Distributed Custodial Frameworks for Archival Preservation

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How do you respond to people inside and outside of the archives profession who complain that we have spent a lot of years and money researching solutions to electronic records preservation, and yet we still don't have solutions?

A lot of resources have been invested in strategic and institutional planning, and yet most institutional archives (government, academic, etc.) still don't have full electronic records programs (mature policies, institutional support AND electronic records repositories). Why?
Challenge is Big --
Resources are Small

- Most archival repositories will never have the resources needed to build in-house electronic records preservation capabilities.
- The records we are trying to preserve are constantly changing and becoming more complex.
- Every archival repository cannot hire experts in preservation technologies.
- The solutions we develop today will not work forever.
One piece of the puzzle

We need a trusted sustainable preservation service that archival repositories of all types and sizes can employ to support their preservation responsibilities for electronic records.
What is Distributed Custodial Preservation?

- Physical custody of archival collections is distributed outside of the archival repository to a trusted preservation service.
- Archival repository retains legal custody.
- Archival repository remains responsible for archival functions, including preservation and access.
- Access to collections is controlled by archival repository.
DCAPE Project

- Distributed Custodial Archival Preservation Environments
  - Project was funded by NHPRC in 2008 (RE10010-08)
  - Officially started in December 2008
  - Project will run for 2 ½ years
  - http://dcape.org
DCAPE Partners

- 28 people across 9 institutions and 4 staff at UNC, for a total of 32 participants
- **State Archives:** California, Kansas, Michigan, Kentucky, North Carolina, New York
- **University Archives:** Tufts
- **Cultural Entity:** Getty Research Institute
- **Cyberinfrastructure:** West Virginia University, Carleton University (Canada)
- **UNC:** Renaissance Computing Institute (RENCI) and School of Information and Library Science (SILS)
DCAPE Goals

- Build a preservation environment that meets the needs of archival repositories for trusted archival preservation services.
- The trusted digital repository infrastructure will be assembled from state-of-the-art rule-based data management systems, commodity storage systems, and sustainable preservation services.
- The software infrastructure will automate many of the administrative tasks associated with the management of archival repositories.
DCAPE Goals

- The preservation service will reduce the need for archival repositories to build their own electronic records preservation capabilities in-house.
- A business model will be developed to sustain the preservation service over time.
Project Tasks

- Execute service agreements between UNC and partners to govern use of the test collections.
- Define rules and services (organized according to the OAIS framework) for iRODS to perform on test collections.
- Ingest test collections into iRODS and validate the rules and services.
- Develop business model (including costs) for sustaining a repository service based on iRODS.
- Develop model service agreements that define the standard and optional services of the repository.
Role of iRODS

- Preservation environment provides rule-based automation of archival functions (repeatable services)
- Standard and optional services will be available
- Shared service should reduce costs for each archival repository compared to the cost of building in-house preservation capabilities
DCAPE is More

- More than a storage service or environment
- More than a reference tool
- DCAPE will provide the capability for all archival repositories to fulfill their responsibility to preserve electronic records