Chapter 10

MyCoRe Digital Library Software Evaluation
http://www.mycore.de/content/below/index.xml

Introduction

MyCoRe (MILESS Community Content Repository)\textsuperscript{[1]} is an open source project which provides a system for creating digital libraries and content repositories. It is developed at Essen University, Germany. The first official version was launched during 2004.

MyCoRe\textsuperscript{[2]} supports all key functions which are necessary to create digital libraries such as Document and Person Metadata, Internal logical Filesystem, Hierarchical Classification System, User and Rights Management, User and Author Editor Interfaces, Distributed Search Function and Interfaces for OAI and Web Services.

It is an Open Source project under GNU General Public License. MyCoRe is the kernel for My Content Repository (MyCoRe). In the MyCoRe project a group of universities from Germany are working on the development of MyCoRe.

The technical base of the system is formed of Java class libraries, XML technology and, besides Open Source database backends, IBM Content Manager and IBM DB2 for large applications.
CHAPTER 10. MYCORE SOFTWARE EVALUATION

Since the origin of software is from Germany so far the installation of MyCoRe are carried out in Germany only. Most of the documentation of MyCoRe is available in German language. It was difficult to install MyCoRe due to non availability of most of the documentation in English.

First version of MyCoRe i.e. version 1.2.1 was released during November 2005. For the present study evaluation of version 2.0.1 was selected and further evaluation was carried out. This version was made available on 10th September 2007. No further current versions of MyCoRe are yet available on web. The following sections lists different observations after having installation of version 2.0.1.

10.1 Content Acquisition

10.1.1 Which document types can be added in the software (books, reports, journal articles, lecture notes, technical reports, thesis, images, audio/video files, data set files etc.?)


10.1.2 Does the software have capability to define the domain/scope of Digital Library for whom it is intended for?

MyCoRe has been especially designed for creating institutional content repository or archival solutions.

10.1.3 If yes, what level of the users it is intended for?

It is intended for authors, editors, readers where it supports to define different workflow for different groups and allow end users to upload documents directly.

10.1.4 Which digital document file formats does the system support (proprietary as well as open source)?
MyCoRe supports to upload all types of file formats. By default, system supports collection, dataset, event, image, service, software, sound, text, unknown, video, interactive-resource types of file formats uploading.

10.1.5 Does the system carry out duplicate checking while uploading the data? What happens if the same digital document is submitted multiple times?

No, System does not carry out duplicate checking. If the same digital document is submitted multiple times, it gets added into the repository.

10.1.6 How does the system allow to upload the digital objects, whether normal digital objects or compressed digital objects?

Software supports to upload digital objects with normal size as well as compressed digital objects. MyCoRe has capability to handle large size data.

10.1.7 Does the system support to upload digital objects from existing URL?

No, System does not support uploading digital objects from existing URL. The document has to be available on local disk.

10.1.8 Does the system support distributed/community based acquisition?

Yes, software has facility to acquire material from network through the MyCoRe users. A MyCoRe user can upload documents through his/her login area from anywhere on Internet.

10.1.9 Does the software support metadata/content import? In which file format data is required for importing?

Yes, MyCoRe supports import of metadata and contents and data needs to be in XML format.

10.1.10 Does system support importing of bulk metadata/content of digital objects?

Yes, software supports import of bulk digital objects.

10.1.11 Does the software support import of automatic metadata for the digital objects that are added into the repository? No

10.1.12 Does the software support metadata/content export? In which file format data is exported?
MyCoRe supports to export metadata in XML format.

10.1.13 Does the system support export of bulk metadata/content of digital objects?
Yes, MyCoRe supports export of bulk digital objects.

10.1.14 Does the system allow adding past versions of the digital document files?
Yes, software supports to add past versions of digital documents.

10.1.15 Does the software support its own accession number for each document that gets added into the repository?
Yes, MyCoRe generates its own accession number for each document that is added into the repository for e.g. Every document will have a unique MyCoRe ID number i.e. DocPortal_document_00000001.

10.1.16 It it necessary to know whether software supports weed out policy?
No, MyCoRe does not support any weeding out policy.

10.1.17 Does the system support to delete items from the collection/repository, move objects from one collection to other collection, cross-list objects across different collections?
System supports to delete objects from the repository. MyCoRe does not group documents into different collections. Each document is separately added into the repository.

10.1.18 Which persistent identifier scheme does the system support?
MyCoRe support Uniform Resource Name i.e. URN for all documents that are added into the repository.

10.1.19 Does the system’s persistent URL method handle an object’s change in location and state in future with same identifier number? Yes

10.2 Content Management

10.2.1 Does the system have proper work flow in place which handles different submission processes?
Yes, MyCoRe has proper work flow in place where it allows to create different submission roles within the repository.

10.2.2 If the system supports to have proper work flow for all actions into the repository then whether submission supports following options:

| 10.2.2.1 | System allows to create overall system administrator | Yes |
| 10.2.2.2 | System allows to submit documents by users via web | Yes |
| 10.2.2.3 | System allows to set up submission rules | Yes |
| 10.2.2.4 | System can define accept/reject policy for all documents that gets added into the repository | Yes |
| 10.2.2.5 | Allows multiple collections within same installation of the system | No |
| 10.2.2.6 | Home page for each collection/community | No |
| 10.2.2.7 | Allows to set different policies for different collections | Yes |
| 10.2.2.8 | Allows to set different authorization policies for different collection/items added into the repository | Yes |
| 10.2.2.9 | Allow to edit metadata submitted by users | Yes |
| 10.2.2.10 | Sends email notification to users/submitters/authors | No |
| 10.2.2.11 | Sends email notification to metadata reviewers | No |
| 10.2.2.12 | Sends email notification to reviewer | No |
| 10.2.2.13 | Sends email notification to administrators | No |
| 10.2.2.14 | Allow users to review completed content | Yes |
| 10.2.2.15 | Allow users to review uncompleted content | Yes |
| 10.2.2.16 | Allow content administrator to review submissions | Yes |
| 10.2.2.17 | View pending content administration tasks | Yes |

10.2.3 Does the system support to upload documents into the repository through Librarian’s interface as well?

No, MyCoRe does not have any separate support of Librarian’s interface. All functions in MyCoRe are carried out through Web User Interface.
10.2.4 Does the software provide easy way for adding/editing of records for Librarian as well as for the remote user? Are insertion and deletion of records easy?

Yes, MyCoRe data entry interface is same for all. It has simple data entry template which helps end users to add/delete/modify data easily.

10.2.5 Are the supported file formats well documented in the system? Can new file formats be added or removed by the end user?

Though MyCoRe supports to upload any file formats, file formats are not well documented in the system. End user can add new file formats in MyCoRe.

10.2.6 Does the repository software have any capabilities, such as access control lists, Internet address filters, etc., that limit who is allowed to submit items in the software?

Yes, MyCoRe supports to have access control based on login and password as well as it allows to define different access control methods based on IP address for each digital document that is added into the repository.

10.2.7 Does the repository software maintain audit logs that identify by whom and when documents are submitted into the repository?

MyCoRe does not maintain audit logs that identify by whom and when documents are submitted into the repository.

10.2.8 Does the system support knowledge organization systems such as ontologies, thesauri, classification systems and taxonomies for users while adding documents via web in the repository?

Yes, MyCoRe currently allow users to classify digital objects with different class numbers.

10.2.9 Does the system support digital objects to be grouped into organized structure (i.e. linear/hierarchical/graphical structure)

Yes, MyCoRe Supports to group digital objects into different groups which is one of the important feature of MyCoRe.

10.2.10 Does the system support to generate authority files?

MyCoRe supports to generate authority files of authors, institutes and subjects.
10.2.11 Does the system allow digital object to be a member of multiple collections i.e. content mapping? No

10.2.12 Does system allow users to modify (add/delete/update) metadata/complete document added within the repository? Yes

10.2.13 Does the system support to show strength of each collection? No

10.3 Metadata Submission and Support

10.3.1 Does the software support to add descriptive metadata (such as author, title, subject, publisher, copyright, year of publication etc.) for each digital object that gets added into the repository?

Yes, MyCoRe by default has template of adding the following metadata fields such as Title, Author, Origin, Description, Publisher, Contributor, Date, Type, Format, Identifier, Source, Language, Keywords, Coverage, Relation, Rights, Size, Contact, Note, Citation etc.

10.3.2 Does the software support to add administrative metadata (such as technical aspects of digital documents, such as source of information (i.e. When and how a digital document was created), rights management, what is file size, in what file format digital document is in, what is needed to view the digital document) for each digital document that gets added into the repository?

Yes, MyCoRe supports to store administrative metadata.

10.3.3 Does the software support to add structural metadata (such as description, owner, data type, date deposited, version number, data of last revision, how compound objects are put together, how pages are ordered to form chapters) for each digital object that gets added into the repository?

Yes, MyCoRe supports to store structural metadata.

10.3.4 Does the software support adding/editing/deleting metadata fields? Yes

10.3.5 Are help messages given in each metadata field while entering data? No
10.3.6 **Does the metadata entry have at least one field mandatory? What are the mandatory fields in each software?**

While entering metadata, MyCoRe has following mandatory fields such as Title, Author, Type, Format, Language & Rights.

10.3.7 **Does the software support Unicode character set for metadata entry?**

Yes, MyCoRe supports UTF-8.

10.3.8 **Does the software allow to create and manage a variety of different metadata schemas to meet different needs across the subject disciplines?**

No, The default metadata schema supported by MyCoRe is Qualified Dublin Core but it has the capability to add different metadata schema for metadata entry which needs high customization.

10.3.9 **Can the metadata fields or formats be customized?**

Yes, MyCoRe supports to add any metadata fields and formats but one has to customize the fields/formats.

10.3.10 **What type of Metadata Schemas are supported by the software default?**

MyCoRe supports by default qualified Dublin Core metadata schema.

10.3.11 **Does the software have default metadata entry templates?** Yes, MyCoRe has single metadata template which covers DC metadata fields for adding each document into the repository.

10.3.12 **Are the metadata formats documented?** Yes

10.3.13 **Does the software support different interface for metadata entry and whether customized data gets added into the system?**

It is possible to create different interfaces for metadata entry and software has capability to add customized data into the system.

10.3.14 **How does the software verify that submitted objects and metadata are correct?**

There are no ways by which it is possible to verify submitted objects and metadata.
10.3.15 *Are there automated checks of the metadata, such as verifying that a date entered into a field is really a date string?*

Yes, for date string there is automated check but for other fields there are no automated checks.

10.3.16 *Does the repository software have any means to verify that objects or metadata have not been tampered with, such as checksums or digitally signed checksums?*  
No

10.3.17 *Does the software support real time updating and indexing of accepted contents?*

Yes, as soon as data is uploaded it is available for searching immediately.

10.3.18 *Does the software allow for metadata extensibility and complexity?*  
Yes

10.3.19 *Does the software support metadata versioning? What happens to old versions of metadata or content objects when they are replaced by new versions or modified in some way?*  
No

10.3.20 *Does the repository software support provenance metadata? What is included in the provenance?*

Yes, MyCoRe records provenance metadata such as digital document created at and last changed with time and date as well as content type and size of the file.

10.3.21 *Does the software support metadata crosswalk?*  
No

10.3.22 *Does the software support "thesaurus" building? Does it specify which thesaurus standard is used? Which subject heading DDC, DC or LC is used for thesaurus building?*  
No

10.3.23 *Does software have ontology support?*  
No

10.3.24 *How does the repository verify file types, for example, if JPEG images are submitted to the repository, does the software verify that it is really a valid JPEG, or does it just blindly take the submitters word?*

MyCoRe has facility to identify file type. If the file is not identified by MyCoRe it uploads it automatically into the repository with unknown format.

10.3.25 *While exporting metadata whether software support checksums?*  
No
10.3.26 It is necessary to know whether the software support RAP protocol? No

10.4 Classification

10.4.1 Does the system allow digital objects to be grouped into classification/subjects? Yes

10.4.2 Which classification system does the software support?

MyCoRe supports Dewey Decimal Classification system.

10.4.3 Does it allow to group documents as per the class number? Yes

10.4.4 It is also necessary to know whether system supports hierarchical browsing of collections through class number?

Yes, MyCoRe supports hierarchical classification of an organizational structure.

10.5 Information Search & Retrieval

10.5.1 Browsing

10.5.1.1 Author/Creator/Contributor No

10.5.1.2 Title of the document/Title of the book/Title of the article etc. No

10.5.1.3 Issue Date/Date of Publication No

10.5.1.4 Collection No

10.5.1.5 Communities No

10.5.1.6 Subject browsing Yes

10.5.1.7 Publisher wise browsing No

10.5.1.8 Table of Contents browsing No

10.5.1.9 Multi-Dimensional Browsing No
10.5.2 Searching

10.5.2.1 Searching content via different metadata fields such as author, title, subject, publisher etc. Yes

10.5.2.2 Full text searching Yes

10.5.2.3 Boolean (AND, OR, NOT) searching Yes

10.5.2.4 Basic search Yes

10.5.2.5 Advanced search Yes

10.5.2.6 Does the system allow to search the database putting boolean operators such as !, |, &,. ~ , +, - etc. as well as "must contain", "should contain", "may contain", "not contain", as operators in place of AND, OR, and NOT Boolean operators respectively. No

10.5.2.7 Truncation/Wild card searching Yes

10.5.2.8 Exact words/phareses searching Yes

10.5.2.9 Proximity searching The software supports to search via different operators such as =, >=, <= operators.

10.5.2.10 Stemming Yes

10.5.2.11 Fuzzy searching Yes

10.5.2.12 Phonetic searching No

10.5.2.13 Case sensitive or case insensitive while searching No

10.5.2.14 System should support term weighting No

10.5.2.15 System should support search history option , reuse of query, query save option. No

10.5.2.16 Boosting the term No

10.5.2.17 Range searching No

10.5.2.18 Use of thesaurus or permuted index for searching No
10.5.2.19 Expand search  Yes

10.5.2.20 Lateral searching  No

10.5.2.21 Search support for special collections  No

10.5.2.22 Searching via table of content and classification codes  No

10.5.2.23 Ability to browse subject/author authority files  No

10.5.2.24 PIC variant searching (plurals, international spelling variants, and compound words)  No

10.5.2.25 Support multilingual search and retrieval  Yes

10.5.2.26 Allow refinement of searches with qualifiers  Yes

10.5.2.27 Ability to group: prior to search, user can delimit pending results’ listings, and group results by item characteristics (type, format)  No

10.5.2.28 Spell checker support  No

10.5.2.29 Refine searches: Once results are retrieved, users have the ability to focus and reduce number of items retrieved  Yes

### 10.5.3 Sorting

The system should support sorting results by

10.5.3.1 Author  Yes

10.5.3.2 Title  Yes

10.5.3.3 Issue Date  Yes

10.5.3.4 Relevance  No

### 10.5.4 Which search engine toolkit is used for searching the database?

MyCore uses Lucene search engine tool kit.
10.5.5 **How is the recall and precision ratio while searching the documents?**

Since the system supports searching via metadata fields and full text searching, the recall is high via word searching and precision is high if the metadata fields are used for searching the database.

10.5.6 **How is the speed of the retrieval of the documents?**

The speed of the retrieval of documents is very fast in MyCoRe but it does not show on the screen how many documents are retrieved within how many seconds.

10.5.7 **Does the system provide help for the users while searching digital documents?**

No help is provided for searching the documents from MyCoRe.

10.5.8 **How the results are displayed to the users? Whether users can download contents after searching? How are results displayed such as metadata, filetype, file size?**

Results are displayed with minimum metadata fields such as author, title, type of document, format, accession number, date of creation, file size etc. Users can download contents after searching.

10.5.9 **While viewing the results does the system provide access control?**

Yes, if the end user does not have right to access a particular object the system gives error message.

10.5.10 **Does system support streaming audio/video option? Or it allows only to download documents? Whether browser can support any other document viewing? Does the end user need to have plugins and software for viewing particular documents?**

MyCoRe has capability to configure the MyCoRe server with any streaming server available with the end user. If the streaming server is not configured MyCoRe supports to download the audio/video file on the end user’s browser page. End user needs to have proper plugin for viewing a particular audio/video digital object. Helix Universal Server or IBM VideoCharger Server can be configured with MyCoRe. MyCoRe supports streaming of AVI, MPEG1, MPEG2, QuickTime, Real, Windows Media, AVI, MP3, WAV file formats.

10.5.11 **Does the system support advanced features such as my binders, virtual bag, shelving etc.**

No
10.5.12 Whether system supports unified search? (Unified search is the support for finding items that are scattered among a distributed collection of information sources or services, typically involving sending queries to a number of servers and then merging results to present in an integrated, consistent, coordinated format)?

Yes, MyCoRe supports to search with the existing server as well as supports to search documents via all other MyCoRe servers or selected servers available on Internet and search query can be submitted.

10.5.13 Whether system supports federated search? (Federated search allows users to search multiple digital libraries with a single query from a single user interface. The user enters a search query in portal’s interface search box and the query is sent to every other digital library software)?

Yes, MyCoRe supports to search with multiple digital libraries across web.

10.6 Access Control, Privacy and Management

10.6.1 How users are managed in the software?

MyCoRe has a very good user database management. It allows to create database of different users. The system administrator or root only can create different users with different roles and passwords.

10.6.2 Does the system support to add/edit/delete user profiles? Yes

10.6.3 Does the system support to define different roles for different users? Yes

10.6.4 Does the system keep detailed information of each user that is registered in the repository such as name, email, phone number, address etc.? For every user MyCoRe records user account, password, description, primary group, salutation, first name, last name, affiliation details, institution name, faculty, department, email, telephone, FAX number and Cell Number details.

10.6.5 How the permissions are given to users who have registered into the repository?
For every group, MyCoRe allows to provide permissions based on different types of groups such as each user can be either from admingroup, authorgroup, broadcastgroup, editorgroup, guestgroup or readergroup. On the basis of these categories permissions are provided to each user.

10.6.6 Does the system have provision to identify active and inactive members and take necessary action against inactive members?

No system does not keep track of active/inactive users.

10.6.7 User Roles

10.6.7.1 Does system allow to create different groups for different users Yes

10.6.7.2 Does system allow to create different groups of users Yes

10.6.7.3 Does system allow definition of different user groups Yes

10.6.7.4 Does system limit access by role Yes

10.6.7.5 Does system allow collection to be customized for each role/group

Yes, MyCoRe allow each document to be customized for each role/group instead of collection.

10.6.8 Does the system allow access limits at different levels?

(a) File/object level Yes

(b) Collection level No

(c) User/Group level Yes

10.6.9 How passwords are administered in the system?

All passwords are encrypted into the system and stored in the database.

10.6.10 Does the system assign passwords for each user?

For the first time system assign passwords for each user and later on end user can change the password assigned by the system.

10.6.11 Does the system allow users to select passwords? No
10.6.12 **Does the system have mechanism to retrieve forgotten password?**

No only admin/group member or root can change the forgotten password.

10.6.13 **How is the level of access for inside/outside users (such as outside users can access only metadata and abstract level access and internal members can access full texts as well as metadata)?**

MyCoRe has very good access control mechanism. It allows to control access by individual user from the repository as well as allow to control access by IP authentication at different levels such as permissions can be set for every group, every user for a particular period with read, modify and create options.

10.6.14 **Does the system have any mechanism to provide access to the digital library via**

(a) IP source address filtering Yes

(b) Proxy filtering No

(c) Credential-based access Yes

10.6.15 **Are access denials flagged in any special manner by the software? Does the software keep access logs and how accessible are the logs to either human or machine processing and interpretation?**

Yes, if end user is not allowed to access a particular object MyCoRe gives a message as "Access forbidden. You do not have the privilege to access this page. Please authorize yourself by logging in."

10.6.16 **Does the system support access to the collection for a specific period?** MyCoRe supports to provide access control to every digital object added into the repository with data stamp.

10.7 **Authentication and Authorization**

10.7.1 **Does the system support to provide setting authorization policies?** Yes

10.7.2 **System should support restricting access to contents through password authentication/IP filtering/Proxy filtering.**
Yes, MyCoRe supports to restrict access to contents through password authentication and through IP filtering.

10.7.3 **System should be able to support access based on browsing/viewing metadata, preferred records, full text item or collections through different authorizations with different privileges for different communities or individuals.**

By default MyCoRe shows all documents added into the repository but detailed view is restricted by different authorization policies.

10.7.4 **System should also be able to allow different roles for different members for different items/collections.** Yes

10.7.5 **Does the system support a super user/admin user who is overall manager/administrator of the software?** Yes

10.7.6 **Does the system use authorization to support different roles within the system (for eg submit user, metadata editor, reviewer, approver, overall administrator etc.)** Yes

10.7.7 **Does the system use an external authentication mechanism (eg. Lightweight Directory Access Protocol)?**

Yes, MyCoRe can be configured with LDAP.

10.7.8 **Does the system display only those pages that are pertinent to each user that he/she is able to see?** Yes

10.7.9 **Does the system support the feature that groups are assigned to one or more roles?** Yes

10.7.10 **Does the system support the feature that users are assigned to one or more groups or collections?** Yes

10.7.11 **Does the system support the following roles:**

(a) Content Developer Role: must be able to create/add/edit/delete metadata and content in defined (not ALL) collections in addition Yes

(b) Administrator Role: must be able to add/delete/create users and groups Yes

(c) Contributor Role: must be able to submit metadata and content, in addition to general users’ role Yes
(d) General User Yes
(e) Submitter Yes
(f) Metadata Reviewer No
(g) Max Role: must be able to do all activities within the system Yes

10.7.12 Does the system use authorization to verify users with campus security systems (NetID)?
No

10.8 Interoperability

10.8.1 It is necessary to know whether the software supports Z39.50 protocol and OAI-PMH protocol?
MyCoRe supports Z39.50 protocol as well as OAI-PMH 2.0 protocol.

10.8.2 Which harvesting software is used by the Digital Library Software for metadata harvesting?
MyCoRe uses its own harvesting software.

10.8.3 SRU/SRW Support Yes

10.8.4 Does the software have openURL support? Yes

10.9 Ease of deployment of each software

The following points will be considered while evaluating installation of each software:

10.9.1 Software Installation

10.9.1.1 Packaging and installation steps
The detailed installation process of MyCoRe is added in Appendix F of this document.
10.9.1.2 **Automatic installation script**

MyCoRe provides a jar file which helps to install DoCPortal.

10.9.1.3 **Disk space used**

268 MB disk space is used for installation of MyCoRe.

10.9.1.4 **Time required to install each software**

For installing MyCoRe there are installation steps available. It took about two to three hours to do successful installation of MyCoRe along with installation of DocPortal. Most of the documentation of MyCoRe is available in German hence it was little difficult to understand MyCoRe installation.

10.9.1.5 **Documentation help available and useful for installation**

There is only one file available in English which is installation file. With the help of this file it is possible to install MyCoRe.

10.9.1.6 **Environments needed to set for installation of each software**

For MyCoRe installation MYCORE_HOME, DOCPORTAL_HOME, ANT_HOME, & JAVA_HOME environments are needed to be set.

10.9.1.7 **Operating systems (Linux/Windows/Solaris/MacOS/GNU/AIX) on which software can be installed**

MyCoRe can be installed on 32-bit MS Windows (95/98), All 32-bit MS Windows (95/98/NT/2000/XP), All POSIX(Linux/BSD/UNIX-like), Linux, Solaris, IBM, AIX and MacOS operating systems.

10.9.1.8 **Programming languages used**

MyCoRe is developed using Java, XSL (XSLT/XPath/XSL-FO)

10.9.1.9 **Database supported at back end**

MyCoRe supports MySQL, HSQL, IBM Content Manager, Oracle, DB2

10.9.1.10 **Web Server used**

Apache Tomcat and Jetty web server is used for hosting MyCoRe.
10.9.1.11 **Java servlet engine needed**

MyCoRe requires Apache Tomcat Java servlet engine and Java runtime environment.

### 10.9.2 System Support/Maintenance

10.9.2.1 **Documentation/manuals**

MyCoRe all documentation manuals such as User’s guide, developer’s guide, overview guide, programmer’s guide, migration guide, How To guide all are are available only in German language from [http://www.mycore.de/content/main/documentation.xml](http://www.mycore.de/content/main/documentation.xml)

10.9.2.2 **Mailing lists/discussion forums**

MyCoRe has user mailing list and developers mailing lists.

- mycore-users@lists.sourceforge.net
- mycore-developer@lists.sourceforge.net

10.9.2.3 **Wiki pages**

[http://cmsobj.rrz.uni-hamburg.de:50080/cmswiki/mycoreWikiWiki](http://cmsobj.rrz.uni-hamburg.de:50080/cmswiki/mycoreWikiWiki)

MyCoRe wiki page was not accessible during 17th February 2008.

10.9.2.4 **Help desk support**  No

10.9.2.5 **Ease of system administration (ability to configure for different uses)**

It is easy to configure MyCoRe for different users.

### 10.9.3 Hardware/Software Requirements

10.9.3.1 **What are the minimum hardware requirements for the repository software?**

MyCoRe can be installed on any PIV machine though no specific hardware requirements are mentioned on the MyCoRe site.

10.9.3.2 **How actively is the software maintained by its owners or contributors?**

In Germany MyCoRe has been actively used and soon English documentation will be available which will help MyCoRe to get more acceptance from other countries.
10.9.3.3  Does the software have procedures in place to monitor and receive notifications when hardware technology changes are needed?  No

10.9.3.4  Does the software creators have a process to stay current with the latest operating system security fixes?  Yes

10.9.4  Security

10.9.4.1  Does the system have security methods such as

   (a) Data encryption  Yes

   (b) Digital signatures  No

10.9.4.2  Server security (Does software have secure database connection?)  Yes

10.9.4.3  Ability to restrict access repository at item level (For eg to view metadata but not content)  Yes

10.9.5  System Level Security

10.9.5.1  Fixity - such as checksums or digests  MyCoRe supports MD5 checksum.

10.9.5.2  Management of users' accounts and rights to specified locations within the DL  No

10.9.5.3  Logging and auditing events

   The software supports to create a nohup.out file which can records all transactions carried out in the software but it does not have separate logging and auditing events.

10.9.5.4  Does the software support any security if OS does not have any firewall implemented?  No

10.9.6  General features related to technical aspect

10.9.6.1  Does the software have any back end maintenance?  No

10.9.6.2  Does the software have RSS support?  No
10.9.6.3 Does the software have easy mechanisms to upgrade the software from old versions to new versions?
Yes it is easy to migrate MyCoRe from old version to new version.

10.9.6.4 Does the software support migration of data from one repository software to another repository software? Yes

10.9.6.5 Does the system support any ranking algorithms for the documents added in the repository? No

10.9.6.6 Are there any known issues/bugs in the system?
Installation of MyCoRe has a small bug. While installing MyCoRe one has to rerun ant.create and ant webapps commands twice, then only MyCoRe gets successfully installed.

10.9.6.7 Whether a novice user can easily publish content?
Yes, MyCoRe has simple metadata template which helps user to add metadata and upload documents.

10.9.6.8 How often user needs to use database schema for making any change?
If there are major metadata fields change then only user can use database schema. HSQLDB allow to run database through its admin interface.

10.9.6.9 Whether user can reorganize database? No

10.9.6.10 Does system support automated content acquisition, harvesting and automatic metadata generation, automatic subject indexing/classification? No

10.9.6.11 Does the system support to store metadata records separately from the actual contents?
Yes, Metadata records are stored in back end database and actual contents are stored in /home/mcradmin/docportal/data/filestore folder.

10.9.6.12 Does the software support storing varied file formats?
Yes, MyCoRe can store any file format.
10.9.6.13 Does the system keep the original file’s name, size and created date?

MyCoRe changes original name of the file while uploading that file in MyCoRe with its own filename structure, for e.g. 080216-174707-630-3fzw4qcf00tlfk8z.pdf.

10.9.6.14 While using the software if any errors occur, does the system allow to submit the error report?

If there are any errors, system does not support to submit error report.

10.9.6.15 How many developers are working for the software?

There are currently 16 developers working for MyCoRe.

10.9.6.16 How many users are using the software/strength of community?

As on 3rd March 2008, there are 17 users of MyCoRe mostly from Germany.

10.9.6.17 Does the software provide its history on the web page for evidence of sustainability and vitality? Yes

10.9.6.18 Total number of downloads of the software?

As on 3rd March 2008, the latest MyCoRe file was downloaded 31 times and doc-portal latest file was downloaded 27 times.

10.9.6.19 Is the software really under Open Source License terms and conditions?

Yes, MyCoRe is available under GNU General Public License.

10.9.6.20 Are there any costs involved for using OSS-DL? No

10.9.6.21 Does the repository software have a clear policy regarding software upgrades? Yes

10.9.6.22 Whether the software has a long-term leadership and consulting services? Yes

10.9.6.23 After releasing the software whether it was tested and whether it has integrated new features or not?

Yes, MyCoRe has been regularly tested by its users.

10.9.6.24 How is the mailing list used by the users?

Table 10.1 shows number of queries submitted by users on MyCoRe mailing list. The table shows data as observed on 3rd March 2008.
### Chapter 10. MyCoRe Software Evaluation

#### Table 10.1: MyCoRe User’s Mailing List Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Requests Sent on MyCoRe User’s Mailing List</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>10</td>
</tr>
<tr>
<td>2004</td>
<td>66</td>
</tr>
<tr>
<td>2005</td>
<td>162</td>
</tr>
<tr>
<td>2006</td>
<td>192</td>
</tr>
<tr>
<td>2007</td>
<td>318</td>
</tr>
<tr>
<td>2008 3rd March</td>
<td>69</td>
</tr>
</tbody>
</table>

**10.9.6.25 Whether software has conducted any workshops, training sessions on local, regional, national and international levels?**

No information available on Web about this aspect.

**10.9.6.26 Whether software is built according to open standards?**

Yes, MyCoRe uses open standards.

**10.9.7 Architecture of the Software**

**10.9.7.1 How is the architecture and design of the software: whether it is simple or complex?**

No information about how the architecture of MyCoRe is found due to documentation and other material available in German.

**10.9.7.2 Does the architecture support separation between different local parts and put into different machines (e.g. centralised/distributed database, relational/object-oriented database management system, different components of the directory to distribute to different machines) and the transport model (protocols for communication between the system and the user interface or between system components)?**

No information was found about this feature.

**10.9.7.3 Does system support grid architecture? How grids can help disaster recovery of data?**
Figure 10.1: MyCoRe Architecture

No information about grid architecture was found.

10.9.8 **Scalability:** It is necessary to know whether software is scalable in terms of storage and retrieval?

MyCoRe can handle large volumes of data. MyCoRe is scalable in terms of storage and retrieval but there are no proven results about handling millions of records using MyCoRe.

10.9.9 **Extensibility:** Extensible, to allow new elements (collections, data types, services, etc.) to be easily added to the digital library.

MyCoRe can be extended with new services, data types and formats. It is easy to add new features in MyCoRe.

10.9.10 **Storage:** Does the system support data compression? For e.g., in case of multimedia collections the size of the files (for e.g. video/audio files) would be very large, hence system should support data compression/decompression techniques. Does the system support to store compressed file formats?

No, MyCoRe does not support compression and decompression technique.

10.9.11 **Backup/Restore facility**

10.9.11.1 Does software support backup function, which contains metadata associated with access controls, customized files, as well as full texts of the documents added in the repository?

No, MyCoRe does not support any backup function.
10.9.11.2 Does the software explicitly require any particular backup strategy, or does it just rely on system-level backup plans, like periodic disk backups to tape?

Yes, MyCoRe relies on system level backup i.e. All digital documents are stored in MyCoRe /home/mcradmin/docportal/data/filestore directory and actual metadata is stored in hsqldb.

10.9.11.3 In the event of a disaster, what recovery plans are supported by the software?

No information was found on this aspect.

10.10 User Friendly Interface

10.10.1 Whether end user can easily customize the user interface “look and feel”? Whether the end user can change the header, theme, footer, overall web interface of the system?

Yes, end user can customize the user interface as per end user’s needs.

10.10.2 Can user interfaces be localized in their language?

Yes, MyCoRe supports to localize user interface in any language.

10.10.3 How is user interface for the experienced or non experienced users?

User Interface is very simple to use for experienced and non experienced users.

10.10.4 How is the user interface designed for the use of librarian or for the use of users?

User interface is same for the library staff and for the end user.

10.10.5 Whether system provides web based interface for all its functionalities?

Yes all functions in MyCoRe are carried out through web interface.

10.10.6 Does the system provide online help? No

10.10.7 Does the system provide multilingual access support? Yes

10.10.8 Does the system allow users to submit feedback on system problems? No

10.10.9 Does the system notify user’s current state of the task? Yes

10.11 Usability

10.11.1 What user skill levels are expected to use the web interface?
Though MyCoRe does not provide any help message it is easy to use the web interface of MyCoRe and user can easily navigate through different links and get the information.

10.11.2 Is the user able to navigate and find his/her ways to information quickly and easily? Yes

10.11.3 How are the help features provided with the software? Does help feature allow a user to feel comfortable within a digital library? Does the help feature provide general as well as technical answers to the problems?

No help features are provided with the software for end user which is one of the drawbacks of MyCoRe.

10.11.4 Does the user need to know which player or viewer is necessary to view multimedia or other digital objects from the system?

No, MyCoRe automatically detects the installed server on the local disk and allow end user to view audio/video files.

10.11.5 Does the user interface provide facility to give user opinion on the web as well as does the software support user to fill up online user feedback form? No

10.11.6 Does the system support to show usage statistics?

No, MyCoRe by default does not provide any usage statistics.

10.11.7 Transaction Log Analysis

10.11.7.1 Does the system keep error log files? No

10.11.7.2 Does the system keep user logs? No

10.11.7.3 Does the system keeps track of query’s submitted to the system? Does it store any query log? No

10.12 Copyright/Policy Issues

10.12.1 Does the repository software have any means to manage, store, or enforce contract agreements for all the digital documents that are added into the repository?

No, MyCoRe does not have any provision to maintain contract agreement details.
10.12.2 Does the software have any capabilities, such as access control lists, Internet address filters, etc., that can be used to enforce copyright or access restrictions? Can different restrictions be applied to different objects in the repository?

Yes, software supports to control access by IP address as well as by different authorization procedures. Different restrictions can be applied to each digital object in the repository.

10.12.3 If repository ingests digital content with unclear ownership/rights, does it have policies addressing liability and challenges to those rights. No

10.13 Advanced Features

10.13.1 Whether software has long term leadership and consulting services?

Yes, MyCoRe has been getting good support from Hamburgh University, Germany.

10.13.2 Does the system provide citation data?

Yes, MyCoRe default template allows to enter citation details while submitting documents into the repository.

10.13.3 Does the software have defined road map for the future? Yes

10.13.4 Does software support indexing of all documents that are added in the repository in a distributed way, without central control? No

10.13.5 Virtual Collection Support: Does software support to generate virtual collections /special collections across several content providers? No

10.13.6 Load Balancing: Does software have any mention of load balancing? It is necessary to know how the software functions when number of records are more or more number of people try to access the software?

No mention about load balancing was found.

10.13.7 Visualization: Does the software support visualization feature? No

10.13.8 Personalization: Does the system support Personalization feature? No
10.13.9 Translation Service: Does the system provide translation service? No

10.13.10 Community Services: Does the software support to provide community services such as allowing members of the digital library community to exchange ideas, make announcements, write reviews etc. No

10.13.11 Page Ranking: Does the software supports page ranking such as supported by commercial digital libraries. No

10.14 Digital Preservation

MyCoRe has not yet implemented any digital preservation support. Hence none of the evaluation criteria related to digital preservation were valid and considered in this evaluation.

Figure 10.2: MyCoRe Installation Screen
Bibliography
