

Title	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
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Abstract: The paper will use text, diagrams, screenshots, models, and developing e-science digital collections at Florida State University (FSU) Libraries as an experimental approach in developing a digital preservation management policy strategy that promotes current and future use of FSU Libraries digital assets. Scientific research from quantum mechanics, biological science, and oceanography research disciplines will be used as digital collection development and preservation models for education and outreach strategies for engaging disciplinary research communities at FSU.

The project will explore the use of standards-based description and the ingest, access, data management, and preservation functional entities of the open archival information system (OAIS) reference model as they relate to digital collection development and preservation of early works on quantum mechanics by Paul A.M. Dirac such as his 1926 hand-writing dissertation and other keen insights from primary source materials on quantum mechanics, biological science images of biological silica, and oceanography technical reports. Select materials from these research disciplines will be digitized, cataloged, and made available online via libraries public access catalog (OPAC), OCLC WorldCat, and DigiTool institutional repository (IR) along with being preserved via the Florida Digital Archive (FDA) and/or MetaArchive. The project will also explore the use of open-source software developed at the University of Florida used for the Digital Library of the Caribbean (dLoc) for the creation of Metadata Encoding Transmission Standard (METS) files for ingest into FDA and DigiTool (digital content management system).

The paper will reference Purdue's work on digital curation profile development for research discipline-specific communities and propose a theory of metatriangulation that maps the Reference Model for an Open Archival Information System (OAIS) CCSDS 650.0-P-1.1 (Pink Book) Issue 1.1 August 2009, The DCC Curation Lifecycle Model, and Boyers Model of Scholarship in the development of a digital preservation management policy strategy for interdisciplinary consideration and research community engagement.

The project will exhibit FSU Libraries' local collaboration with the Department of Biological Science, Department of Earth, Ocean, & Atmospheric Science, Special Collections and Dirac Science Library; regional collaboration with Florida Center for Library Automation (FCLA); and national/international collaboration with MetaArchive Cooperative for data management and/or preservation.