

Storage Delegation Layer

Discussions have begun between DSpace and Fedora developers to evaluate having a common storage layer abstraction. Leading this effort from the DSpace community is Richard Rodgers and Brad McLean, from the Fedora community is Chris Wilper. A meeting will take place the week of October 7th, during the time of the DSpace 2.0 developer meeting to outline possible proposals from which both communities can give feedback.

Some Motivations and Expectations

- Since storage systems underpin all repository platforms, there is an obvious advantage to sharing and leveraging work in this area regardless of other differences in data model, architecture, etc; work which would otherwise be duplicative. Expressed another way, it multiplies the resources that can be brought to bear on the rapidly evolving world of cloud-based, grid, enterprise CMS, etc, storage options.
- A common abstraction could enable and encourage a common storage **fabric** (meaning a large collection of content addressable by a variety of repository systems), which can form the foundation for inter-repository services. Examples: replication for data security, distributed mirroring for optimized access, custody transfers, etc. Such services are possible - but far more difficult - in a heterogeneous storage environment.
- This effort can also function as an invaluable forum for understanding requirements and use-cases around repository content management encompassing the DSpace and Fedora constituencies. Example: what additional requirements - if any - are placed on a storage back-end by holding video or other streamable content?
- A common storage layer invites us to re-imagine, or poke holes in, our conception of a repository. Is storage an 'out-sourceable' service of a repository? Can a Fedora and a DSpace instance, or a consortium of them, share a single store? Such questions can help us answer the critical questions about the distinctive nature of the systems we are inventing and how they fit into the larger digital ecosystem.