MyCoRe Data Modeling:
Classification System
and
Internal Logical Filesystem
MyCoRe Classification System: Basic concepts

- Functionality comparable to what has been implemented in MILESS, but redesigned APIs, Servlets, XML

- **Classification**: Linear list or hierarchical tree of categories
- **Category**: Unique ID, label, comments, links etc.
- **Document**: Can be assigned to one or more categories in one or more classification systems

- **Examples** of Classification Systems:
  - Dewey Decimal Classification
  - Sachgruppen der Deutschen Bibliothek
  - Physics and Astronomy Classification System
  - Mathematics Subject Classification
  - MILESS document types and media types
  - Organizational structure of your university / corporation
MyCoRe Classification System: Functionality

- Import / export your own classifications through XML files
- Assign documents to classification categories
- Manipulate classifications through MyCoRe API
- Navigate through classification trees using a servlet / HTML
- Count documents per category / "below" a category
- Use classification structure in searching for documents

Future development could be:

- Thesaurus integration
- Usage of defined "vocabularies": Schlagworte
- Integration of "categorizer" technologies
- Integration of automatic clustering technologies
- …
MyCoRe Classification System: Browsing through classifications

Fachbereich / AG
(Insgesamt 838 Dokumente nach dieser Klassifikation eingeordnet)

Klassifikationsauswahl: Fachbereich / AG [838 Dok.] [wählen]
MyCoRe Internal Logical Filesystem: Intention

• A "real" digital library should be able to manage not only metadata, but also the content -> the files that build the digital document within the system -> to provide content based services

• MILESS:
  One document may be held in many physical formats, e. g. PDF, PostScript, HTML, LaTeX
• MILESS "Derivate" Model:
  1 Document -> n Derivates -> m Files of any kind

• MyCoRe:
  Internal Logical Filesystem: API, Storage Implementations, GUIs to import, export, deliver and manage files and directories in a digital library application
• More flexible than MILESS derivate model, but can be used for the same thing.
MyCoRe Internal Logical Filesystem: Functionality

- Import, export, retrieve, update, delete files and directories
- Manage node metadata, e.g. size, content type, date modified
- ZIP / GZIP / TAR support: dynamically zip/unzip collections etc.
- MD5 checksums (file) and fingerprints (directories)
- Support to digitally sign content using public key technologies: to be able to proof that a document is still the unchanged original
- Support for Audio / Video files: Metadata, streaming, storage

Future development:

- Versioning of files and directories
- FTP interface: Use a standard FTP Client to manage stored files
- Email interface: Send files to the system as email attachment
- WebDAV interface, ...  
- Integration of watermarking technologies
- Integration of content based query functionalities
MyCoRe Internal Logical Filesystem: Separation of file metadata and content

- directory structure
- file names, types
- size, MD5 checksum
- date modified

stored in RDBMS

MCRNode

MCRDirectory

MCRFile

MCRFileContentStore

Manages file metadata

Manages file content

FCSCContentManager

FCSLocalFileSystem

FCSRealServer

FCSRemoteFTPServer

FCSVideoCharger

various interface implementations
MyCoRe Internal Logical Filesystem: Audio/Video Stores and Extenders

- audio/video files can be treated as ordinary files (import, export, ...)
- audio/video content will automatically be stored in appropriate streaming server
- audio/video files have additional metadata (bitrate, framerate, ...) and capabilities (start a streaming player)