

Training Programme on DSpace Software
For Library Professionals
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Course Material

Dr.G Santhosh Kumar
Surendran Cherukodan
(CUSAT)

CHMK Library
University of Calicut



Welcome to this programme;

Universities and higher education institutions around the globe install and maintain digital libraries (DL)/ institutional repositories (IR)/ archives to store and provide online access to a variety of materials produced as part of learning and research. A DL/IR is a digital, open access system established by a university or other institution. Content usually includes working papers (preprints) articles, teaching materials, dissertations and theses, slides, images, etc. DLs/IRs now play an important part in the dissemination of knowledge that were previously inaccessible to the wider community. They support learning, teaching and research in all fields. They promote the concept of open access to scholarly materials.

The process of building DLs/IRs was accelerated by the emergence of Free/Open Source Software(OSS). The following are the popular OSS for DL/IR;

1. DSpace (<http://www.dspace.org/>) by MIT Libraries & Hp Lab
2. EPrints (<http://www.eprints.org/>) by University of Southampton
3. Fedora (<http://fedora-commons.org/>) by Cornell University
4. Greenstone (<http://www.greenstone.org/>) by University of Waikato

(CONTENTdm, Digital Commons, DigiTool, Open Repository and EQUELLA Repository are the Commercial Software for building DL/IR)

Among the OSS for DL/IR DSpace dominates major share of installations in the world. The website of DSpace provides a list of around 1451 institutions who have live DSpace based system. There may be many other members who did not register their system to be included in the list. In India, there are around 119 registered DSpace installations. DSpace is the software of choice for academic, non-profit, and commercial organizations. It is easy to install completely customizable to fit the needs of any organization. DSpace preserves and enables easy and open access to all types of digital contents. DSpace has an ever-growing community of developers, committed to continuously expanding and improving the software.

The DL/IR built using DSpace has been designed to store materials in an organized,

secure, and searchable archive. It can be used to preserve articles, bibliographic datasets, images, course materials, preprints, working papers, technical reports, conference papers, books, theses, computer programs, visualizations, simulations, multimedia publications, audio files, video files, learning objects and web pages. The contents being saved in the DSpace DL/IR shall be distributed quickly with worldwide visibility, permanently. The other benefits include getting top search results in Google, Increasing accessibility to your work and browsing others' research.

The DSpace is available for free to anyone and can be downloaded from the sourceforge open source software repository. The code is currently licensed under the BSD open source license. This means that any organization can use, modify, and even integrate the code into their commercial application without paying any licensing fees. DSpace software is managed by a smaller group of volunteer developers (called committers) that work together to plan releases and integrate new features and bug fixes submitted by the community. Some of the key features of DSpace are given below;

Ability to customize or theme the user interface - You can fully customize the look and feel of your DSpace website so it will integrate seamlessly with your own institution's website and can be more intuitive for your users. DSpace provides two main user interface options: the traditional (JSP-based) interface, and Manakin (XML-based).

Ability to customize the metadata - Dublin core is the default metadata format within the DSpace application, however you can add or change any field to customize it for you application. DSpace currently supports any non hierarchical, flat name space. However, it is possible to ingest other hierarchical metadata schemas into DSpace such as MARC and MODS. This requires using tools such as crosswalk and having some technical capability to map the transfer of data.

Standards compatible- DSpace complies with many standard protocols for access, ingest, and export. The standards DSpace supports include: OAI-PMH, OAI-ORE, SWORD, WebDAV, OpenSearch, OpenURL, RSS, ATOM

Ability to configure Browse and Search - You can decide what fields you would like to

display for browsing, such as author, title, date etc. on your DSpace website. You can also select any metadata fields you would like included in the search interface. All of the text within a given item and metadata associated with the item, are indexed for full text search if desired.

Ability to use local Authentication mechanisms - DSpace comes with plugins for most university authentication methods, including: LDAP (and hierarchical LDAP), Shibboleth, X.509, IP-based. In addition, DSpace comes with its own internal authentication method, or can be configured to use multiple authentication methods at once. You can also build your own authentication plugin if you use a custom authentication mechanism.

Configurable database -You can choose either PostgreSQL or Oracle for the database where DSpace manages its metadata.

Ability to choose the default language -The DSpace web application is available in over twenty languages. So if English is not your local language, you can customize the language which DSpace uses. You can also configure DSpace to support multiple languages, so that the language your user sees is the 'preferred language' set in their web browser.

DSpace comes with an easily configurable web based interface, which any system administrator can install on a single Linux, Mac OSX or Windows box to get started.

Major DSpace Websites in the world

<http://dspace.mit.edu/>- DSpace at MIT with 64671 Documents

<http://www.dspace.cam.ac.uk/> DSpace at Cambridge with 193188 Documents

<http://dash.harvard.edu/> DSpace at Harvard University with 12202 Documents

<http://dspace.cusat.ac.in/jspui/> at Cochin University of Science and Technology -5307 Documents

<http://shodhganga.inflibnet.ac.in/> Indian Digital Theses by Inflibnet -7736 theses

<http://nsdl.niscair.res.in/> National Science Digital Library at NISCAIR-578 Documents

<http://nopr.niscair.res.in/> NISCAIR online periodical directory- 17261 articles

Installing DSpace

The CD distributed here is available at <http://liblivecd.sourceforge.net/> . It can be used to install multiple OSS packages of Koha, DSpace and Drupal. You can either install the CD on your desktop/laptop or try the OSS packages without installing. If you intend to install it, make sure to backup your data and ensure partition of disc space to retain existing operating system and your documents. Consult your IT staff for advice and help.

When you want to try DSpace without installing, insert the CD in the CD drive and restart the machine. It will boot from the disk. Finally a desktop with two icons appear. Click on the” ClickME” icon. A text file is displayed with navigation facility. Note the user name and password for all applications. Click on the fist DSpace link. A DSpace website will be displayed. Suppose that this is your DSpace. We can customize, create communities, sub communities, collection and add items to the Collection.

The Concept of Communities

When you design a DSpace for your University, think of the academic structure. It may include various departments;

Department of Arabic

Department of Biotechnology

Department of Botany

Department of Chemistry

Department of English

Department of History

Department of Library and information Science

Department of Malayalam

Department of Philosophy

Department of Psychology

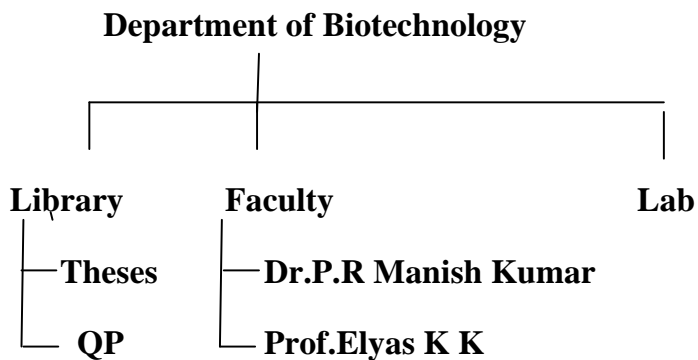
The Concept of Sub communities

Consider the Department of Biotechnology for its Sub-Communities. We can see that Library, Lab, Faculty Members etc are the possible Sub-Communities.

The Concept of Collection

Collection is the place where we assemble documents. If **Biotechnology** is a Community, **Library** is its Sub-Community and **PhD Theses** is a Collection where we store all PhD theses submitted on Biotechnology. **Question paper** is another Collection

where we store all previous question papers.



However, there is no rigidity in the construction of Communities/Sub-Communities and Collection. It can be customized as per our requirements. But if we follow a plan for arrangements of documents, it is easy for us to accommodate every document to the appropriate community.

The Creation of Communities

To begin the process of building communities, Go to MyDSpace to log in.

The screenshot shows the MyDSpace interface. On the left, there is a 'Browse' section with links for 'Communities & Collections', 'Issue Date', 'Author', 'Title', and 'Subject'. Below that is a 'Sign on to:' section with links for 'Receive email updates', 'My DSpace authorized users' (circled in green), 'Edit Profile', 'Help', and 'About DSpace'. The main content area has a welcome message, a search box with a 'Go' button, and a 'Communities in DSpace' section listing various communities with their item counts: 'Article Index [107]', 'Centre for Information Resource Management [1]', 'CUSAT Events [74]', 'CUSAT-News [26]', and 'Department of Applied Economics [1]'.

Log In to DSpace

[New user? Click here to register.](#)

Please enter your e-mail address and password into the form below.

E-mail Address:

Password:

[Have you forgotten your password?](#)

ssword into the form below.

E-mail Address:

Password:

Logged in as
san@cusat.ac.in
([Logout](#))

Search DSpace

[Advanced Search](#)

The website shall show the logged in status as shown above on the left side.

When you are in the logged status, click on “Communities and Collections” on the left side . At the right side, you will get an option to Create Top-Level Community.

Logged in as
san@cusat.ac.in
([Logout](#))

Search DSpace

[Advanced Search](#)

[Home](#)

Browse

- [Communities & Collections](#)
- [Issue Date](#)

Community or

Admin Tools

[Admin Help...](#)

When you click on it, you will get the worksheet for entering the details of the Community including name.

Create Community

Name:

Short Description

Introductory text (HTML):

Copyright text (plain text):

You can enter name including other details to describe the community here. A logo representing the community can also be put here.

Logo:

The created community will look like as shown below. The number [0] show the count of the items in the community

CHMK Library : [0]

Community home page



In: CHMK Library ▾

Search for

or browse

The Calicut University Library, established in 1971 and later renamed after C.H.Mohammed Koya, (the former Minister for Education, Government of Kerala), is primarily concerned with the conservation and dissemination of knowledge to its users.

Creating Sub-Communities

Consider the various sections in the library as Sub-Communities; Periodical, Technical, Reference etc. We can create Sub-Communities under this name. But we know that these sections don't generate information contents. So in this case we can consider creating Sub-Communities in a different manner. eg. Journal Articles, Phd Theses, Question Papers, Syllabus etc.

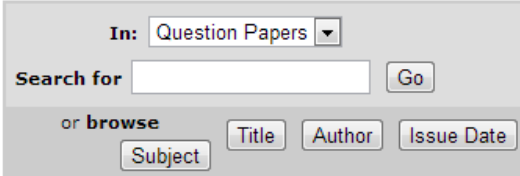
Sub-communities within this community

- [E-Books](#) [0] 
- [Journal Articles](#) [0] 
- [Patents](#) [0] 
- [PhD Theses](#) [0] 
- [Question Papers](#) [0] 
- [Syllabus](#) [0] 

Suppose we have question papers of different subjects; Sociology, Psychology, English etc we cannot organize them under a single collection under Question Paper Sub-Community. So here we can further create Sub-Communities under Question Paper Sub-Community. eg





Question Papers : [0]

Community home page



The image shows a search interface for the 'Question Papers' sub-community. At the top, there is a dropdown menu labeled 'In:' with 'Question Papers' selected. Below this is a search bar with the text 'Search for' and a 'Go' button. Underneath the search bar, there is a section labeled 'or browse' with four buttons: 'Subject', 'Title', 'Author', and 'Issue Date'.

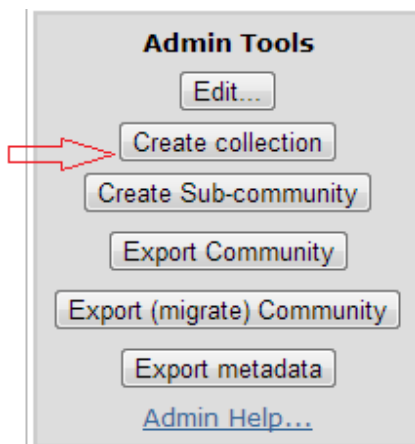
Sub-communities within this community

- [History](#) [0] 
- [Malayalam](#) [0] 
- [Psychology](#) [0] 
- [Sociology](#) [0] 

We can again create sub-communities if we want. Otherwise we can create Collection under a Sub-Community.

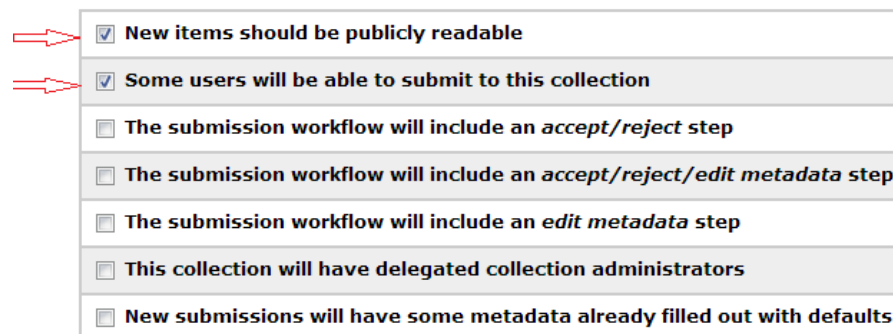
Creating Collections

The creation of **Collections** is an **important** step. You have to **describe** the Collection. Plan well before creating a Collection. Suppose we want to create different Collections in **History**. Go to History Sub-Community. There is provision for creating Collection at your right hand side.



When you click on **Create Collection**, we are asked to describe the Collection.

that apply to the collection. [More Help...](#)



A screenshot of a form with seven checkboxes. The first two are checked, and red arrows point to them. The options are:

- New items should be publicly readable**
- Some users will be able to submit to this collection**
- The submission workflow will include an *accept/reject* step**
- The submission workflow will include an *accept/reject/edit metadata* step**
- The submission workflow will include an *edit metadata* step**
- This collection will have delegated collection administrators**
- New submissions will have some metadata already filled out with defaults**

The selection or de-selection determines the feature of the Collection. You must select the first two options. You can try other options later and check how it affects feature of the Collection.

When we click **Next**, the worksheet for providing name and other details of the Collection shall appear.


Name:


Shown in list on community home page

Description:

When we finish filling the required information we are directed to select e-person, the staff member having permission to submit items to this Collection. Click on Select E-people.

Click on the 'Select E-people' button to choose e-people to add to the list. Click on the 'Select Groups' button to choose groups to add to the list.





<input type="button" value="Add"/>	342	bijeshchellappan2003@rediffmail.com	Chellappan	Bijesh	en
<input type="button" value="Add"/>	124	alex_cherian123@yahoo.com	Cherian	Alex	en
<input type="button" value="Add"/>	2	csura@cusat.ac.in	Cherukodan	Surendran	en
<input type="button" value="Add"/>	250	karthhhi@gmail.com	Chidhambaram	Karthik	en

[< 5 Pages](#) [< 1 Page](#) [1 Page >](#) [5 Pages >](#)

The system shall display all e-people already registered to DSpace. Add one or two or three e-people and close. The selection will be displayed like this.


Authorization to Submit

Who has permission to submit new items to this collection?

[More Help...](#)

You can change this later using the relevant sections of the DSpace admin UI.

Click on the 'Select E-people' button to choose e-people to add to the list. Click on the 'Select Groups' button to choose groups to add to the list.

 Surendran Cherukodan (csur@cusat.ac.in)	
<input type="button" value="Select E-people..."/>	<input type="button" value="Remove Selected"/>

<input type="button" value="Select Groups..."/>	<input type="button" value="Remove Selected"/>

Next page you update the details already given. There are many options that you can test one by one.

Edit Collection 123456789/6561

Name:

Short Description


Introductory text (HTML):

Metadata Format

Content being Harvested

- Harvest metadata only.
- Harvest metadata and references
- Harvest metadata and bitstreams

Last Harvest Result



MA History Final : [0]

Collection home page

The screenshot shows a search interface for the 'MA History Final' collection. At the top, there is a dropdown menu labeled 'In:' with 'MA History Final' selected. Below it is a search box labeled 'Search for' with a 'Go' button to its right. Underneath the search box, the text 'or browse' is followed by four buttons: 'Subject', 'Title', 'Author', and 'Issue Date'. Below the search area, there is a 'Submit to This Collection' button on the left and a 'Subscribe' button on the right, with the text 'Subscribe to this collection to receive daily e-mail notification of new additions' in between. At the bottom center, there is a 'View Statistics' button.

When we click on update, the Collection is ready to accept items.

Now we have created two Collection in the History Sub-Community.

History : [0]

Community home page

This is a partial screenshot of the search interface for the 'History' community. It shows the 'In:' dropdown menu with 'Histor' selected, the 'Search for' box, and the 'or browse' section with the 'Subject' button visible.

Collections in this community

- [MA History Final \[0\]](#) 📖
- [MA History Previous \[0\]](#) 📖

Uploading in DSpace

Welcome to the digital library of Cochin University!

Browse

- Communities & Collections
- Issue Date
- Author
- Title
- Subject

Sign on to:

- Receive email updates
- My DSpace** authorized users
- Edit Profile
- Help
- About DSpace

Search

Enter some text in the box below to search DSpace.

Communities in DSpace

Choose a community to browse its collections.

- Article Index [107]
- Centre for Information Resource Management [1]
- CUSAT Events [74]
- CUSAT-News [26]
- Department of Applied Economics [1]

word into the form below.

E-mail Address:

Password:

←

Logged in as **csura@cusat.ac.in** (Logout)

DSpace at Cochin University >

My DSpace: Surendran Cherukodan

Search DSpace

Advanced Search

Home

Browse

- Communities

↑

[See Your Subscriptions](#) ↑

↑

Once you logged in the system, you will see the above buttons for starting a new submission. It is advisable to use the “Home Page” to start submission to the required collections as shown below.



[DSpace at Cochin University](#) >

School of Management Studies : [42]

Community home page

In: ▾

Search for

or browse


Sub-communities within this community

- [Faculty](#) [8]
- [SMS Library](#) [34]

The above picture show the different sub-communities within the main community and collections of these can be seen as shown below.

Subject

Collections in this community

- [Dr. D.Mavoothu](#) [5] 
Associate Professor, School of Management Studies, CUSAT
- [Moli P. Koshy](#) [0]
- [Sebastian Rupert Mampilly](#) [3]

The faculty has 5 items already in the collection, and a new one can be added.

[DSpace at Cochin University](#) >
[School of Management Studies](#) >
[Faculty](#) >

Dr. D.Mavoothu : [5]

Collection home page



In: Dr. D.Mavoothu ▾

Search for

or **browse**



Subscribe to this collection to receive daily e-mail notification of new additions

Associate Professor, School of Management Studies, CUSAT E-mail: mavoothu@rediffmail.com

The following process shows the work flow of dspace system. The process consists of steps *Description of the item, Uploading, Verification, Providing License and finalizing the submission*. It is important that each step must be completed with utmost care since it generates lot of meta data used by the dspace system to describe the article which in turn will help the system for efficient querying and retrieval. Following figures show these steps which are self explanatory.

Submit: Describe this Item

Please check the boxes next to the statements that apply to this submission. [More Help...](#)

<input type="checkbox"/>	The item has more than one title, e.g. a translated title
<input type="checkbox"/>	The item has been published or publicly distributed before
<input type="checkbox"/>	The item consists of <i>more than one</i> file

Next > Cancel/Save

NEXT

Submit: Describe this Item

Please fill in the requested information about this submission below. In most browsers, you can use the tab key to move the cursor to the next input box or button, mouse each time. [\(More Help...\)](#)

Enter the names of the authors of this item below.

Last name *First name(s) + "Jr"*
 e.g. **Smith** e.g. **Donald Jr**

Authors

Enter the main title of the item.

Title

Enter the series and number assigned to this item by your community.

Series Name *Report or Paper No.*

Series/Report No.

If this item has any identification numbers or codes associated with it, please enter the types and the actual numbers or codes below.

Identifiers

Select the type(s) of content of the item. To select more than one value in the list, you may have to hold down the "CTRL" or "Shift" key.

Type

Enter the language of the item. If the language does not appear in the list below, please select "Other". If the content does not really have a language (for example, if it is a dataset or an image), please select "N/A".

Language

< Previous Next > Cancel/Save

Provide as much possible key words here.

Enter the names of the authors of this item below.

Last name
e.g. **Smith**

First name(s) + "Jr"
e.g. **Donald Jr**

Authors

Enter the main title of the item.

Title

Enter the series and number assigned to this item by your community.

Select the type(s) of content of the item. To select more than one value in t

Type

- Animation
- Article
- Book
- Book chapter
- Dataset
- Learning Object

NEXT

Enter appropriate subject keywords or phrases below.

Subject Keywords

Enter the abstract of the item below.

Abstract

Enter the names of any sponsors and/or funding codes in the box below.

Sponsors

Enter any other description or comments in this box.

Description

NEXT



ard drive corresponding to your item. If you click "Browse...", a new window will appear in which you can locate and select the file
em is able to preserve the content of certain types of files better than other types. [Information about file types and levels of support for each are availa](#)

Document File: No file chosen



NEXT



File Uploaded Successfully

; successfully uploaded.

details of the file you have uploaded. Please check the details before going to the next step. [More Help...](#)

File	Size	File Format
Social Media- A relevant tool for tourism and hospitality marketing.pdf	337,692 bytes	Adobe PDF (known)

NEXT

Item consists of more than one file: No

Authors	Dr. D Mavoothu
Title	Social Media- A relevant tool for tourism and hospitality marketing
Series/Report No.	None <input type="button" value="Correct one of these"/>
Identifiers	None
Type	Article
Language	None

Subject Keywords	Social Media Tourism and Hospitality Marketing Online travel
Abstract	Tourism is an industry which is heavily dependent on marketing.This paper analyses the social networking sites, their contribution to marketing tourism and hospitality.The negative impact phenomena are also analysed. <input type="button" value="Correct one of these"/>
Sponsors	None
Description	Article Published in the Indian Journal of Tourism and Hospitality Management Vol.11 No.2 Dec 2010.

Uploaded File: [Social Media- A relevant tool for tourism and hospitality marketing.pdf](#) - Adobe PDF (Known)

Describe Describe Describe Upload Verify License Complete

License will not delete your submission. Your item will remain in your "My DSpace" page. You can then either remove the submission or you might have any issues resolved.

Associate Professor, School of Management Studies, CUSAT
E-mail: mavoothu@rediffmail.com



The Final Stage

Describe Describe Describe Upload Verify License Complete

Submit: Submission Complete!

Your submission will now go through the workflow process designated for the collection, or if for some reason there is a problem with your submission, you might have any issues resolved.

[Go to My DSpace](#)

[Communities and Collections](#)

Conclusion

This document describes the importance of adopting dspace open source software in libraries. A simple procedure for installing and setting up the system is also discussed. The training program has exhaustively given practical know-how to all the participants to set up such a system for their libraries.

Don't hesitate to contact us for further queries;

1. **Dr. G. Santhosh Kumar** ,
Assistant Professor, Dept. of Computer Science
Cochin University of Science and Technology, Cochin 682022.
Mob: 09447305879 E mail: san@cusat.ac.in

2. **Surendran Cherukodan**
Junior Librarian
School of Engineering Library
Cochin University of Science and Technology, Cochin 682022.
Mob: 9447579411 E mail: scherukodan@gmail.com