

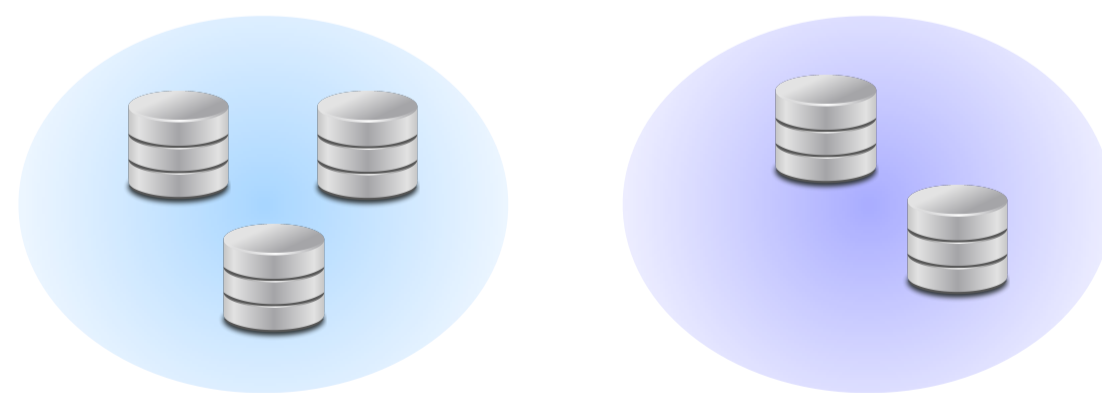
Global Media Curation Platform Using iRODS

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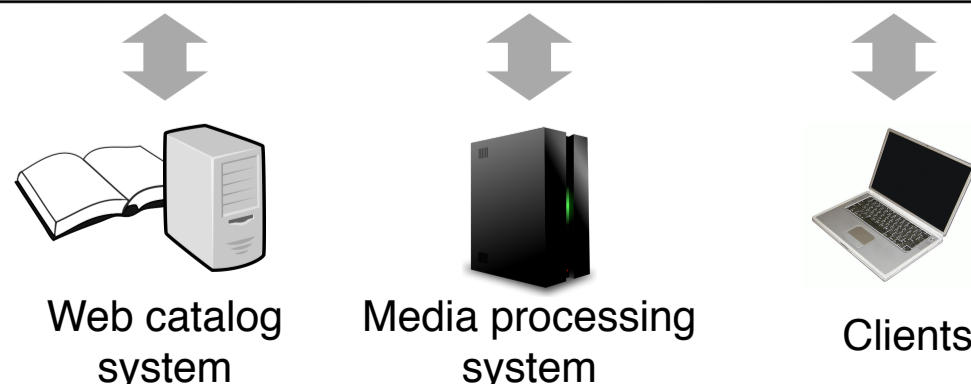
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Overview

- In CineGrid Exchange project, we use iRODS to curate and preserve super-high-definition media content such as 4K movies.
- Our media curation platform enables long-term data preservation and streamlined workflows for curators to handle large amount of media data in a cross-organizational environment.
- The platform consists of a front-end web catalog system and a back-end storage and workflow system.
- The front-end is a web-based content management system and brings ease-of-use in metadata management and data retrieval. The back-end is an iRODS-based distributed storage system that guarantees data consistency and redundancy. It also provides an event-based rule engine to realize flexible workflows.

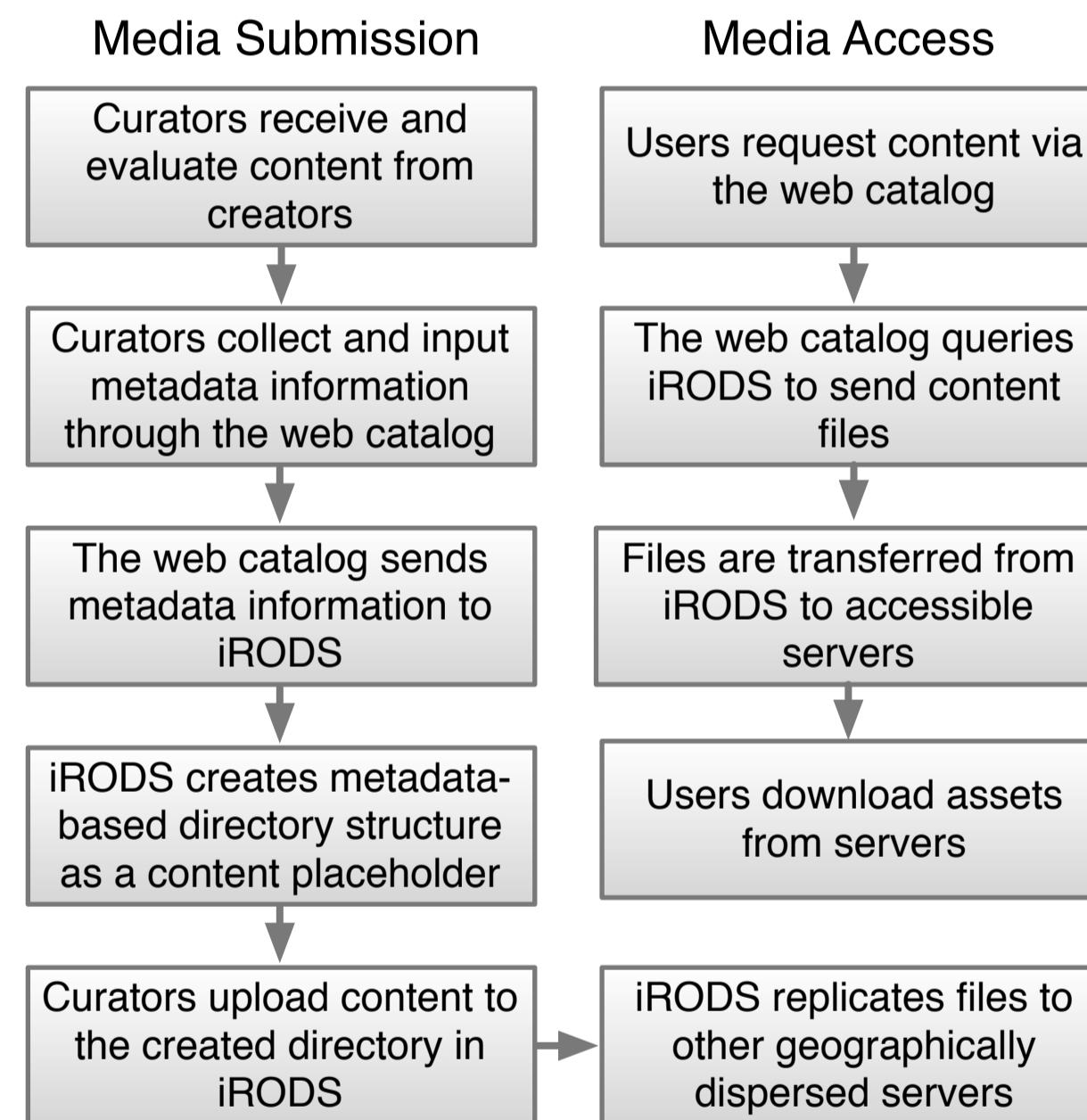


Back-end storage and workflow system using iRODS



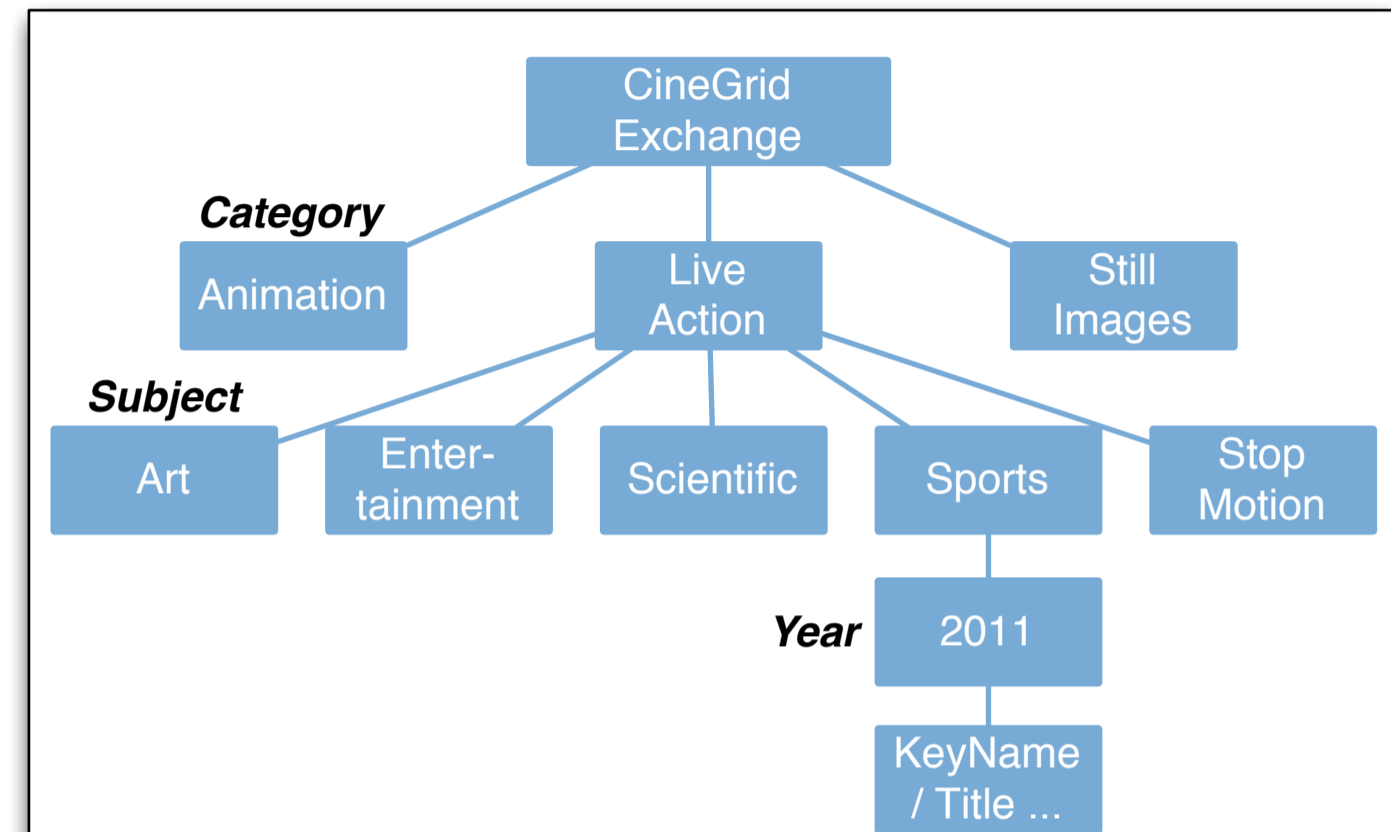
Media Curation Workflow

The main curation workflows in CineGrid Exchange are media submission and media access.



Following iRODS rules are implemented to realize the curation workflows.

- **Metadata handler** parses metadata XML messages from the web catalog and creates corresponding directory structure as illustrated in the figure.
- **Content handler** replicates uploaded content files to other distributed iRODS servers.
- **System maintainer** checks file corruption and server connection to detect errors instantly.



CineGrid Exchange directory structure to store media data

Development Status

We developed and deployed preliminary iRODS rules at Calit2 and are testing communication with the web catalog system. We will populate them on a global scale and also integrate the system with a high-performance media processing system.



Group	Location	Capacity
Center	San Diego	110TB
North America	Monterey, Chicago	40TB
South America	Brazil	TBD
Europe	Amsterdam, Prague	40TB
Asia	Tokyo, Hong Kong	10TB

