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### Preface

The purpose of this manual is to serve as a self-instructional guide to those who want to convert Winisis database into greenstone application (as is conversion) with Greenstone digital library software 2.72 independently.

The manual can be used as a training handout for exposure training that long for one or two days. The basic approach of the manual is to include the essential and easy-to-learn things and to exclude everything else that cannot be learned by new users.

*In exposure training, please desist from showering a lot of information of complex nature to the new participants who cannot digest all of them. That many dispel some of them from greenstone.* 

Practice reminds that learning happens in the form of layers one over the other. When the first layer is not stable, you cannot build up the subsequent layers. This manual deals with the first layer of knowledge on implementation of greenstone. Advance features are not dealt with in this manual.

We express our gratitude to Dr. John Rose for the enthusiasm he has shown in clarifying our doubts and helping us learn newer changes, without which the document would have more infirmities.

Mulakunnathukavu 25-05 -2007 K. Rajasekharan K.M Nafala

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#### Abstract

The purpose of this guide is to narrate the steps to convert a Winisis database to a greenstone application, in an easy to understand manner. The details of software required, the address of download sites and the manner of creating the greenstone application are explained in the guide with screenshots. The guide would be useful to those who are experienced in Winisis and want to convert the database to Greenstone. The greenstone application thus creates can be uploaded in a website or published in a CD-ROM.

# 1. Objective of this Guide

The objective of this guide is to convert a Winisis database into a Greenstone Digital Library application. The converted greenstone collection can be put on the World Wide Web or it can be published on a CD-ROM.

#### 1.1 Sample Winisis Database Chosen for Conversion

We may choose the Winisis database **cds** that appears along with the software, for this experimentation. You can choose any other database for conversion. A sample Winisis database may contain fields such as Title, Author, and Keywords etc. The sample database **cds.mst** will appear as follows: -

<sup>\*</sup> Librarian, Kerala Institute of Local Administration, Mulagunnathu Kavu - 680 581

<sup>\*\*</sup> Library Computer Operator, Kerala Institute of Local Administration, Mulagunnathu Kavu -680 581

**Figure 1 Winisis Archive** 

	ndows [Full Version : EN] Search Edit Configure Utils Windows Help
🛎 📇 🗖	
MFN 1	DS Database and you can change this title
MFN	: 0001
TITLE	: Techniques for the measurement of transpiration of individual plants.
AUTHOR (S)	: Magalhaes, A.C.; Franco, C.M.
IMPRINT	: Paris, Unesco, -1965.
COLLATION	: p. 211-224, illus.
SERIES	: Methodology of plant eco-physiology: proceedings of the Montpellier Symposium.
NOTES	: Incl. bibl.
KEYWORDS	: Paper on: plant physiology; plant transpiration; measurement and instruments.
	MAX: 154

# 2. Software Installation

### 2.1 Software Download

TheGSDL2.72softwarecanbedownloadedfrom<a href="http://prdownloads.sourceforge.net/greenstone/gsdl-2.72-win32.exe">http://prdownloads.sourceforge.net/greenstone/gsdl-2.72-win32.exe</a>

Java2 Runtime Environment can be downloaded from http://greenstonesupport.iimk.ac.in/software/jre-1\_5\_0\_05-windows-i586-p.exe

*ImageMagick* can be had from <u>http://greenstonesupport.iimk.ac.in/software/ImageMagick-6.2.3-2-Q16-windows-dll.exe</u>

*Ghostscript* can be obtained from <u>http://downloads.sourceforge.net/ghostscript/gs854w32-</u> gpl.exe?modtime=1155148078&big\_mirror=1

Winisis 1.5 can be downloaded from <u>www.unesco.org/isis/files/winisislicense .html</u>

#### 2.2 Installation of Software

Install **Java2 Runtime Environment** in your computer as a pre-requisite for installing GSDL software. Then install the **GSDL 2.72 (windows version)** software in your computer. Choose the recommended **Local Library** mode for installation.

You may install **ImageMagick** and **Ghostscript** softwares, required to build image collections and to do advanced conversion of PDF and Postscript documents, respectively. Otherwise these two softwares are not required.

# 3. Conversion of Winisis into Greenstone Application

Open the Greenstone Librarian Interface (GLI) Start  $\Rightarrow$  Programs  $\Rightarrow$  Greenstone Digital Library Software v2.72  $\Rightarrow$  Greenstone Librarian Interface.

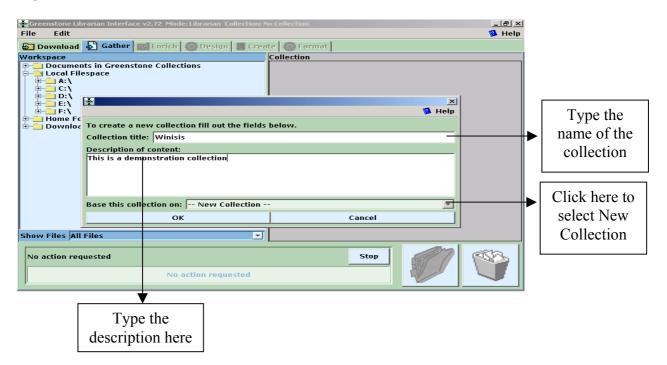
To create a new collection, choose New from File menu

#### Figure 2 Starting a New Collection

Greenstone Librarian Interface	v2.72 Mode: Librarian Collection: N	o Collection			_ 문 × 🔞 Help
New	📓 Enrich 🛛 🌑 Design 🛛 🎆 Crea	te 🎑 Format 🛛			😼 нер
Open		Collection			
Save	ne Collections				
Close					
Delete	rator)				
Export					
Write CD/DVD image					
File Associations	-				
Preferences					
Exit	-				
Show Files All Files	~	Na	o collection	n loaded	
No action requested	No action requested	s	itop	000	
	No action requested				

Give a title for the collection (say **Winisis**) and give a short description about the collection as shows in the following figure.

#### Figure 3 Collection Name & Description



Select New Collection under Base this collection on dialogue and click OK button.

### 4. Gather the Database Files

Now the **Gather** panel will become active. Locate **.mst**, **.fdt** & **.xrf** files from your Winisis database (normally at *C:\Winisis\cds*) and drag them into the **Collection** panel as in the following screen: -

**Figure 4 Gathering the Files** 

_		orarian Interfa	ce v2.72 Mod	le: Librarian Co	llection: C	D5 (cds)		_ 8 ×
File	Edit							🥵 Help
😓 D	ownload	🔊 Gather	🜃 Enrich	🔅 Design	🌆 Crea	te 🔅 Format		
Work	space					Collection		
	<u>-</u>	cds			<u> </u>	- CDS.FDT		
		ACDS.FM				CDS.MST		
		ANEW.fn				GDS.XRF		
		ATHES.F	MT					
		BCDS.FM			1			
		CCDS.FM						
		<ul> <li>ccds4.PF</li> </ul>						
		• CDS.ANY						
		• CDS.CNT						
		CDS.FDT						
		• CDS.FST						
		CDS.GIZ						
		CDS.IFP						
		<ul> <li>CDS.L01</li> </ul>						
		<ul> <li>CDS.L02</li> </ul>						
		CDS.MST						
		<ul> <li>CDS.N01</li> <li>CDS.N02</li> </ul>						
		• CDS.NU2						
		• CDS.PFT						
		• CDS.STV						
		<ul> <li>CDS.ARF</li> <li>CDS1.PF</li> </ul>			-1			
			·		<u> </u>	ol 51 11.51		
Show	Files All	Files			-	Show Files All Fil	es	-
No	action req	uested					Stop	(1883)

# 5. Designing the Collection

Then design the collection by choosing the following features given under the **Design** menu. Collection design consists of many facets enlisted in the left pane.

#### **5.1 Create Search Indexes**

Choose the **Search Indexes**, shown on the left pane, for creating *Search Indexes*. Remove the default indexes and add new search indexes.

#### 5.2 Remove the Default Indexes

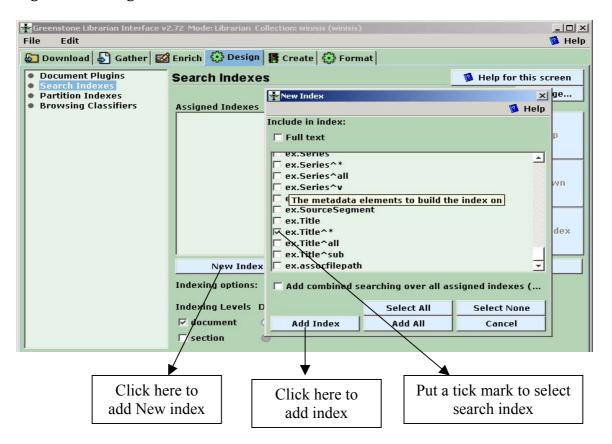
Remove the default indexes for *ex.Title, ex.PersonalAuthors* and *ex.Keywords* by selecting the index description under *Assigned Indexes* and then by clicking on the **Remove Index** button.

		Select the i	ndex
Figure 5 Removing i	ndex		
🙀 Greenstone Librarian Interface v	2.72 Mode: Librarian Collection: wi	nisis (winisis)	
File Edit			🥵 Help
🔄 Download 🔂 Gather 🖾	Enrich 🥨 Design 🖁 Creat	😳 Format	
Document Plugins     Search Indexes	Search Indexes		Help for this screen
<ul> <li>Partition Indexes</li> <li>Browsing Classifiers</li> </ul>		Indexer i	n use: MGPP Change
	Assigned Indexes text [Def_alt Index]		
	ex.Title		A Move Up
	ex.Source		T MOVE OF
			🔸 Move Down
			Set Default Index
	New Index	Edit Index	Remove Index
	Indexing options: 🔽 Stem	🔽 Casefold	🗹 Accent fold
	Indexing Levels Default		
	🔽 document 💿		
	🗆 section 🛛 🔘		
$\perp$			¥
	7		Click here to
Click here to select			remove index
search index			

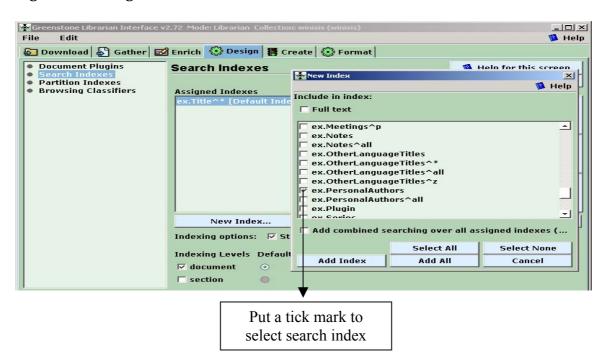
#### 5.3 Adding New Indexes

Click on the **New Index** button. Select the **ex.Title**, **ex.PersonalAuthors** and **ex.Keywords**, by tick marking on the check box one by one, and add them one by one by clicking on the **Add Index** button. That means select *ex.Title* first and add it, then select *ex.PersonalAuthors* and add it, then select *ex.Reywords* and add it and so on.

#### Figure 6 Adding Index for ex.Title



Select and add the Search Index for *PersonalAuthors* by choosing the metadata (*ex.PersonalAuthors*) as follows:-



**Figure 7 Adding Search Index for ex.PersonalAuthors** 

Select and add the Search Index for *Keywords* by choosing the metadata (*ex.Keywords*) as follows:-

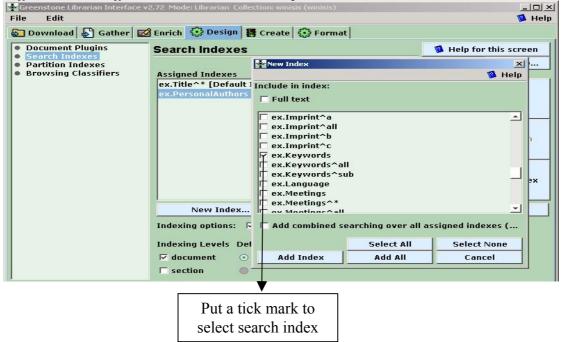


Figure 8 Adding Search Index for ex.Keywords

The three indexes will be added one by one as in the following figure.

**Figure 9 Indexes Selected for the Collection** 

🛉 Greenstone Librarian Interface v	2.72 Mode: Librarian Collection: winisis (winisis)	<u>_     ×</u>
File Edit		🔞 Help
🔄 Download 🔊 Gather 🔯	Enrich 😯 Design 🐻 Create 😯 Format	
Document Plugins     Search Indexes	Search Indexes	🥦 Help for this screen
Partition Indexes	Indexer	in use: MGPP Change
<ul> <li>Browsing Classifiers</li> </ul>	Assigned Indexes	
	ex.Title^* [Default Index]	
	ex.PersonalAuthors	🛖 Move Up
	ex.Keywords	
		- Move Down
		Set Default Index
	New Index Edit Index	Remove Index
	Indexing options: 🔽 Stem 🔽 Casefold	🔽 Accent fold
	Indexing Levels Default	
	🗹 document 💿	
	🗖 section 🛛 🔘	

You can move any index up or down to set its order of appearance by selecting the index and clicking on the buttons on the right side. Likewise you can set any *index* as *default index* by selecting the index and clicking on the **Set Default Index** button.

#### 5.4 Browsing Classifiers

If you want to browse on a metadata element, you must set up a Browsing Classifier, independently of creating a search index on this metadata element. The metadata used for the database are *Title, PersonalAuthors, Keywords* and we need to create browsing classifiers for them. The default Browsing Classifiers are as follows:-

**Figure 10 Default Browsing Classifiers** 

Greenstone Librarian Interface v	2.72 Mode: Librarian Collection: CDS	(cds)		_ 문 × @ Help
🔄 Download 🔊 Gather 🖾	🛿 Enrich 🔅 Design 🔠 Create	😳 Format		
Document Plugins	Browsing Classifiers		🐴 н	elp for this screen
<ul> <li>Search Indexes</li> <li>Partition Indexes</li> </ul>	Assigned Classifiers			
Browsing Classifiers	AZList -metadata ex.Title			
	AZList -metadata ex.Source			🛧 Move Up
				Move Down
	Select classifier to add: AZCon	npactList		
	Add Classifier	Configure Classifier	Rei	move Classifier
	•			V
	Click here to Add classifier		-	lick here to ove classifier

Select **Browsing Classifier** by clicking on it and then click on the **Remove Classifier** button for removing the default classifiers one by one. The resultant screen would be as follows:-

Figure 11 Adding Classifier

萫 Greenstone Librarian Interface 🗴	2.72 Mode: Librarian Collection: Wi	inisis Collection (cds)		_ <u>-</u> - <u>-</u> ×
File Edit				🔞 Help
😓 Download 😓 Gather 🔤	🖁 Enrich 🔅 Design 🌆 Creat	e 🕄 Format		
Document Plugins	Browsing Classifiers		н 🦉	elp for this screen
<ul> <li>Search Indexes</li> <li>Partition Indexes</li> </ul>	Assigned Classifiers		-	
<ul> <li>Browsing Classifiers</li> </ul>				
				A Move Up
				- Hove op
				1
				_
				🖶 Move Down
	Select classifier to add: AZC	ompactList		
	Add Classifier	Configure Classifier	Rer	nove Classifier
1				
	▼			
	Click here to Ad	la		
	Classifier			
	Ciuooniici			

#### 5.5 Adding Browsing Classifiers

Now, choose **Select classifier to add** pull down list and select **A-Z List** or **A-Z Compact List**<sup>1</sup>.

Then click on **Add Classifier** and add the Browsing Classifiers<sup>2</sup> for **Title**, **PersonalAuthors** and **Keywords** by one by one.

When you click **Add Classifier** button in the above screen, you will get the window for choosing the **Browsing Classifier** like *Title*, *Personal author*, *Keywords* etc.

Select the browsing classifier for *Title* by choosing the metadata option (ex.Title) as follows:-

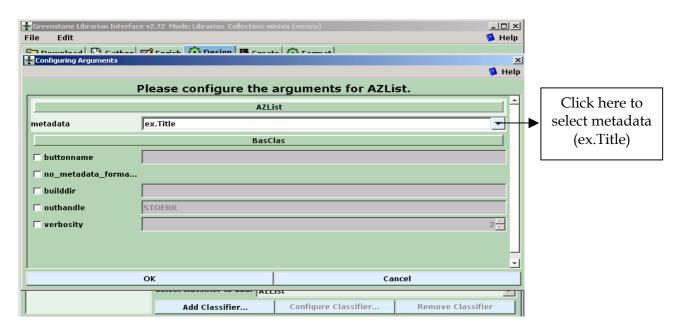


Figure 12 Adding Classifier CL1 for Title - ex.Title

#### Click **OK** button to add *Title* classifier.

<sup>&</sup>lt;sup>1</sup> Use of AZCompactList Classifier brings bookshelf icons under the browsing classifier. It groups together the documents that appear multiple times with same metadata and does not differ with AZList in any other manner. <sup>2</sup> If you want to give a button name other than the button names like **Titles, Creators** etc, check the buttonname box in the "Configuring Arguments" window, type the desired button name and click **Ok**.

Then select the browsing classifier for *PersonalAuthors* by choosing the metadata option (ex.PersonalAuthor) as follows :-

Greenstone Librarian Interf File Edit Configuring Arguments	ace v2.72 Mode: Librarian Collection:	winisis (winisis)	LIX Help LIX Help	
P	lease configure the a	arguments for AZList.		Clial, have to
metadata	AZLi ex.PersonalAuthors	st		Click here to select metadata
	BasCl	as		(exp.PesonalAuth
🗆 buttonname				ors)
🗆 no_metadata_forma				
🗆 builddir				
🗆 outhandle	STDERR			
🗆 verbosity			2 🗧	
	ок	Cancel		
	Select classifier to add: A	ZList Configure Classifier	Remove Classifier	

# Figure 13 Adding Classifier CL2 for Author - ex.PersonalAuthors

Click **OK** button to add *PersonalAuthors* classifier.

Figure 14 Adding Classifier CL3 for ex.Keywords

Greenstone Librarian Interface v7 File Edit	2.72 Mode: Librarian Collection: wi		LIX Help X Help	
PI	ease configure the	arguments for AZLi	ist.	
	AZL	ist	<b>^</b>	Click here to select metadata
metadata e	x.Keywords BasC	las		(exp.Keywords)
🗖 buttonname				
🗖 no_metadata_forma				
🗖 builddir				
🗖 outhandle 🛛 S	TDERR			
🗖 verbosity			2	
0	к	Ca	incel	
	Select classifier to aud. AZL	ist		
	Add Classifier	Configure Classifier	Remove Classifier	

Click **OK** button to add *Keywords* classifier.

The resultant screen, that shows the three added Browsing Classifiers, will appear as follows:-

Greenstone Librarian Interface v2	2.72 Mode: Librarian Collection: wi	nisis (winisis)	 10				
🔂 Download 🔊 Gather 🗹	Enrich 🔅 Design 🄀 Creat	e 😚 Format					
Document Plugins	Browsing Classifiers		🥦 Help for this screen				
<ul> <li>Search Indexes</li> <li>Partition Indexes</li> </ul>	Assigned Classifiers						
<ul> <li>Browsing Classifiers</li> </ul>	AZList -metadata ex.Title AZList -metadata ex.Person AZList -metadata ex.Keywo		👚 Move Up				
			Move Down				
	Select classifier to add: AZL	ist					
4			Remove Classifier				

Fig 15 Browsing Classifiers assigned for this sample Collection

# 6. Format

Many aspects of the page-display of the resultant digital library are governed by the features provided under the **Format** menu. We do not explain Format Features here, as it is a bit complex for beginners.

# 7. General

Choose the **Format** Tab and select **General** to provide the general information about the collection.

### 7.1 Put a picture as a collection icon

Choose a small picture of around 100\*100 pixels that needs to appear as an icon of the collection in the homepage, by clicking on the **Browse** button on middle right and selecting the picture. On choosing the picture, the full path of the picture will appear in the address box lying against the **Browse** button.

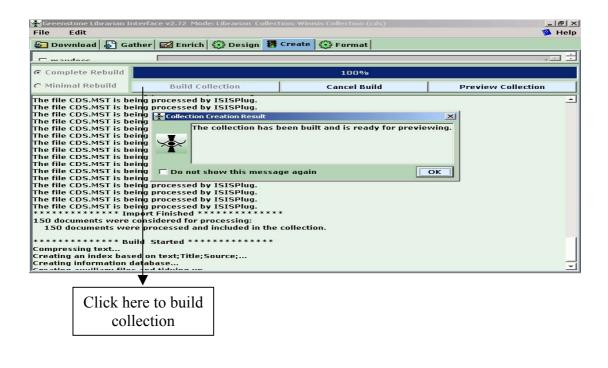
#### Figure 16 Designing the Collection - General Information

File Edit Gather	Enrich 🔅 Design 🏽 🌆 Crea	te 😯 Format		LOX Help	
Conerol     Search     Format Features     Translate Text     Cross-Collection Search     Collection Specific Macros      Preview Collection	General Creator's email Maintainer's email Collection title: Collection folder: URL to 'about page' image: URL to 'home page' image: F This collection should be Collection description:	greenstone@cs.waikato.ac.nz.wail greenstone@cs.waikato.ac.nz.wail Winisis Collection cds httpprefix_/collect/cds/images/	kato.ac.nz	Browse	Click here to select picture as 'homepage' icon
Click here to select					

# 8. Build the Collection

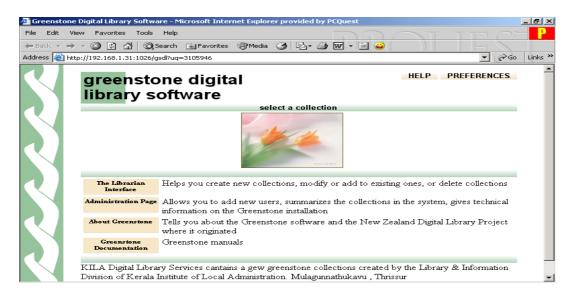
Then go to the **Create** panel. Click on the **Build Collection** button and the progresswindow will show the progress in building the collection.

#### Fig 17 Building a Collection



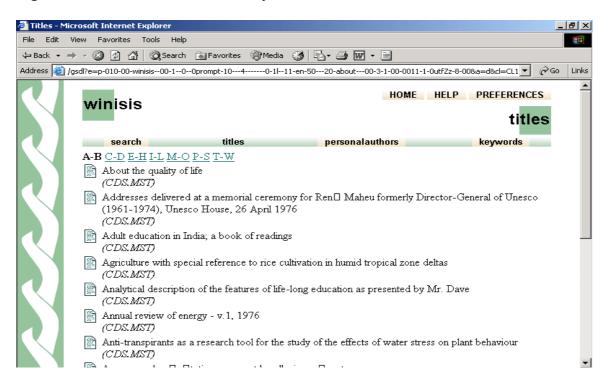
Click **OK** button when the building process is completed.

Click on the Preview Collection button to show the collection.



#### Figure 18 Home Page of the Demo Collection

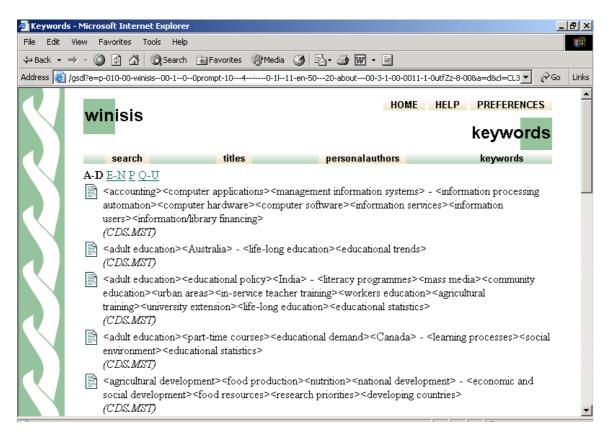
#### Figure 19 Browse the Collection by Title Classifier



- File Edit	View Favorites Tools Help				1
Þ Back 👻 🗉	→ - 🙆 🛃 🚮 🕅 🥘 Search 👔	Favorites 🛞 Media	3 B. J E		
ddress 🥘 j	/gsdl?e=d-010-00-winisis00-100pro	mpt-1040-1 -	-11-en-5020-about00-3-1-00-0	011-1-0utfZz-8-00&a=d&cl=CL2 💌 🔗 G	o Link
	winisis		ЮН		
				personalauthors	
7	search	titles	personalauthors	keywords	
	A-C <u>D-J K-O P-S T-Z</u>				_
	Abeywickrama, B.A. (CDS.MST)				
	Ahmad, Majeed (CDS.MST)				
	Ahmad, Nazir (CDS.MST)				
	Ahmad, Nazir (CDS.MST)				
	Anaya, Ricardo (CDS.MST)				
	Apter, David Ernest (CDS.MST)				
	Ayala, Francisco Jose				

#### Figure 20 Browse the Collection by Personal Authors Classifier

#### Figure 21 Browse the Collection by Keywords Classifier



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Adult education in India; a book of r le Edit View Favorites Tools F	eadings - Microsoft Internet Ex <del>Iel</del> p	plorer	<u>_</u>	B
= Back 👻 🤿 🗸 🔿 😨 Sea	rch 📓 Favorites 🛞 Media 🤮	) B- 3 🛛 - 3		
Idress 🧃0-1 11-en-5020-about-			51be7901d17974cs83 💌 🔗 Go	Lin
winisis		HOME	ELP PREFERENCES	
search	titles	personalauthors	keywords	
Adult education i DETACH NO HIGHLIGHTING	n India; a book of readi	ngs		
Title	Adult education in India; a b	ook of readings		
Imprint	Bombay , Nachiketa Publications, 1973			
Collation	532 p.			
Notes	Incl. bibl.			
Keywords	<adult education=""><educational policy=""><india> - <literacy programmes=""><mass media&gt;<community education=""><urban areas=""><in-service teacher="" training=""><workers education&gt;<agricultural training=""><university extension=""><life-long education&gt;<educational statistics=""></educational></life-long </university></agricultural></workers </in-service></urban></community></mass </literacy></india></educational></adult>			
Personal Authors	Bordia, Anil Kidd, James Robbins Draper, James A.			

Figure 22 Display of One Record in the Database

# 9. Converting the Collection in to a CD-ROM Library

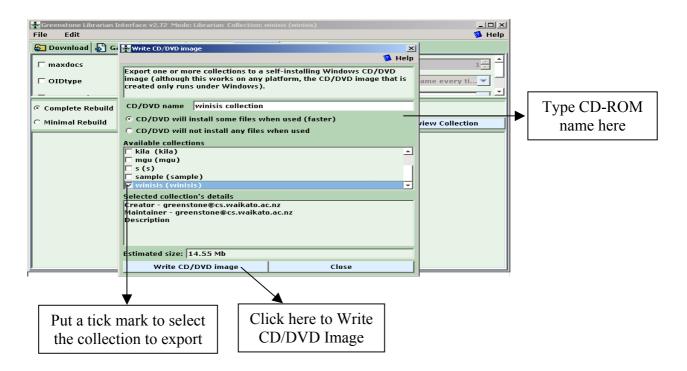
You can write the collection/collections to a CD-ROM, if you want to convert the Greenstone collection into an installable CD-ROM for distribution among wider audience.

Click on **File** ⇒ **Write CD/DVD image.....** 

Figure 23 Starting the Writing Process

New     Image: Design is Create is Format       Open     Save       Save     is Design is Create is Format       Close     is - Hash the contents of the file. Document identifiers will be the same every ti       Delete     is - Hash the contents of the file. Document identifiers will be the same every ti       Export     0%       File Associations     Build Collection     Cancel Build       Preferences     Exit	e Edit	ice v2.72 Mode: Librarian Collec	tion: winisis (winisis)	 🕲 He
Save     1       Close     ash - Hash the contents of the file. Document identifiers will be the same every ti       Delete     ash - Hash the contents of the file. Document identifiers will be the same every ti       Write CD/DVD image     0%       File Associations     0%       Preferences     Build Collection     Cancel Build		🗹 Enrich 🔅 Design 🔢	Create 🔅 Format	
Delete     ash - Hash the contents of the file. Document identifiers will be the same every ti       Export        Write CD/DVD image     0%       File Associations     Build Collection     Cancel Build       Preferences     Cancel Build     Preview Collection				1 -
Delete	Close		f the file Decument identifiers u	uill be the came every ti
Write CD/DVD image         0%           File Associations         Build Collection         Cancel Build         Preview Collection			in the me. Document luciturers w	be die suite every d
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Exit		Build Collection	Cancel Build	Preview Collection
	Exit			

A pop-up window will appear as follows:-



### Figure 24 Giving a Collection Name for CD-ROM

Provide a name for your CD-ROM (winisis collection), put a tick mark the check box pertaining to the collection and click **Write CD/DVD image** button.

Figure 25 l	Export completed	Read this and do wh	nat is said
File Edit Download maxdocs OIDtype C Complete F C Minimal Re	Arian Interface v2.72 Mode: Librarian Collection G Write CD/DVD image Export one or more collections to Export Complete The collections (winisis (winisis)) have Please review output below: exportcol.pl succeeded:The exported co Files\Greenstone\tmp\exported_winisi exportcol.pl succeeded:The caperted a self contents of this folder out to a CD-ROM. Command complete.	b a self-installing Windows CD/D been exported. bllections (winisis) are in C:\Prog scollection.	jram
	Description Estimated size: 14.55 Mb Write CD/DVD image	Close	

Then write the contents of the folder (C:\ProgramFiles\Greenstone\ tmp\exported\_Winisis) into a blank CD-ROM for creating self-installing Windows CD-ROM library.

#### References

- 1. Witten, Ian H and Brainbridge, David (2003) : *How to build a digital library*. Amsterdam, Morgan Kaufmann
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http://greenstonesupport.iimk.ac.in/Documents/CDS-ISIS\_to\_DL.pdf

7. Tutorial exercises on Greenstone at <u>http://greenstone.sourceforge.net/wiki/index.php/Tutorial\_exercises</u>

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