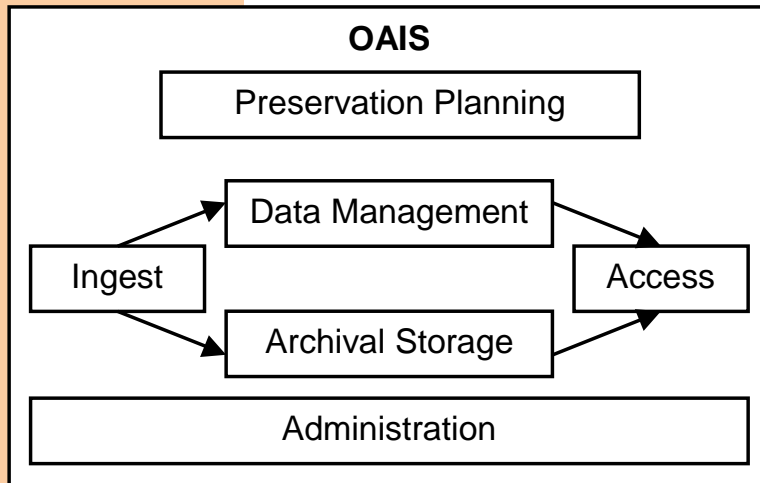


Archiving Systems

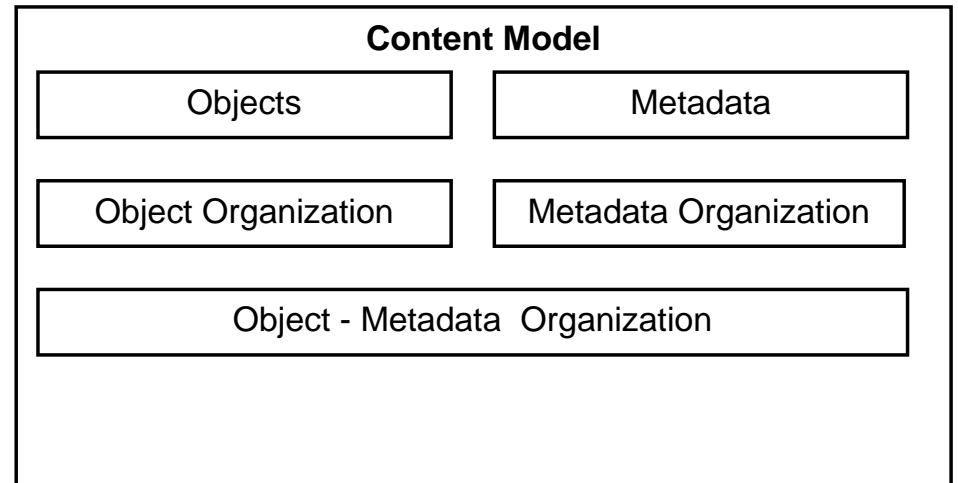
Uwe M. Borghoff
Universität der Bundeswehr München
Fakultät für Informatik
Institut für Softwaretechnologie

uwe.borghoff@unibw.de

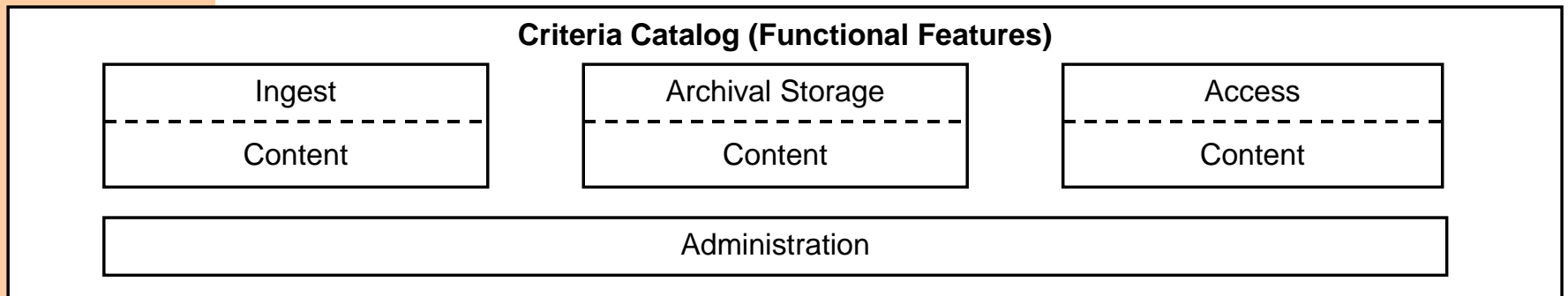
Developing the Criteria Catalog



Functions



Content



Criteria Catalog

General Attributes

- Overall system architecture
 - Design principles, compliance with standards or recommendations (e.g, OAIS, OAI etc.)
- Explicit long-term features
 - E.g., file format registry, preservation meta-data scheme
- Object organization
 - E.g., single object, collections, identification
- Metadata organization + Rights / Role management
 - Consumer / producer / archive operator
- Functions
 - Ingest / access / archival storage / administration

Criteria Catalog

General Attributes (cont'd)

- System / application integration
 - Library system / publishing system / other archives
 - federation / cooperation / user communities
- Software architecture
- Hardware basis

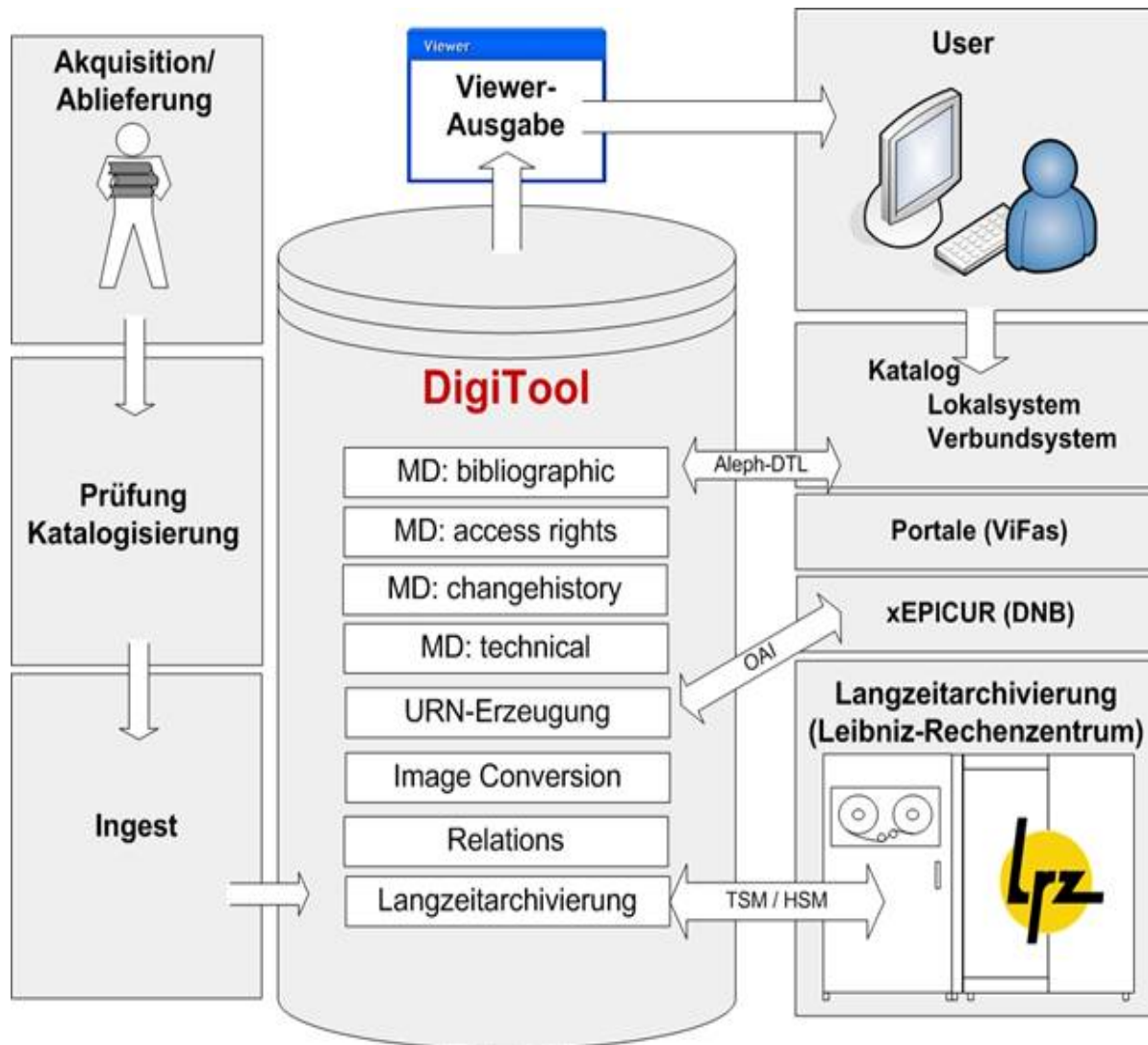


Criteria Catalog

Functional Attributes (ingest)

- Accepted submission formats
- Object format / identification
 - E.g., file format restrictions
- Object organization
 - E.g., hierarchies, links, versions, variants
- Access procedures for producers
 - meta-data scheme incl. meta-data entry procedure
 - Batch ingest / conversion / (formal) quality checking / dedicated workflow
 - For meta-data: manually / automatic extraction / 3rd party
 - Overall throughput

DigiTool-Workflow at the Bayerische Staatsbibliothek



Criteria Catalog

Functional Attributes (access)

- Access procedure for consumer
 - Remote vs. local / multilingual / help system / notification services / communication protocols
- Search / retrieval
 - Metadata indexes / navigation / full text search / inspection of class methods
- Dissemination form of objects / metadata
 - Conversion on the fly / on demand
- Accounting, e.g. as part of a Digital Rights Management
- Federation
 - access or replication transparency
- Interoperation

Criteria Catalog

Functional Attributes (storage)

- Conceptual organization of objects and metadata
 - Object format (file format) / object identification
- Versions (time lines) vs. Variants (manifestations)
- Relationships object – metadata
 - E.g., multiplicity (simultaneous support of various schemes)
- Mapping of conceptual organization to logical elements
 - E.g., files / database tables)
- Physical storage
 - media / interfaces / abstraction
- Limits
 - e.g., number / size of objects (or relations)



Criteria Catalog

Functional Attributes (admin)

- Access procedures for administrators
 - Local / remote / special protection
- Administration of object and metadata
 - Deletion of collection / reorganization
 - Updates (for new elements) / controlled vocabulary
- Administration of user access
 - OAIS-roles like producer / consumer / admin / management
- Object related rights
- Administration of physical storage
 - E.g., allocation of storage for objects / collections / roles



Criteria Catalog

Functional Attributes (admin cont'd)

- Access to internal interfaces
 - E.g., to basic database schemes / storage system
- Configuration / scaling
 - E.g., scalability transparency
- Disaster management / Trustworthiness
- Backup / recovery
 - Redundancy / replication / fragmentation for availability
- Monitoring / reporting
 - Trouble ticket systems / error reports / statistics / metrics



Criteria Catalog

Non-Functional Attributes

- **Product Costs**
 - Initial purchase / license / leasing / maintenance / updates
 - Training
 - Personal resources
 - Initial installation / operating
- End user support, e.g., hotline / newsletter / FAQ
- Long-term preservation, e.g., monitoring applied (embedded) technologies / media migration
- Quality w.r.t. manufacturer / product / support
 - Company structure / development status
 - Market penetration / user community

Comparison

	Persistent Identifier	METS-like export	Controlled vocabulary preservation metadata	UVC or comparable LTA features
DIAS	yes	yes	no	planned?
MyCoRe	yes	no (XML export)	no	no
DigiTool	yes	yes	no	no
DSpace	yes	planned	no	no
EPrints	yes	yes	no	no