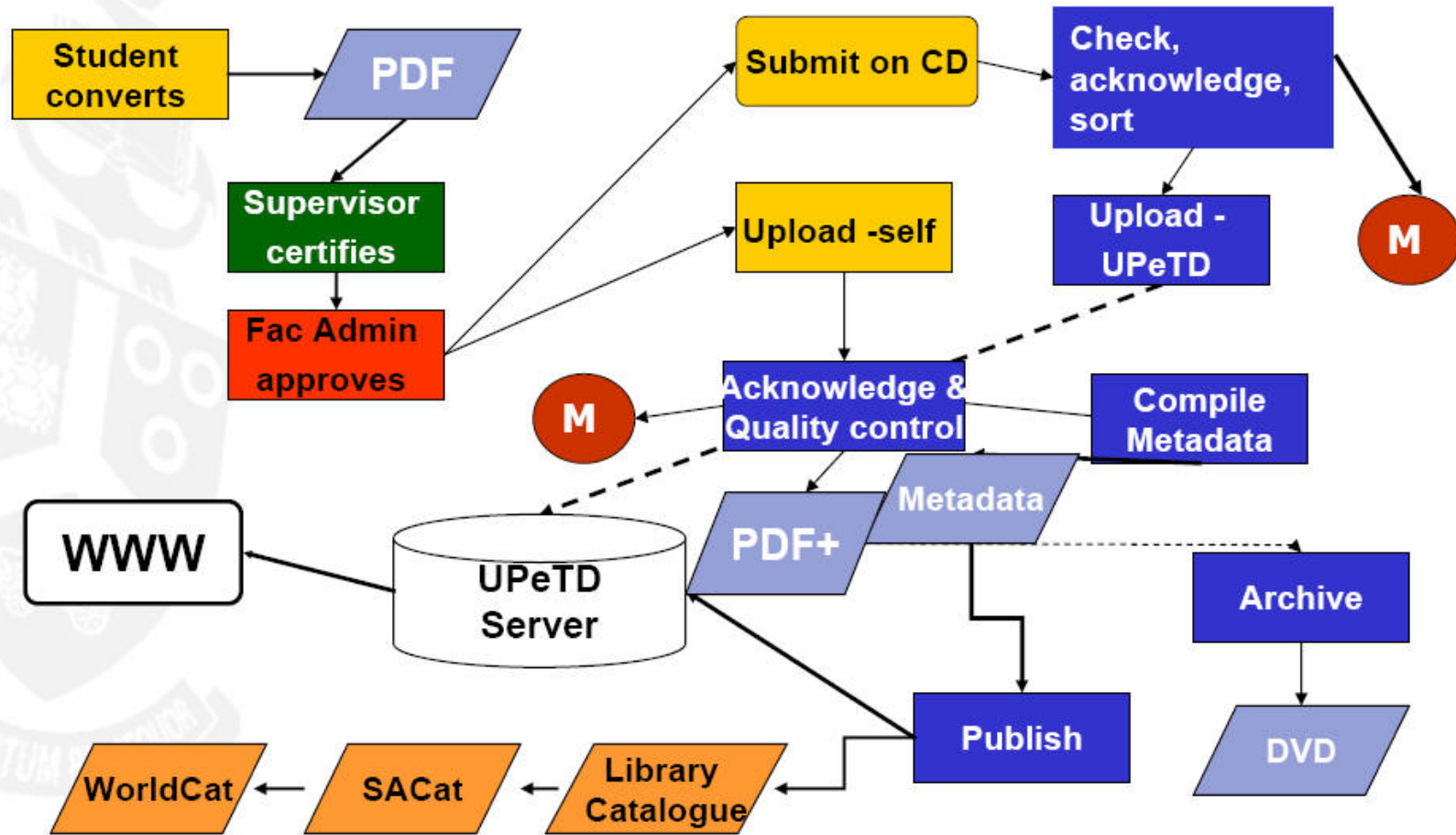


- “Our theses and dissertations are proof of excellent research work done at high cost for the university as well as for the country: they deserve to be read widely”

(Hammes 2005)

- Open source software – NDLTD
- Detailed workflow
- Extension of metadata

# UPeTD Workflow




**Compulsory submission of PDF files directly on web or on CD**

UPeTD - Microsoft Internet Explorer

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Back Forward Stop Home Search Favorites Refresh Print Mail Stop Send To


Address <http://upetd.up.ac.za/UPeTD.htm> Go Links



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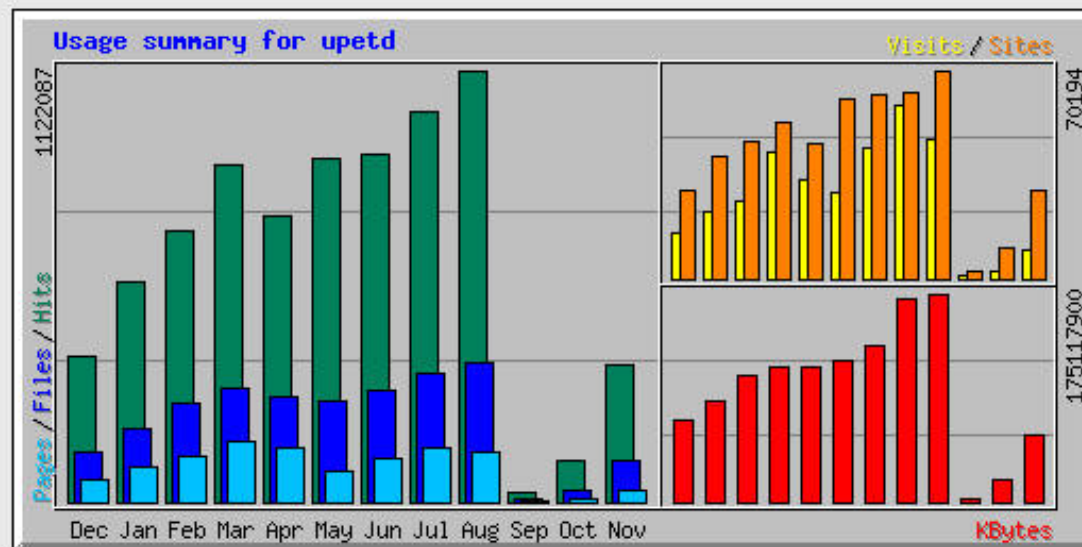
Enquiries: [upetd@up.ac.za](mailto:upetd@up.ac.za) University of Pretoria. Copyright © 2004. Privacy policy and terms of use. Revised: 01/20/2005

Local intranet



<b>Document Type</b>	Doctoral Thesis																															
<b>Author</b>	Korsten, Hilda																															
<b>URN</b>	etd-10252006-162402																															
<b>Document Title</b>	An evaluation of and a model for South African government websites																															
<b>Degree</b>	DPhil (Information Science)																															
<b>Department</b>	Information Science																															
<b>Supervisor</b>	<b>Advisor Name</b>	<b>Title</b>																														
	Prof T J D Bothma																															
<b>Keywords</b>	<ul style="list-style-type: none"> <li>• Web sites evaluation South Africa</li> <li>• Internet in public administration South Africa</li> <li>• Government communication systems South Africa</li> <li>• Internet in public relations South Africa</li> </ul>																															
<b>Date</b>	2002-12-01																															
<b>Availability</b>	unrestricted																															
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<b>Files</b>	<table border="1"> <thead> <tr> <th rowspan="2">Filename</th> <th rowspan="2">Size</th> <th colspan="5">Approximate Download Time (Hours:Minutes:Seconds)</th> </tr> <tr> <th>28.8 Modem</th> <th>56K Modem</th> <th>ISDN (64 Kb)</th> <th>ISDN (128 Kb)</th> <th>Higher-speed Access</th> </tr> </thead> <tbody> <tr> <td><a href="#">00front.pdf</a></td> <td>3.17 Mb</td> <td>00:14:40</td> <td>00:07:32</td> <td>00:06:36</td> <td>00:03:18</td> <td>00:00:16</td> </tr> <tr> <td><a href="#">01chapter1.pdf</a></td> <td>2.91 Mb</td> <td>00:13:27</td> <td>00:06:55</td> <td>00:06:03</td> <td>00:03:01</td> <td>00:00:15</td> </tr> </tbody> </table>						Filename	Size	Approximate Download Time (Hours:Minutes:Seconds)					28.8 Modem	56K Modem	ISDN (64 Kb)	ISDN (128 Kb)	Higher-speed Access	<a href="#">00front.pdf</a>	3.17 Mb	00:14:40	00:07:32	00:06:36	00:03:18	00:00:16	<a href="#">01chapter1.pdf</a>	2.91 Mb	00:13:27	00:06:55	00:06:03	00:03:01	00:00:15
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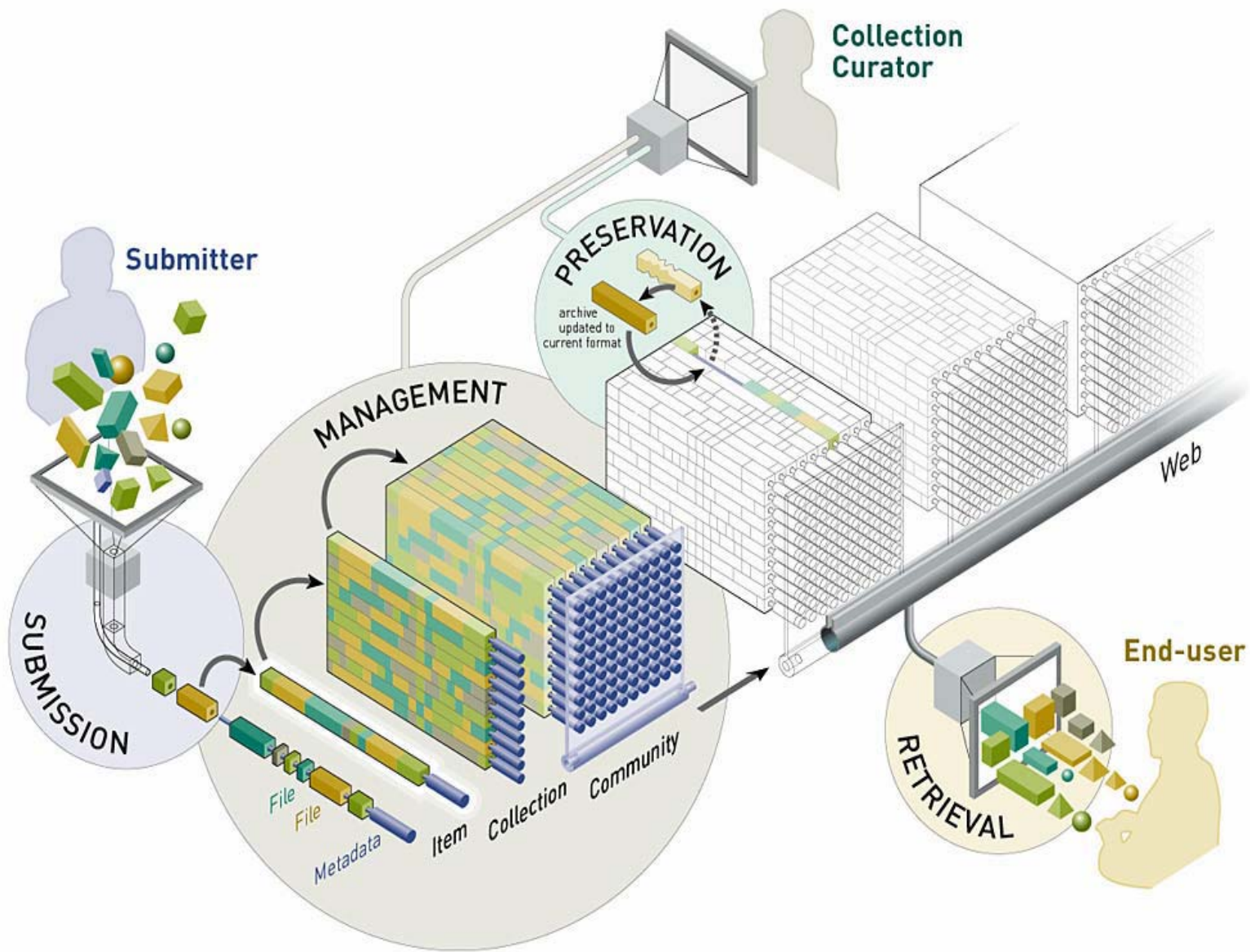


Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
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<a href="#">Oct 2007</a>	35457	10169	2720	753	10122	18249577	2260	8161	30508	106373
<a href="#">Sep 2007</a>	12346	3740	2028	484	2535	3309563	969	4057	7480	24693
<a href="#">Aug 2007</a>	36196	11690	4151	1515	70194	175117900	46982	128692	362416	1122087
<a href="#">Jul 2007</a>	32693	10765	4537	1892	62947	170676073	58664	140651	333739	1013491
<a href="#">Jun 2007</a>	30121	9703	3825	1479	61613	131289916	44383	114754	291104	903643
<a href="#">May 2007</a>	37310	11013	3337	1211	60446	118810750	29079	80109	264324	895449
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<a href="#">Jan 2006</a>	18465	6195	2872	722	40863	85521449	22406	89058	192065	572437
<a href="#">Dec 2005</a>	14540	4967	2141	589	29772	69509013	15329	55691	129154	378050
<b>Totals</b>						<b>1160524882</b>	<b>332240</b>	<b>1068582</b>	<b>2545257</b>	<b>7697994</b>

# UPSpace

- Evaluated various open source repository software systems
- DSpace from MIT and HP
- Java and a PostgreSQL database layer
- Long term digital preservation
- “Communities and collections” model
- Digital repository management team
- Special and Africana collections, Veterinary Science Faculty, Department of Architecture, Education Faculty and the Mapungubwe museum
- openUP: collection of scholarly articles

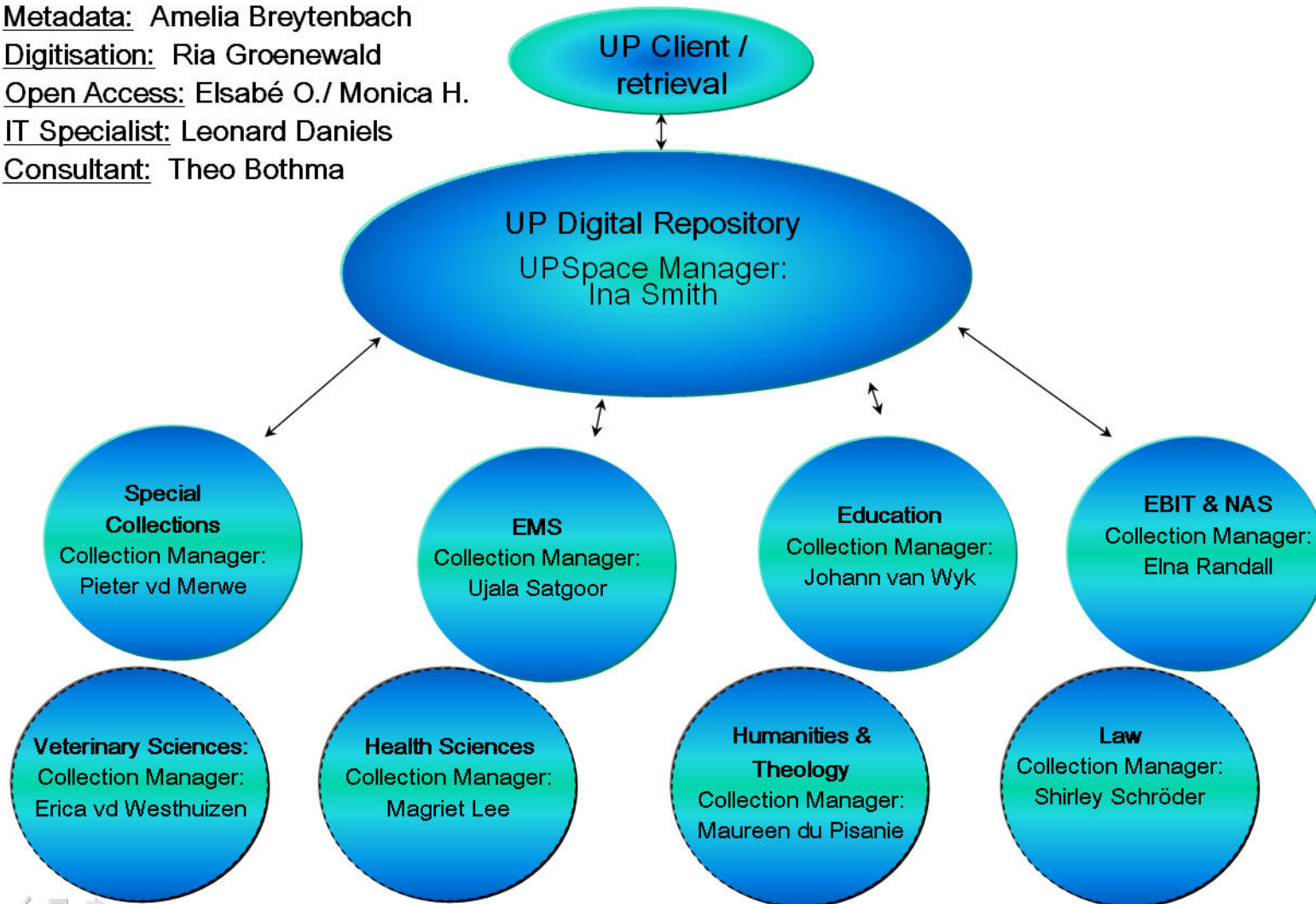




## UP Digital Institutional Research Repository

### Specialist / expert roles:

- **Metadata:** Amelia Breytenbach
- **Digitisation:** Ria Groenewald
- **Open Access:** Elsabé O./ Monica H.
- **IT Specialist:** Leonard Daniels
- **Consultant:** Theo Bothma



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UPSpace at the University of Pretoria >

**Welcome to UPSpace, the digital research repository of the University of Pretoria!**

**Items archived since January 2006: 2 562**

## Search

Enter some text in the box below to search UPSpace.

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## Open Access Initiatives

[eIFL SURFshare](#)

[DRIVER](#)

[openUP](#)

[openDOAR](#)

[ROAR](#)

[OAISTER](#)

[Open Archives Institute](#)

[Wikipedia](#)

[DOAJ](#)

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**Do you want to become part of the UPSpace research community?**

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**Title:** Virtual teamwork in very large undergraduate classes

**Inquiries:** [pmalex@postino.up.ac.za](mailto:pmalex@postino.up.ac.za)

**Author/s:** Alexander, P.M.

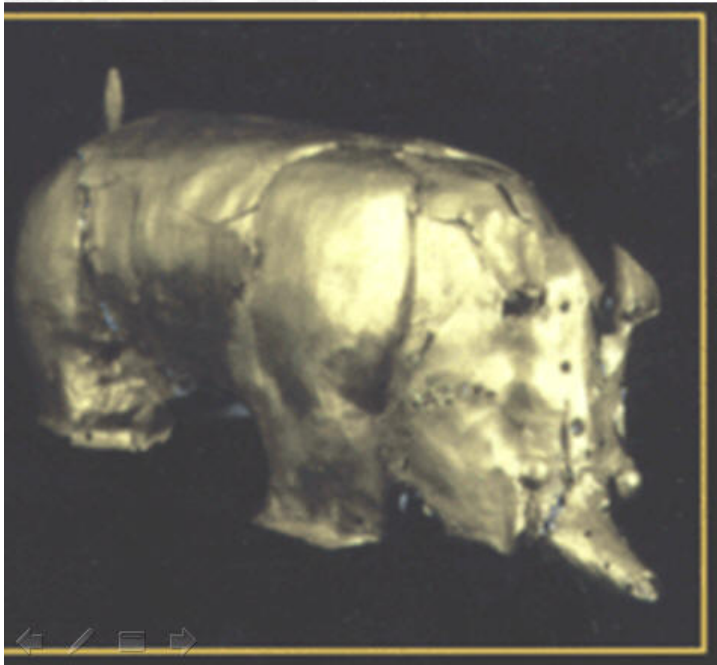
**Keywords:** Computer-mediated communication  
Cooperative and collaborative learning  
Distributed learning environments  
Virtual teams

**Issue Date:** Sep-2006

**Publisher:** Elsevier

**Citation:** Alexander, PM 2006. 'Virtual teamwork in very large undergraduate classes'. *Computers & Education*, vol. 47, Issue

# Examples UPSpace Content



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Department Anatomy and Physiology

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

F D Azzet<sup>1</sup>, S A Goodman<sup>1</sup>, M Hayes<sup>2</sup>, M J Legoff<sup>1</sup>, H A van Lee<sup>1</sup> and D C Look<sup>2</sup>

<sup>1</sup> Physics Department, University of Pretoria, Pretoria 0002, South Africa  
<sup>2</sup> Semiconductor Research Center, Wright State University, Dayton, OH, 45435, USA,  
Materials and Manufacturing Directorate, Air Force Research Laboratory, OH 45333, USA

Received 6 June 2001  
Published 20 September 2001  
Online at [stacks.iop.org/JPhysCM/13/09989](http://stacks.iop.org/JPhysCM/13/09989)

**Abstract**  
We report on the electrical and defect characterization of an Schottky formed on single-crystal ZnO, before and after irradiating with high (1.8 MeV) protons. Prior to bombardment we observed that several traps (E1-E4), with energies between 0.10 and 0.57 eV below the conduction band, are present in the ZnO. High-energy proton bombardment introduces donor traps (Epl and Epc2), with extremely low introduction rates of 2.4 and 1.9/cm<sup>2</sup>, respectively. Schottky barrier properties and reverse leakage current deteriorated from 1 × 10<sup>-7</sup> A for an irradiated to 1 × 10<sup>-6</sup> A after bombarding it with a dose of 4.2 × 10<sup>18</sup> cm<sup>-2</sup>. Compared to GaN we found that ZnO is remarkably resistant to high proton bombardment.





# Acceptance

- Initially very sceptical
  - Extra work
  - Copyright
- Change of attitude because of visibility of research
- Top management support
  - New regulations making archiving in repository compulsory
- Linking Research Office database and repositories



# Challenges for librarians



- Support the strategies and objectives of the institutional repository projects
- Influence the mindsets of colleagues in the library and also of researchers that may be hesitant to accept these new ideas
- Encourage knowledge transfer
- Motivate others to share, learn, apply their new knowledge
- Communicate new ideas and new ways of working effectively to their colleagues
- Identify new opportunities
- Mentor others that may be struggling in the new work environment

(Smith & Pienaar 2007)

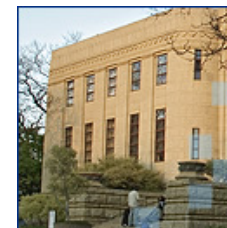
# Knowledge sharing

- Communities of practice
  - Spontaneous
  - Across institutional boundaries
- Even further – SARUA
- Mailing list
- Further initiatives
  - The Institutional Repository Toolbox
  - Wiki
  - Entry in Wikipedia



# Conclusions (1)

- Huge effort
- Hardware and software evaluation, purchase, instalment
- Training
- Mindset change
- Populating the repositories
- More and more researchers are becoming convinced that open access and open scholarship are to their advantage



## Conclusion (2)



- Support from top management is essential
- UP research has become much more visible
- Researchers were originally reluctant but have become much more enthusiastic
- Information professionals feel empowered
- Skills and expertise of the information professionals at UP are at a high level of professionalism



Thank you!

Questions, comments?

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