

OCLC Online Computer Library Center



Implementing OAIS Reference Model at OCLC

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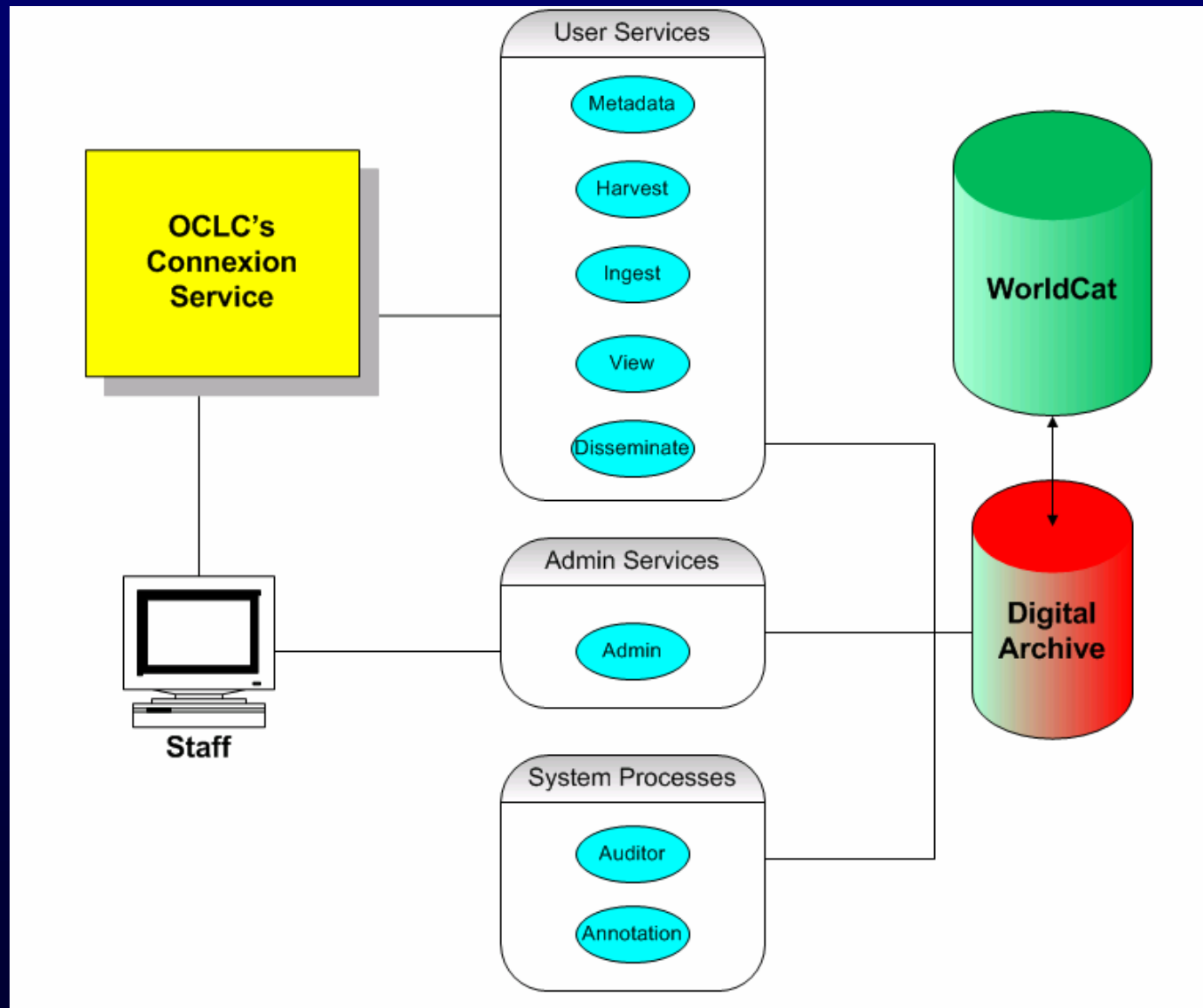
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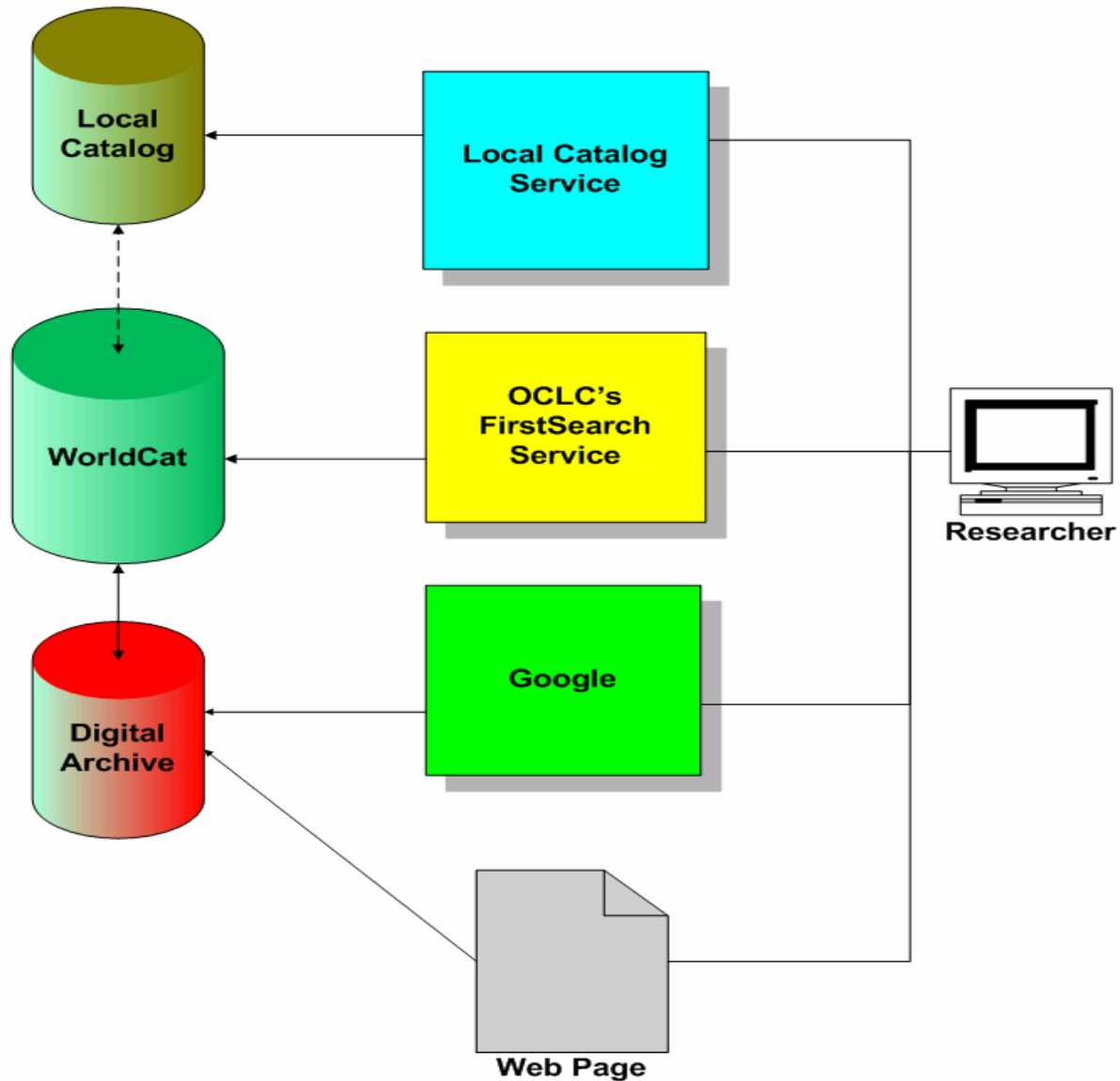
Outline

- OCLC Digital Archive overview
- Influences on development decisions
- Preservation planning

OCLC Web Archiving Services



Discovery Services



Influences on Development Decisions

- Institution developing the archive
- Local depositor community
- Global digital archiving community

Influence: Archive & Depositors

■ OCLC

- International member cooperative
- Members were pilot depositors
- Corporate commitment

■ Local depository community

- Guided requirements
- Confirmed following OAIS model
- Emphasis on pre- and post-ingest processes
- Influenced preliminary content object formats and types

Influence: Global Digital Archiving Community

- Provided inspiration and practical experience
- Source of evolving standards
- Opportunity for hands-on involvement with peers around the world
 - PREMIS
 - Task Force on Certification
- Ongoing access to an international knowledge-base

Decisions Influenced

- Object types and formats
- Access
- Preservation metadata
- Rights management capabilities
- Preservation planning

Decision: Object Types & Formats

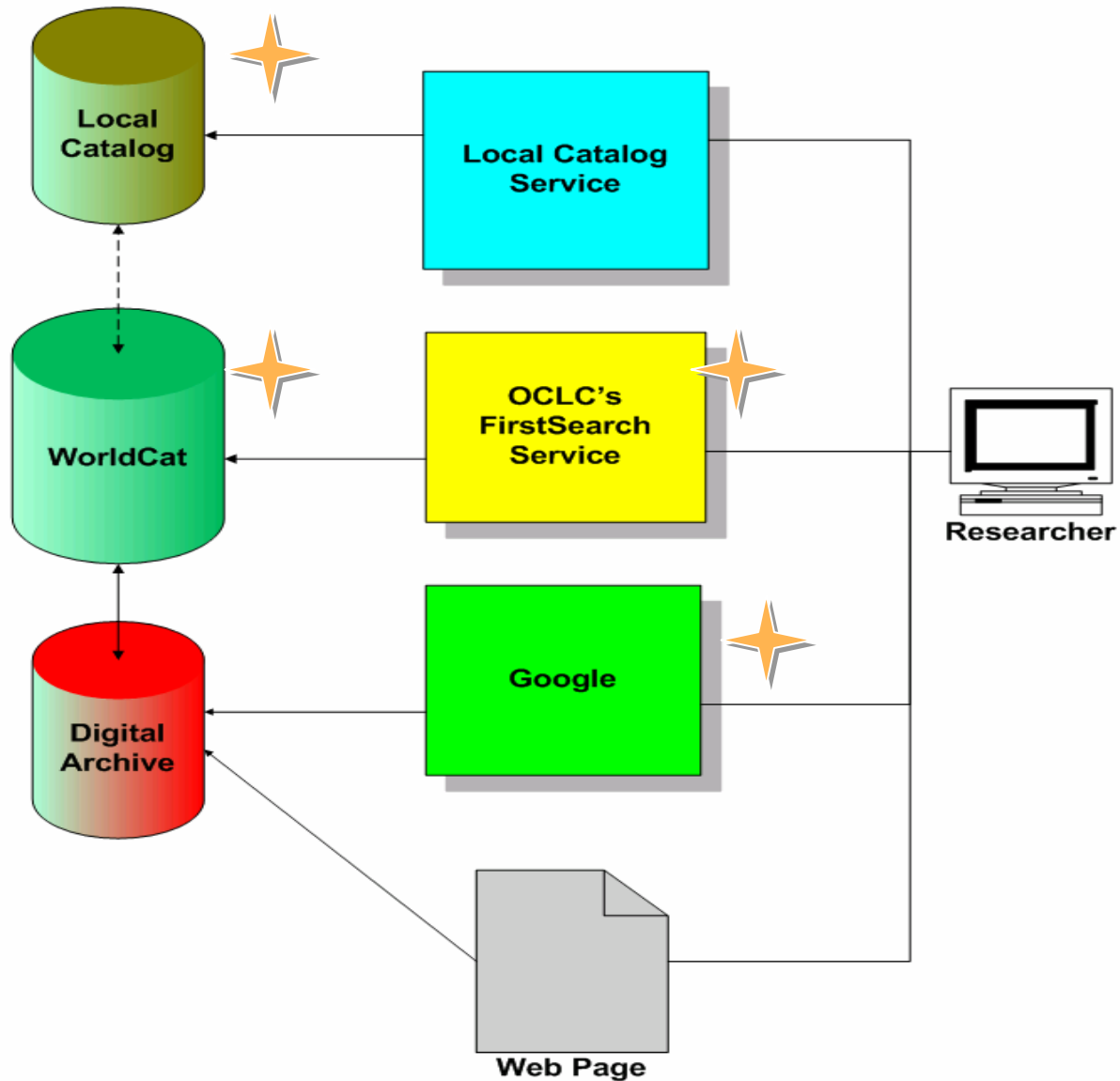
■ Initial formats

- Text and still image
- PDF, HTML, TXT, TIFF, GIF, JPEG, BMP

■ Initial object types

- Born-digital documents

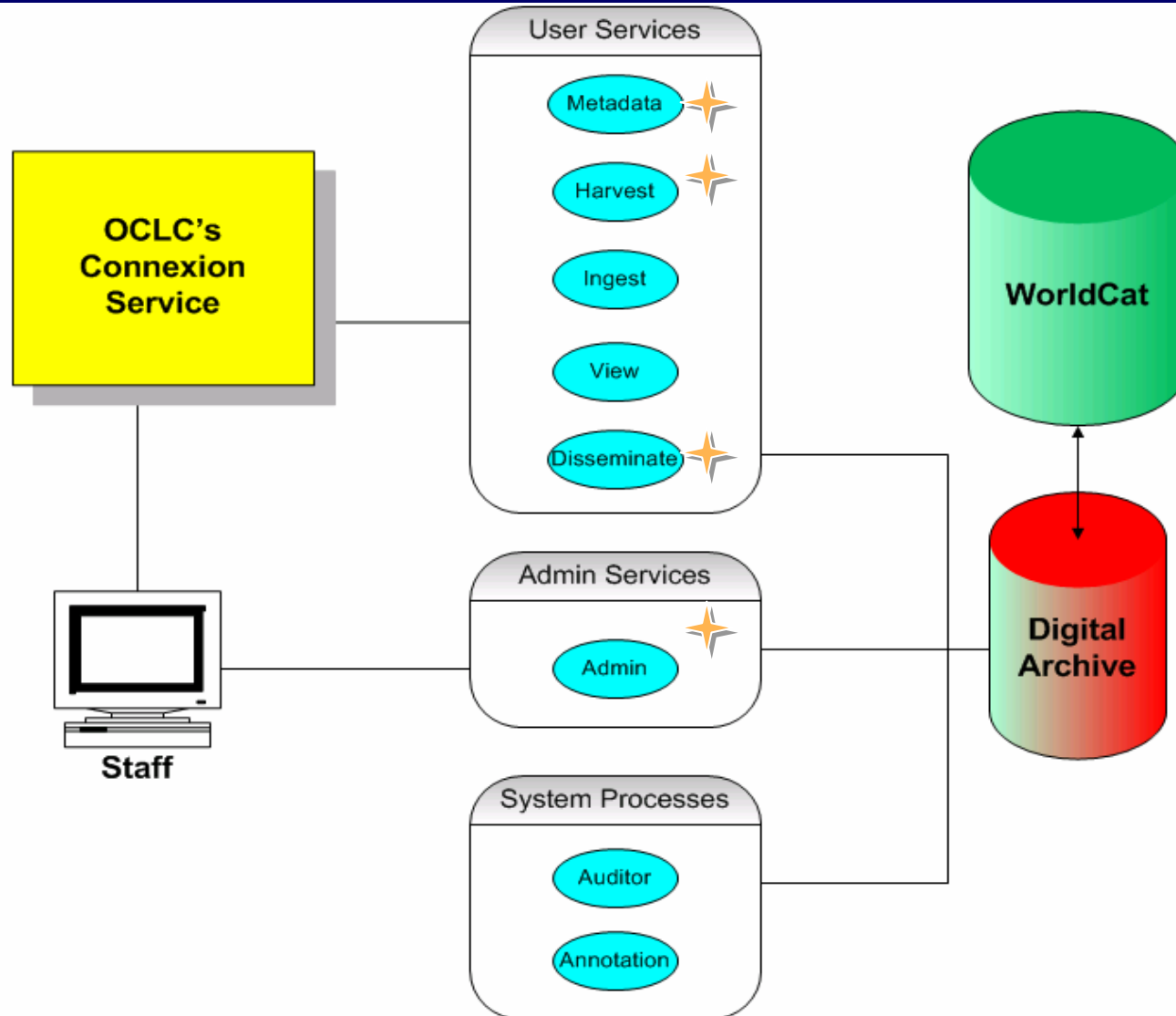
Decision: Access



Decision: Preservation Metadata

- Built from what existed at the time
- Considered metadata in context
 - Types of objects archived
 - Element scope and purpose
 - Availability of the metadata at ingest
 - Function of the metadata in archive

Decision: Tools



Decision: Rights Management

■ Local community

- Long experience working with them
- Assume right to harvest and preserve
- Knowledgeable about copyright

■ Types of objects archived

- Preserve government publications
- Provide access now and in future

Decision: Preservation Planning

■ Local depositor community

- Use of objects long-term
- Significant properties
- Review of policy

■ Global digital archiving community

- Format registry
- Review of policy

Preservation Policy

- Provides a general outline of OCLC's approach to digital preservation
- Specifies the list of digital formats currently accepted and how that list can change over time
- Specifies the preservation service levels
- Specifies what services are implemented to ensure uninterrupted access
- Defines technology watch service
- Defines how the policy itself changes
- Defines roles and responsibilities of participants

Preservation Planning

- Designed a strategy behind digital preservation processes
- How to identify the digital object formats best suited for preservation
- How to determine what computing platform offers the longest life-span expectancy
- How to measure preservation decisions
- What classes of metadata are necessary
- How to determine preservation actions

Preservation Planning Tools

- Designed a set of metrics necessary to assess the viability of any solution
- Designed the set of viable preservation actions
- Designed formal models to specify and document the computing platform necessary to render digital objects
- Designed processes to assess and prove authenticity of the digital objects

Preservation Planning Tools

- Designed a risk-based assessment methodology
- It is designed to look at all facets of the digital format specification itself and its dependencies
- Considered environment dependencies such as other specifications, software and hardware
- Considered associated organizations such as vendors, standard organizations, content owners, beneficiaries

Preservation Planning Tools

- Adopted the risk exposure calculation scales developed by Gregory Lawrence (Cornell Univ.)
- Identified several classes of potential reviewers, including computer scientists, format experts, librarians, preservation specialists, hardware vendors, lawyers, digital archive developers
- Developed a methodology to collect, analyze and compare the assessments
- Developed methods to relate assessment results to preservation actions

Preservation Actions

- The proposed strategy is to identify preservation actions by monitoring and reducing risk
- Chose open source, open license and open specification software, hardware and formats
- Identify and test alternative open source software tools and computing environments
- Specify and test one current era commercial alternative, respecting the investment in technology already made by beneficiaries
- Migrate to new formats when risk is too great

In Conclusion

- Questions and Comments

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