Plato L. Smith II
Florida State University
Tallahassee, FL
USA

The e-Curation of Diatomscapes

Abstract - This poster session will use text, diagrams, and images to display the development of the application of The DCC Curation Lifecycle Model to the preservation of Diatomscapes. Diatomscapes represents a collection of images of biological silica and includes diatoms ("microscopic, single-celled plants that thrive in freshwater, saltwater, brackish water and even semi-terrestrial environments" (Prasad, 2005)) and Radiolarians ("any of various marine protozoans of the order Radiolaria, having rigid siliceous skeletons and spicules" (Dictionary, 2008)). Diatomascapes II is another collection of images of biological silica. Diatomscapes images were produced using the JEOL JSM-840 Scanning Electron Microscope and Diatomscapes II images were produced using the FEI Nova 400 Nano Scanning Electron Microscope (SEM). Before the start of this project, Diatomscapes and Diatomscapes II existed offline on distributed compact discs and PC workstations inaccessible to the wider online research and learning communities . The term Diatomscapes was developed by FSU Biological Scientist Dr. A.K.S.K. Prasad.

Area of Opportunity - There is currently no established metadata standard being used for the description or a systematic approach or model for the preservation of Diatomscapes. The majority of digital images of biological silica exist offline.

Research Question - If The DCC Curation Lifecycle Model was articulated to FSU biological scientists, would they be willing to adopt this model in the preservation of digital images of biological silica?

Sample Project - Diatomscapes represent a sample from over 7100 available images of biological silica (majority pertain to diatoms, mostly marine and some freshwater);1000 of those images are stored as TIFF file format; and the remaining images exist as 5" x 4" negatives which have yet to be digitized.

Outcomes - Diatomscapes exist online in Picasa, Flickr, and a short video in Facebook and are currently being preserved in the Florida Digital Archive and MetaArchive. Dr. A.K.S.K. Prasad and other FSU biological scientists are pleased with current digital curation efforts of images of biological silica and have extended support for future project collaboration; however, it is not a priority.

Future Plans – Fully map Diatomscapes to Access to Biological Collections Data (ABCD) metadata standard and The DCC Curation Lifecycle Model as prototype for all digitized images of biological silica; build Diatomscapes digital collections in DigiTool and link to FSU Libraries OPAC and OCLC WorldCat; develop a grant proposal for developing a biological infrastructure for the organization, description, preservation, and online accessibility to there remaining images of biological silica that contribute to 20+ years of research.

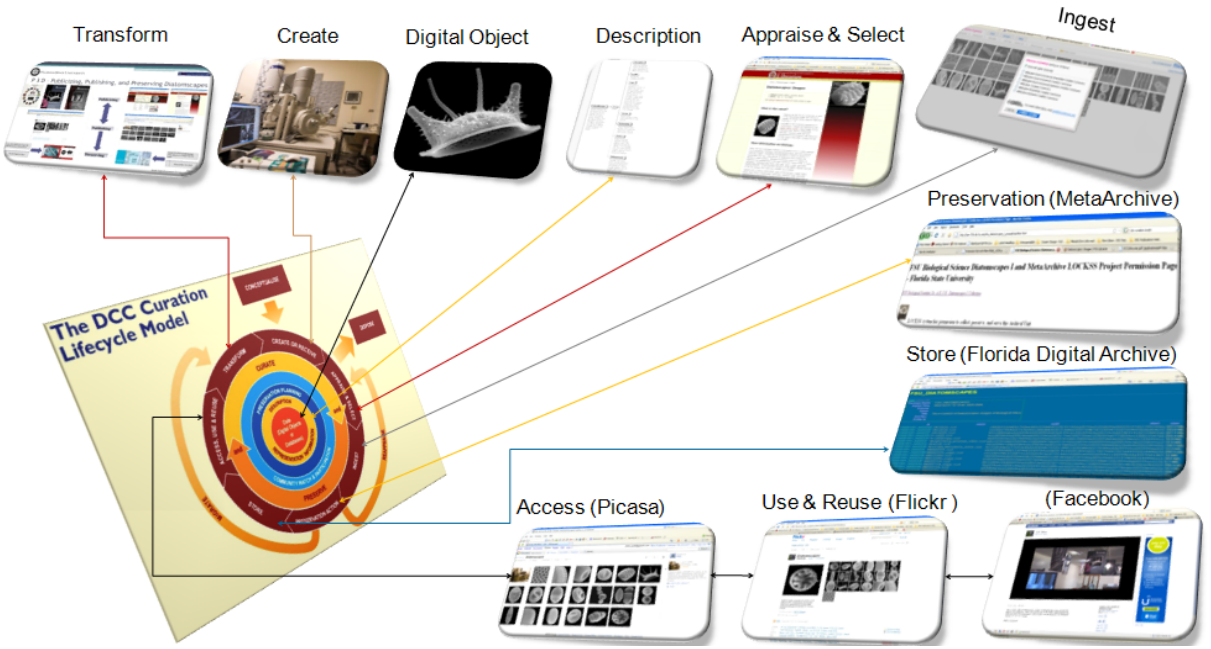

Figure 1: Using The DCC Curation Lifecycle Model as a reference model for the e-Curation of Diatomscapes

Figure 2: SPARC 2008 Innovation Fair presentation – Introducing aspects of Level 1, 2, & 3 curation

References

Biodiversity Information Standards (TDWG). 2007. Access to biological collection data (ABCD), version 2.06. Retrieved November 24, 2008 from http://www.tdwg.org/standards/115/.

Dictionary.com. Radiolarian. Retrieved November 24, 2008 from http://dictionary.reference.com/browse/radiolarian.

FDA. 2008. Florida digital archive. Retrieved November 24, 2008 from http://fda.fcla.edu/statistics/project/281.

Lord, P., & Macdonald, A. (2003). e-Science Curation Report. *Data curation for e-science in the UK: an. audit to establish requirements for future curation and provision*. Retrieved October 11, 2007 from http://www.jisc.ac.uk/uploaded_documents/e-ScienceReportFinal.pdf.

MetaArchive. (2008). http://www.metaarchive.org/.

Prasad, A.K.S.K. (2005). Diatomscapes images of biological silica. Personal correspondence April 12, 2008.