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2011

Using Preservation of Faculty Research as Demo Preservation Use Case for Developing a Digital Preservation Strategy within a Research University

Plato Smith II

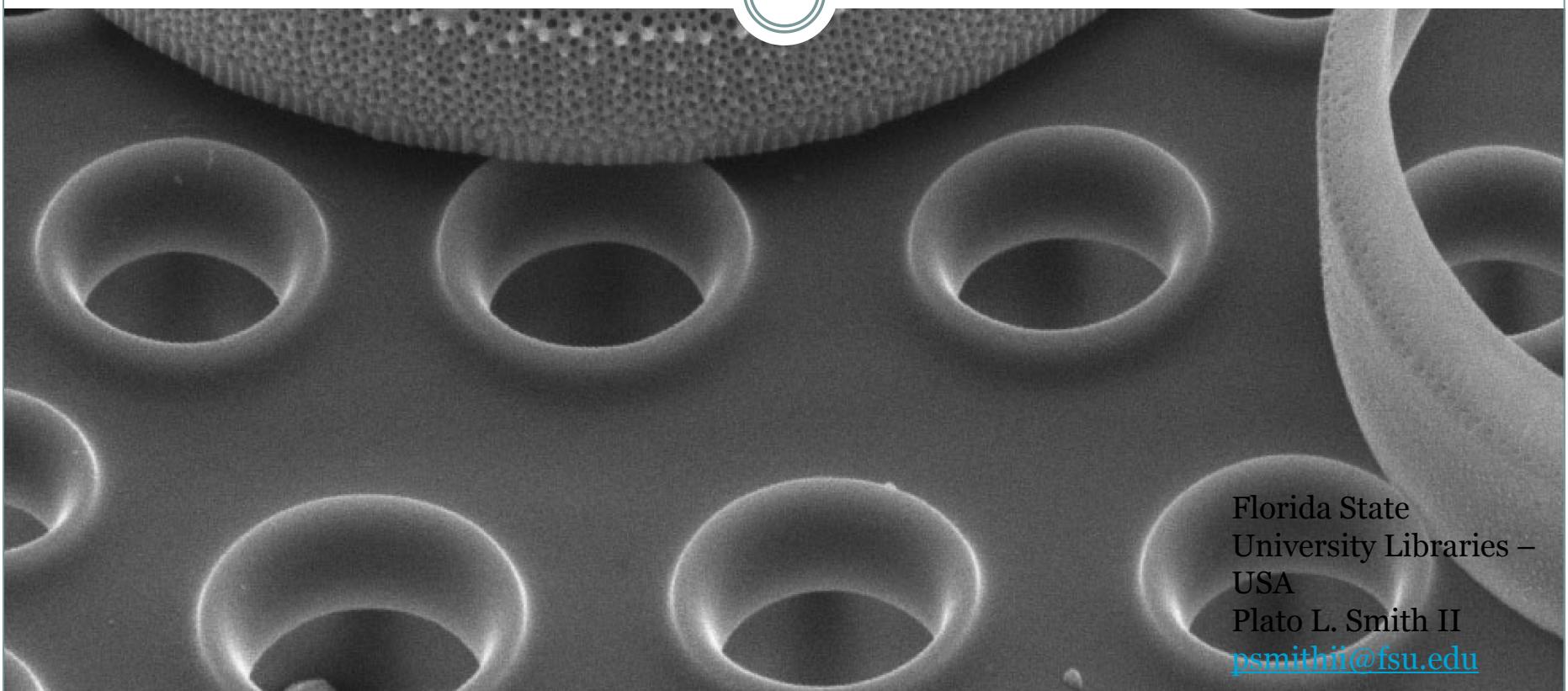




1st USETDA Conference

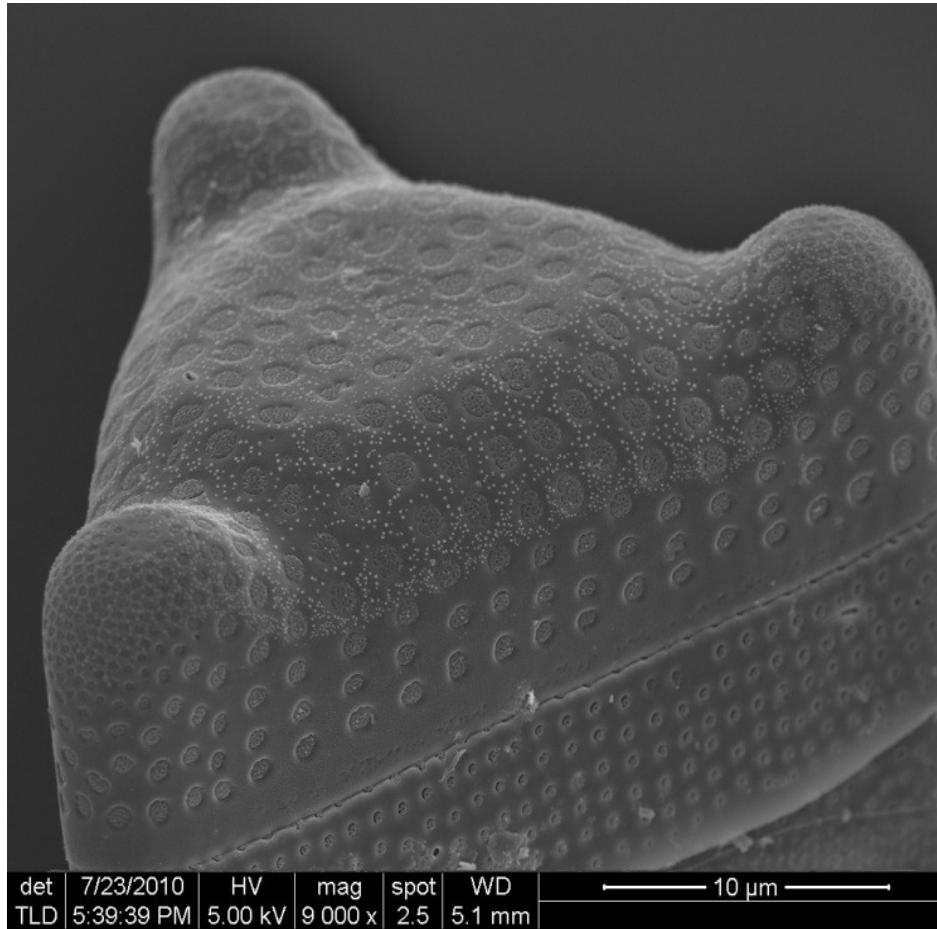


Using Preservation of Faculty Research as Demo Preservation Use Case for Developing a Digital Preservation Strategy within a Research University



Florida State
University Libraries –
USA
Plato L. Smith II
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Orlando, FL, May 20, 2011



“One interprets one’s own research so that it is useful beyond one’s own disciplinary boundaries and can be integrated into a larger body of knowledge” (Nibert, 2008).

Florida State University



- Carnegie Foundation designation
- Doctoral/Research University
- 40,000 students
- 16 colleges and more than 275 undergraduate, graduate, doctoral, professional and specialist programs
- 2000+ graduate and professional awarded annually
- Located in Tallahassee, Florida

Table of content

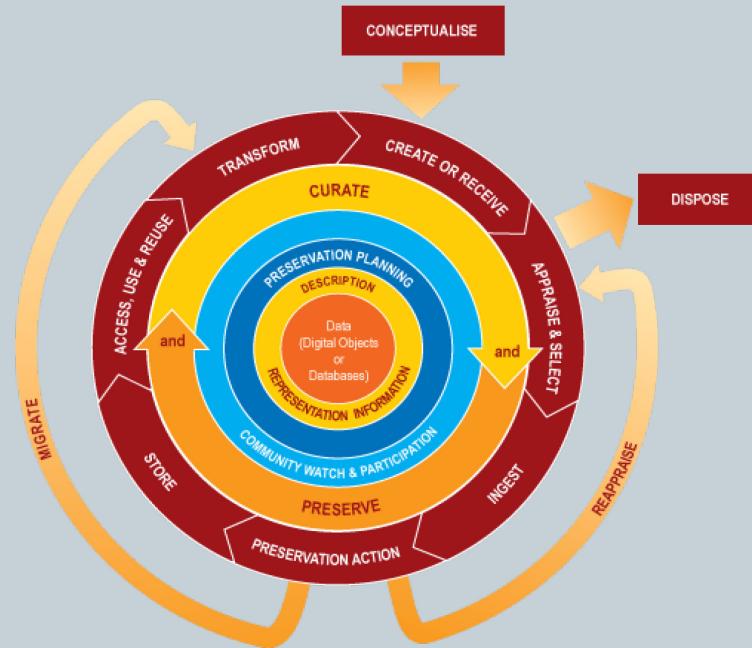


- Conceptual model used for preservation planning of Diatomscapes
- Preservation Planning
- Preservation Action - Florida Digital Archive (FDA) & MetaArchive
- Boyer's Model of Scholarship
- Florida State University (FSU) collections in FDA
- Resource Discovery
- Presentations
- Faculty Remarks
- Outcomes & Future Plans

Conceptual model used for preservation planning of Diatomscapes

- Requested a meeting with scientist
- Expressed interest to promote, publish, & preserve his research data
- Articulated significance & benefits of providing online access and preservation of data stored on CDs in his office

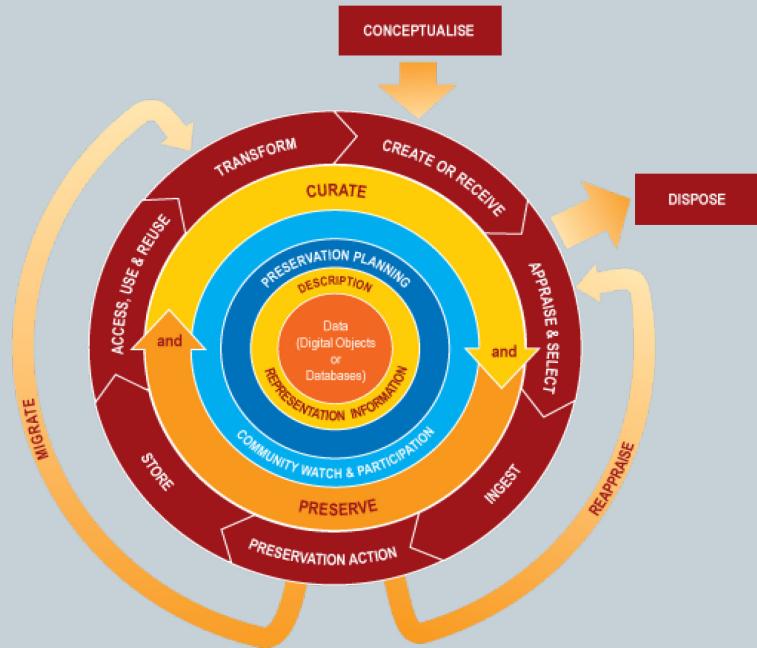
The DCC Curation Lifecycle Model



Conceptual model used for preservation planning of Diatomscapes (cont.)

- Acquired small sample of images for collection development & preservation planning
- Requested copyright permission from scientist to build digital collection from sample
- Honored scientist's request to restrict access to select unpublished images
- Began preservation planning and collection development

The DCC Curation Lifecycle Model

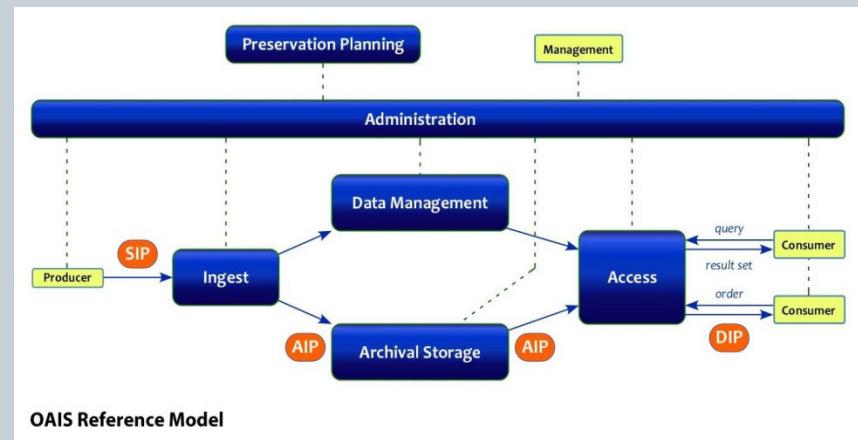


Preservation Planning - Florida Digital Archive (FDA) & DAITSS



- Contacted FDA Manager in Fall 2008
- Requested permission for demo preservation collection
- FDA granted FSU demo project code for preservation prototype
- FDA provided METS SIP specifications
- Developed Diatomscapes METS SIP

The Open Archival Information System (OAIS) Reference Model



Consultative Committee for Space Data Systems (CCSDS) - Reference Model for an Open Archival Information System (OAIS). Blue Book. Issue 1. January 2002. (CCSDS 650.0-B-1)

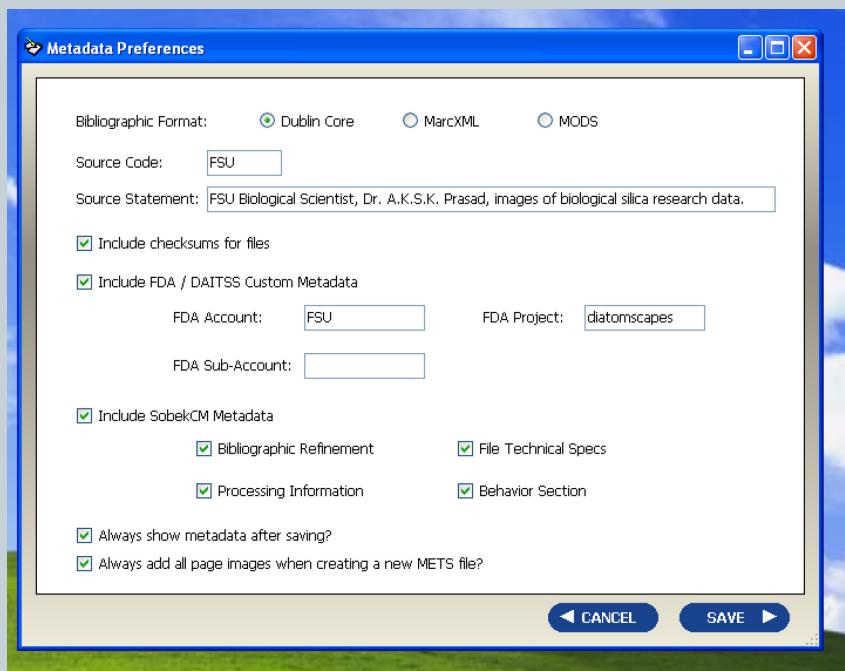
Preservation Planning (cont.) – Metadata Encoding Transmission Standard (METS) Creation Tool

- "Developed by UF integrated in their processes with an origin around 2005 and in use since then by UF. Recently rebranded and repurposed for larger consumption and use."
- Open-source SobekCM Online METS metadata creator/editor tool
- Creates OAIS SIP & AIP for FDA
- Used by University of Central (UCF)
- Currently being tested by Florida International University (FIU) and Florida State University (FSU)

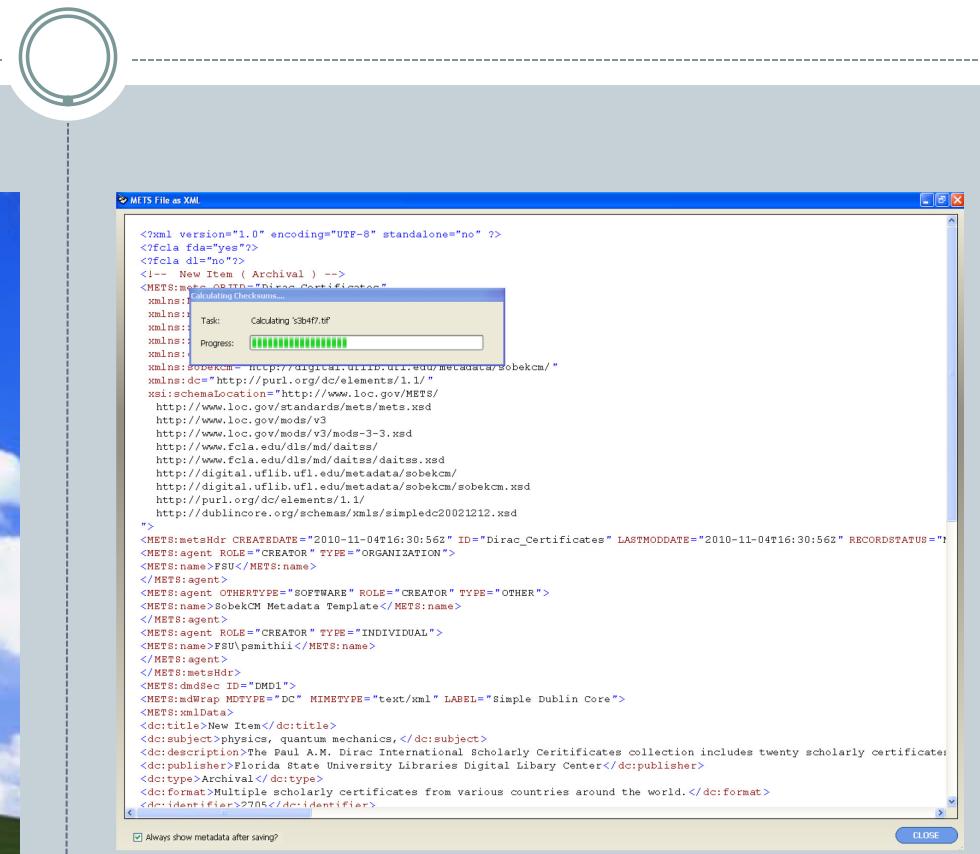


FSU began testing 2010-11-04

Preservation Planning (cont.) – Metadata Encoding Transmission Standard (METS) Creation Tool



METS creation data entry bibliographic information – metadata standards, checksums, & FDA preservation options



METS creation tool checksums demo

example of Paul Dirac certificate tiff file images

Preservation Action - FDA

- FDA – FSU joined 2009
- Digital preservation strategy
- DAITSS open-source software v.1
- OAIS compliant (METS SIP, AIP)
- Checksum SIP required before AIP
- Requires FDA agreement (free)

File Edit View History Bookmarks Tool Help
http://fda.fda.edu/statistics/package/E20081001_AAAAGAE# dictionary

Most Visited Getting Started FSU Libraries FSU Webmail Blackboard @ FSU (ca... Council of State Univ... Should my collection b... Choose a License Shared on Local PC My Account Google Translate

UFDC METS DigiTool - Se... Florida Stat... Diatomscape... FSU Biologic... Conspectus Archb... Florida Stat... Paul A.M. Di... DigiTool - Se... Grey Literat... GL12 Absr...

FSU_DIATOMSCAPES

totals

files	40
bytes	5 GB

admin info

Package Name	FSU_DIATOMSCAPES
Ingest Time	Wed Oct 01 16:12:42 -0400 2008
Volume	
Issue	
Title	The e-Curation of Diatomscapes. Images of Biological Silica
Ext Rec	
Entity Id	

File List

id	name	md5	sha1	size
F20081001_AAAGUD	2K14635.tif	1985b0120489c765be945c53dd547c36 817f2ead072a3120ab0e96029c37351764c904a	303.2 MB	
F20081001_AAAGUE	2K14636.tif	1c04ee73246557a3a365cd6bdebe40c3	eabe090702db7d703f54700d75295f0bdad2dc56	183.6 MB
F20081001_AAAGUF	2K14648.tif	48c1c6bb2aba50a0e4fb6490d3804df9a4	20c2cf4c8ffb9a04c15c5d03b31918212dd3ab	301.5 MB
F20081001_AAAGUG	b-1606.tif	9cc6d3eb28e899c4bdd585c2861b383a	7047580790d1129b620d777d859cc12bbc2327e	284.4 MB
F20081001_AAAGUH	b-1606copy.tif	4e95554c8cc5e748f58c8e23fa3c3659	41595e9d023af038f1b2de6a204ece1725zf24ic	10.9 MB
F20081001_AAAGUI	delphineis_prasad_1986.tif	ed1c67610def82f6c70d8eb687ebe51	5195ace1ec9f48f08e808dc8d13ec20d207cc3	16.8 MB
F20081001_AAAGUJ	diatoms.tif	f4ce994a7d9b42d9aef89edf0e9fc0d3df8a41225c59595d566dea3	ed16e842038368e	190.5 MB
F20081001_AAAGUK	diatoms_metadata_2005.txt	617cebdbab077a7cbbfbfed343d1755fc	d9611b42abbd1f278bbe9da9f505c6f28993a3c8	12.2 KB
F20081001_AAAGUL	EM962593.tif	663663982dd611d79d28560725a26b55	9c59391d0206017d275661567e633064c6d0bb96	296.6 MB
F20081001_AAAGUM	EM962593_copy.tif	c2cadef1d4b370d701503a6547e8c730	44116ddfc0a39954559a11980969cb28a92295819b9	10 MB
F20081001_AAAGUN	EM972940.tif	74858066904fe86df25b3398b6625166	d29ebff1d7295ad45ef495101ff7fb98364686eaca	303 MB
F20081001_AAAGUQ	EM972940_copy.tif	218a024ae2f2810ae6eff27a26bac158	bf326426582c3503dab7f6c4f2a9eb8535c113a	9.1 MB
F20081001_AAAGUP	EM993714.tif	deiceb4c946bb6335sefa4b21b0832367	2f58ecaaebc76de6994f292d2c4b3b9dce3b893t	296.4 MB
F20081001_AAAGUQ	EM993714_copy.tif	7ba254a410994c35a1b3352319820d8b	a232a0c9c90360956830eff7ded6c5628fb3faaa	12.3 MB
F20081001_AAAGUR	EM993715.tif	a644b61ea2abcbad8f4aee370cd9c4	37d38d48144ec3bcdffcc8aa0788e6045d4993509	309.3 MB
F20081001_AAAGUS	EM993721.tif	6fd7d1927668abca5f8f6933e2c9f7b5	99790d74428697ba8d7bdb02fdae63f34c782ce0	298.1 MB
F20081001_AAAGUT	EM993721_copy.tif	b1197c6a9b0419f127d04693b827a2a	1865a065d3d30123ace271e56204473178zr84d8	10.9 MB
F20081001_AAAGUU	EM993801.tif	c152d40d2d1110f6d885c6b7c3e8886	acbc594361bbcd1738c3464dfc13abc57effbd0	309 MB
F20081001_AAAGUV	EM993801_copy.tif	9cb566f6629c0831d6d66ec841c9289b	f414cd98b62912402ddcd126fb98d55dc0f3e08	11.7 MB
F20081001_AAAGUW	FSU DIATOMSCAPES.XML	e34901d5da0d32427b5ea983105cb5	c00e203d9db9a3c1c7e850487b1cea48197e73c6	12.7 KB

Biological Science Diatomscapes I & II
collections preserved via FDA (demo collection)
(Note: This collection was the first to be preserved via FDA as part of demo preservation pilot project & was later used to influence senior management for FSU Libraries to join FDA)

Preservation Action (cont.) – FDA

- DAITSS v.2 (production April 2011)
- FDA Appendix A project codes updated to include undergraduate honors (UHT) (May 2011)
- Successfully ingested several UHT SIPs

The screenshot shows a Mozilla Firefox window titled "daits v0.16.1 - Mozilla Firefox". The address bar shows "https://fda.fcla.edu/packages". The main content area displays the "dashboard : packages" page. At the top left, there is a "submit" button and a note input field with a "Browse..." button. To the right, there is a "search" section with an "eid or package name" input field and a "Search" button. Below these are instructions: "packages must be in **tar** or **zip** format" and "aip or sip separated by spaces." In the center, there is a table with columns: project, start date, end date, activity, and set scope. The start date is set to 05/13/2011 and the end date to 05/18/2011. There is also a "Set Scope" button. At the bottom, there is a table titled "latest activity" showing various entries with columns: internal entity id (eid), package, account, project, size (MB), # of datafiles, lastest activity, and time. The table includes rows for multiple entities like ENH7WYSKQ_HH4NFG, E50MQK1UY_NE032D, ETYT96ASC_FF20SN, etc., with details such as file sizes (e.g., 6.69 MB, 59.30 MB) and activity times (e.g., Tue May 17 2011 02:39:49 PM). The footer of the page reads "Florida Digital Archive" and "DAITSS v0.16.1".

Preservation Action (cont.) – MetaArchive

- MetaArchive – FSU joined 2004
- Distributed digital preservation strategy
- LOCKSS open-source software
- OAIS cognizant (AIP)
- Requires XML plugins, manifest page, conspectus DB entry
- Requires cooperative agreement (fee)

The screenshot shows a web browser window with the URL <http://conspectus.metaarchive.org/collections/109/au/613/status>. The page is titled "Collection" and displays information for the "FSU Biological Scientist, Dr Prasad Diatomscapes I and II Collections". It includes sections for "Archival Unit" (with a plugin entry for "edu.fsu.DiatomscapesPlugin" and base URL "http://nas-725n.lib.fsu.edu/fsu_diatomscapes01_prasad/"), "Preservation Status", and a table of crawl results.

Cache	Size (MB)	DiskUsage (MB)	Last Crawl	Crawl Result	Last Poll	Agreement
aub-cap	5479	5487.9	2010-09-03 20:01:19 UTC	Successful	2010-10-27 18:40:51 UTC	100.0
clem-fe	5479	5487.9	2010-10-20 08:37:54 UTC	Successful	2010-10-28 11:12:45 UTC	100.0
fsu-cap	5479	5487.9	2010-05-25 16:42:40 UTC	Successful	2010-11-01 22:50:28 UTC	100.0
lou-cap	5479	5488.4	2010-09-06 20:24:02 UTC	Successful	2010-10-28 17:46:34 UTC	100.0
rice	5479	5487.9	2010-07-22 14:31:02 UTC	Successful	2010-10-27 08:23:47 UTC	100.0
unt	5479	5480.5	2010-10-20 07:55:12 UTC	Successful	2010-11-05 03:26:54 UTC	100.0
vt-cap	5479	5487.9	2010-09-03 16:17:56 UTC	Successful	2010-10-28 15:02:21 UTC	100.0
Average	5479	5486.91428571429				100.0
Total	38353	38408.4				

Biological Science Diatomscapes I & II collections preserved via Auburn, Clemson, FSU, Louisville, University North Texas, and Virginia Tech LOCKSS caches
(Note: This collection was the first FSU collection to be successfully preserved via MetaArchive in 2009)

Boyer's Model of Scholarship (Nibert, 2008)



Type of Scholarship	Purpose	Measures of Performance
Discovery	Build new knowledge.	<ul style="list-style-type: none">• Publishing in peer-reviewed forums – The Grey Journal, v. 7 (3), 2011; World Digital Libraries, v. 3 (1), June 2010 (peer-reviewed publications)
Integration	Interpret the use of new knowledge across disciplines.	<ul style="list-style-type: none">• Collaborating with colleagues to design and deliver a course – Spring 2011 CCI guest lecture for DL class
Application	Aid society and professions in addressing problems (<i>i.e. faculty isolation and fragmentation; communication issues; tight resources; faulty reward systems</i>)	<ul style="list-style-type: none">• Assuming leadership roles in professional organizations – GL12 SUL DISC presentation 3/11
Teaching	Study teaching models and practices to achieve optimal learning.	<ul style="list-style-type: none">• Mentoring graduate students – DLC graduate assistantships (master/doctoral)

Nibert, M. (2008). "Boyer's Model of Scholarship", *Faculty Guidebook*, 4th Edition, Pacific Crest: Lisle, IL. Retrieved May 18, 2011 from <http://www.pcrest.com/PC/FGB/BoyerModel.pdf>.

FSU Collections in Florida Digital Archive (FDA)



- Biological Science – Dr. A.K.S.K. Prasad (select archival images)
- FSU Honors in the Major Program
 - 2004 – 2010 undergraduate honors theses (UHT) data
 - 6 yrs, 18 semesters, & over 600 theses (3 of 6yrs completed 5/11)
- Electronic Theses
- Florida Heritage Protocol
- Department of Oceanography Technical Reports
- World Map Collection
- Juvenile Literature Collection

Resource Discovery



The screenshot shows the Florida State University Libraries OPAC interface. The search term 'diatomscapes' has been entered into the search bar. One result is displayed, titled 'Diatomscapes I : Images of biological silica.' The record includes basic bibliographic information: Author: A. K. S. K. Prasad; Publisher: Tallahassee, Fla.; Date: c2009; Edition/Format: Downloadable visual material; Summary: This collection consists of 34 images of biological silica, obtained from various locations and produced from the JEOL JSM-840 scanning electron microscope. The record is marked as 'Available'.

THE FLORIDA STATE UNIVERSITY
Libraries

You are searching books, journals, music, movies, and more . . .

Books and more Digital Collections Course Reserves

Basic Search Search begins with (browse) Advanced Search

diatomscapes Anywhere

Results/page: 10 Sort By: Relevance

1. Diatomscapes I : Images of biological silica.
Author: Prasad, A. K. S. K.
Published: Tallahassee, Fla. : Florida State University, c2009.
Summary: This collection consists of 34 images of biological silica, obtained from various locations and produced from the JEOL JSM-840 scanning electron microscope.

Connect to FSU Digital Collection:
Title from home page (viewed on Aug. 26, 2009).
[add](#) [print](#) [email](#) [txt](#) [cite this](#) [RefWorks](#)

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FSU Home | Copyright

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This Site Uses Google Analytics (Google Privacy Policy)

FSU OPAC Diatomscapes record

The screenshot shows the OCLC WorldCat search results for the same title. The record is identical to the one in the FSU OPAC, including the author, publisher, and a detailed summary. The record is marked as 'Available'. The interface includes options for adding the item to a list, writing a review, and rating it. There are also links to similar items and a 'Borrow / obtain a copy' button.

Diatomscapes I : Images of biological silica. (Downloadable visual material, 2009) [WorldCat.org] - Mozilla Firefox

Home Search

Advanced Search Find a Library

Add to list Add tags Write a review Rate this item: ☆☆☆☆☆

Diatomscapes I : Images of biological silica.

Author: A. K. S. K. Prasad, Florida State University, Dept. of Biological Science.
Publisher: Tallahassee, Fla. : Florida State University, ©2009.
Edition/Form: Downloadable visual material : Clipart/images/graphics : Picture : English
Summary: This collection consists of 14 images of biological silica, obtained from various locations and produced from the JEOL JSM-840 scanning electron microscope.

Rating: ☆☆☆☆☆ (not yet rated) [0 with reviews - Be the first](#)

More like this
Subjects: [Diatoms — Frustules](#), [Marine microbiology](#).
Similar Items

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Check for Electronic Resources | ILL | Connect to the catalog at Florida State University | Florida Group Catalog | OCLC FirstSearch

Find a copy online
Links to this item
[purl.fcla.edu](#)

OCLC WorldCat Diatomscapes record

Resource Discovery (cont.)

The screenshot illustrates the use of DigiTool for resource discovery. On the left, a Firefox window shows the FSU Libraries' Digital Collections homepage for Dr. A.K.S.K. Prasad's select images of biological silica. The right window shows a search results page for 'Diatomscapes' within the 'Admin Unit FSU01' collection.

Left Window (DigiTool - Collections - Mozilla Firefox):

- URL: http://digi tool.fcla.edu/R/TUBT4R2JA54NQ6M7YGCKG621CVNK7NG57BMFP4Q1J23A75VS-00403?func= collections&collection_id=1758
- Page Title: FLORIDA STATE UNIVERSITY Libraries' Digital Collections
- Content: Dr. A.K.S.K. Prasad's select images of biological silica, including Diatomscapes - images of biological silica, Open Access Copyright Permission, Diatomscapes Exhibit, Faculty Interview, Diatomscapes Conference Presentations, and Diatomscapes I - Images of biological silica (14).

Right Window (DigiTool - Results - Brief - Mozilla Firefox):

- URL: <http://digi tool.fcla.edu/R/TUBT4R2JA54NQ6M7YGCKG621C>
- Page Title: FLORIDA STATE UNIVERSITY Libraries' Digital Collections
- Content: Search results for 'W-PartitionA= bio03 AND W-PartitionB= fsu' in 'Admin Unit FSU01' Collection [Sorted by: Ranking]. The results show 14 records, including:
 - 1. **Staurosira venter (Ehrenberg)** Grunow
 - 2. **Odontella aurita (Lyngbye)** Brébisson 1838
 - 3. **Azbeitia nodulifer (A. Schmidt)** Fryxell & Sims
 - 4. **Suriella fastuosa (Ehrenberg)** Kützing
 - 5. **Desikaneis howelli Prasad 1993** Dr. A.K.S.K. Prasad
 - 6. **Delphineis livingstonii Prasad 1986** Dr. A.K.S.K. Prasad

FSU Libraries DigiTool Diatomscapes record

Presentations



- **2011 Presentation**
- United States Electronic Thesis and Dissertation Association (USETDA), Orlando, FL <https://conferences.tdl.org/USETDA/USETDA2011/paper/view/375> – 2011/05/20
- **2010 Presentations**
- 12th International Conference on Grey Literature – National Technical Library, Prague, Czech Republic - Presentation titled “Developing small worlds of e-science: using quantum mechanics, biological science, and oceanography for education and outreach strategies for engaging research communities within a university”. http://2007.ispace.ci.fsu.edu/~psmithii/GL12-2010/GL12_2010-11-05_FSU.pdf – 2010/12/06
- 31st Annual IATUL Conference Poster Presentation - Purdue University, Lafayette, IN - Provided and developed as needed abstract, organization, content, images, research questions, methodology, digital collections, preservation strategies, and conclusions. <http://blogs.lib.purdue.edu/iatul2010/program/> – 2010/06/22

Presentations (cont.)



- **2009 Presentations**
- 11th International Conference on Grey Literature Poster Presentation – Library of Congress, Washington, DC
<http://www.textrelease.com/g11program/posterpresentations.html>
- 4th OR Conference Poster Presentation – Georgia Tech, Atlanta, GA
<https://oro9.library.gatech.edu/poster.php>
- 14th ACRL National Conference Poster Presentation – Seattle, WA
http://2007.ispace.ci.fsu.edu/~psmithii/acrl2009/acrl_03092009_fsu.pdf
- **2008 Presentations**
 - 4th IDCC Poster Presentation (Minute Madness: Poster Session – slide #8) – Edinburgh, Scotland
<http://www.dcc.ac.uk/events/conferences/4th-international-digital-curation-conference/programme>
- **SPARC 2008 Digital Repositories 2-minute Innovation Fair Presentation** – Baltimore, MD - Presented innovation fair 2-minute flash video titled “P 3 D: Publishing, Publicizing, & Preserving Diatomscapes”.
http://2007.ispace.ci.fsu.edu/~psmithii/sparc2008/2008-11-07_1717.swf

Faculty Remarks



- *"I am very pleased that my diatom images are now digitally archived as part of the pilot program for [Florida Digital Archive - FDA] digital preservation. I am honored to be partnering with [FSU Digital Library] and your colleagues [Florida Center for Library Automation - FCLA] on this innovative program. Kindly extend my thanks, on my behalf, to Ms. Motyka and Ms. Caplan for their contributions to the success of this important aspect of our collaboration. I hope it is just the beginning for a long and mutually beneficial partnership between scientists and digital technologists. Thank you again for this exciting news. You made my day". - Dr. A.K.S.K. Prasad, FSU Biological Scientist (courtesy)*

Outcomes & Future Plans



- Developed trust and solid working relationship with scientists
- Promoted faculty research which later garnered the attention of faculty colleagues
- Assisted with phase I DEP manual production
- Scientists interested in collaborating on 2 yr BP oil spill project
- Develop, submit, and receive grant funding (i.e. FSU, NSF, IMLS, FRLMG, etc.)
- Procure equipment for scientist (i.e. laptop, new scanner, & microscope)
- Map Boyer's Model of Scholarship to non-tenured faculty
- Extend project scope & collaborations (i.e. HPC)

Thank you



- Q & A
- Comments
- Contact information
 - Email: psmithii@fsu.edu or plato.smith@gmail.com
 - Phone: 1+850.644.3053 (Office)