

Greenstone, an Implementation in Afghanistan

A Case Study of the AREU Collection,

by Graeme Foster

1 Abstract

This article summaries the process of implementing a Greenstone digital library in Afghanistan, the work was initiated in the summer of 2006 and completed early in 2007. The article looks at some of the decisions that were made and hopes to provide some assistance to anyone who is evaluating or looking to configure their own Greenstone collection.

2 Introduction

The Afghanistan Research and Evaluation Unit (AREU) is an independent research organisation based in Kabul. AREU's mission is to conduct high-quality research that informs and influences policy and practice. Since 2002, the Afghanistan Research and Evaluation Unit has maintained a library of Afghanistan-specific materials to support its own research. The collection currently has more than 6,500 catalogued items, primarily in English, Dari and Pashto as well as in other languages (French, German, Italian and Russian). The AREU library's main aim is not to compete with international collections, but rather to gather and preserve relevant materials available both within Afghanistan and abroad for use by national and international researchers.

The AREU digital catalogue is not a typical Greenstone collection it is not being used as a true digital library, in that items of the collection that have been digitised are not integrated into the collection. Rather the collection is a comprehensive bibliographic database of the library's holdings with links to the digitised data and where possible these links will be to the original material when it is available on the Internet (i.e. By citing of the URL).

However, despite the fact that the collection was not implementing the digital library features of Greenstone there were still compelling reasons for using Greenstone.

2.1 Why was Greenstone chosen?

The support and use of open standards is a contemporary battle cry and it is easy to get drawn into such a furore but it did have some pertinence with the AREU collection. Much of the information already existed on an existing database, however there was no support for the database it was fixed to a single client and the character set for the Arabic scripts was non-standard. These were all surmountable issues but it was clear that there was a danger of being locked into a proprietary standard.

One of the open standards that was identified early one as a *must support* was UNICODE. It has become the standard for the support of international scripts, and its adoption at the core level by operating systems and programming languages only confirms its dominance in this arena. The

AREU collection supports three languages, English and the two main Afghan languages of Pushto and Dari.

A second requirement of the collection was to be able to put the collection on the web so that scholars from around the globe can access the collection and where available immediately get their hands on the soft copy.

A third requirement was that the software must be easy to manage. The technical support staff were already overworked and so managing the new service should not add significantly to their workload. Obviously, this is a difficult parameter to access until the product is up and running and people are using it. Using it on a test machine looked as if it would be easy to manage and thankfully, when the product went live it ran smoothly and with very little demand on the technical staff.

A final requirement of the organisation was that backups were easy to create. The situation in Afghanistan is uncertain, it is experiencing a fine balance of normality after many years of instability, but this could deteriorate. Having a backup of all the data was considered a non-negotiable requirement. This was addressed in several ways. First the whole server up is mirrored and the library is physically backed up on a monthly basis. Secondly the whole digital library is hosted on a server outside of Afghanistan. The real feature that got people excited, and let's face it when talking about backups it is hard to get people excited, was Greenstone's ability to create a live CD of the collection. This would not only act as a backup but it could be made available to organisations who had no, or limited, access to the Internet, a all too common situation in Afghanistan.

From a technical perspective it was good that Greenstone was an open source product. This meant that if necessary the code could be changed to meet the specific needs of the collection. Such power is of course a double edged sword. Any change to the code to ensure that the specific requirements are met means that it breaks any upgrade path. So it's a feature that is great to have, but you just hope that you never need to use it. As it turned out it was needed but only in one small area requiring the change in a single file. This sort of change is acceptable and that fact that the collection was a huge deviation from a typical digital library is testament to the configurability of Greenstone. The fact that Greenstone is highly configurable meant that we were able to make the collection look the way we wanted it to look. However, it would only be fair to say that it was a feature that was not fully appreciated until after it had been configured!

3 The Structure of the Collection

3.1 Look of the collection

The general requirement was for the collection to reflect the professional image of the organisation that the web site has helped to enhance. For individual data items it was thought that the familiar library catalogue cards would be a model that users would be comfortable with. From a representation perspective only data that exists should be displayed, that is if a publication doesn't

have an author then it shouldn't display an Author title with a blank value.

Pain -- The unromantic carpet bazaar of Andkhoy / Adam... -- 2002?]


Call Number p381.09581 (1812) P144 [2002?] + PDF (38 KB) 	Author	Pain, Adam. Moharram Ali.
	Title	The unromantic carpet bazaar of Andkhoy / Adam Pain and Moharram Ali.
	Imprint	[Kabul : Afghanistan Research and Evaluation Unit, Save the Children (US), 2002?].
	Physical Description	4 p. ; 30 cm.
	Subject Headings	Rug and carpet industry -- Afghanistan -- Faryab (Province) -- Andhkoy. Bazaars (Markets) -- Afghanistan -- Faryab (Province) -- Andhkoy. Afghanistan -- Faryab (Province) -- Andhkoy -- Economic conditions.
	Accession Number	0735
	Language	English
	Copies	1
	Record Number	856

Illustration 1: A example of the catalogue card







Illustration 1 shows the headings, in English and the data of a sample catalogue card. It also shows the link to the soft copy of the document, in this case a word document of the text.

3.2 Indices and searching

There was a strong feeling that the elements that comprised the search indices should only come from the meta-data of the collection. The collection consists of several thousand items with a small proportion being available electronically. If the contents of those for which soft copies existed were indexed then the search results would be skewed in favour of this subset of documents.

The browse feature had great potential in assisting researchers find documents that they might not otherwise find and so browse categories were added for, the author, title, corporate body, subject headings and language.

As it turned out the browse categories proved to be an excellent way of validating the uniformity of the data. Inconsistencies in spelling, punctuation or letter-case of the meta-data were easily identified because they would generate an extra entry in the browse category. This turns out to be a quicker and more reliable method than checking each entry manually.

-  (2) Aarhus University. Moesgård Museum.
-  Abbasids.
-  `Abbas I, The Great, Shah of Iran, 1571-1629.
-  -Abd al Rahman Khan, Amir of Afghanistan, d. 1901.
-  -Abd al-Rahman Khan, Amir of Afghanistan, d. 1901.
-  Abd al-Rahmān Khān, Amir of Afghanistan, d. 1901.

As shown in Illustration 2 the browse categories can be used to identify inconsistencies in the data. The illustration shows three subject headings with almost identical value but because of slight variations in data entry, as shown with a red underline, they become separate entities. By browsing through all

Illustration 2: A selection of subject headings

the possible values it is easy to spot such issues with the existing data.

3.3 File structure

The catalogue cards are represented by a simple HTML file. It is this file that is displayed by Greenstone. Each HTML file is associated with an XML file that contains the meta-data that Greenstone will be using in its indexing. The details of the HTML file of Illustration 1 is given in the appendix and it can be seen that the html is laid out using extensive use of HTML tables. The style sheet referred to in this HTML is not used by Greenstone but by the Data Entry system described later.

Each HTML, XML file pair is placed in its own directory, whilst this helps to manage the data this was mainly done because Greenstone requires the meta data to have a specific file name, and for ease of managing this file it was decided to have one entry per meta-data file.

The directories of the catalogue cards were broken down into four language groups, Dari, Pushto, English and Misc. Technically English and Misc are interchangeable the others are distinct in that the titles for the catalogue card will be translated into the appropriate language. The translation of each catalogue card is managed by the Data Entry program, and a catalogue card is presented in the primary language of the text.

4 Data Entry

A small system was written to ease the data entry of each catalogue card and the editing of existing entries. This system would automatically generate the files for each system and it would include some validation of the data. It also allows for the simultaneous creation and editing of the catalogue cards. This system would run independent of Greenstone but would honour the file system that had been designed, this meant that it doesn't need to be hosted on a computer that supports Greenstone and it was easy to move it to a computer that had the Greenstone system, such as a backup server.

This system is still being developed and enhanced and it is planned to be released to the community under the GPL.

5 Configuring the collection

There are two broad areas of collection configuration these have been divided into collection description, and collection style.

5.1 Collection description

The file that describes the collection is the `collect.cfg` file and is located in the `etc` directory of the collection folder. This file is included in the Appendix.

For the purpose of this collection the important elements of this file is the meta-data that is used, the browse categories and what should be displayed in the search and browse results. Additionally this file includes the plug-ins that are used and the location of the icons that are to be used for this collection.

5.1.1 Meta-data, selecting, translating and using

Whilst the collection was being designed different meta-data sets were used in the end we decided to use the `rfc1807` collection, because it was the best fit for our requirements. It still meant that some fields were not quite right and so we wanted to change the name of some meta data items. Because this collection was introducing two new languages to Greenstone it was also necessary to add the translations for the meta data entities being used.

Adding a translation to a meta-data element turns out to be a trivial exercise. The following snippet shows the translation that were required for the author meta-data.

```
# meta data translation
collectionmeta .document:rfc1807.author [l=en] "Author"
collectionmeta .document:rfc1807.author [l=prs] "مؤلف"
collectionmeta .document:rfc1807.author [l=ps] "ليکوال"
```

For each meta-data element there are three translations one for each of the three languages that are supported by the collection. The `[l=en]` is language English, `[l=prs]` is for Dari, *Persian Southern*, and `[l=ps]` is for Pushto. For each of the meta-data elements that is being used a translation was provided and put into this file.

The main problem that was encountered with this process stems from the fact that we started with a different meta-data set. In fact we selected different elements from different meta-data sets, picking and choosing the element that appeared to be the most appropriate. As the development process progressed it was clear that this happy go lucky approach was going to be confusing at a later date and so we decided to select a single meta-data set and modify the elements when there wasn't an exact match, for example we use the `rfc1807.id` for the Accession Number, and `rfc1807.keywords` is really Subject Headings. A script was written to implement the agreed upon change in all the records and the collection was rebuilt. When the collection was viewed, sadness all around because, the old meta-data elements were still being used. The problem was obscured by the fact that the English translations were consistent and so at first it appeared as if it had picked up the change but not the new translations. However, once on the right track it was clear to see what was happening by looking at the output generated by the build. Some of the records still had the old meta-data. The conversion script had failed on a few records which was why they were still using the old meta-data. Once these records were fixed then the new meta-data was picked up and the browse buttons displayed their translated values, happiness restored.

5.1.2 Browse categories

When the browse categories were added it was clear that it was important to select the best way to display the data. This is still an area for debate and hasn't proved to be as popular as the search which, with the ascendancy of search engines on the Internet, has become a pervasive technique in the researcher's toolbox. The problem lies with the fact that much of the meta data is unique and so the results do not necessarily cluster well. The clear exception to that is the meta data language which is limited and an ideal candidate for the browse categories, unfortunately for the researchers it is not as useful as the other categories.

One of the difficulties that we faced was that some of the specific browses classifiers didn't work properly (or at all) with the mixed scripts that we were using so to overcome that we decided to classify them using the `GenericList` and then partition the result in blocks of 50. This provides a manageable browse list although it does lead to an excessively long list of classifiers along the top. This can be seen in Illustration 3 below

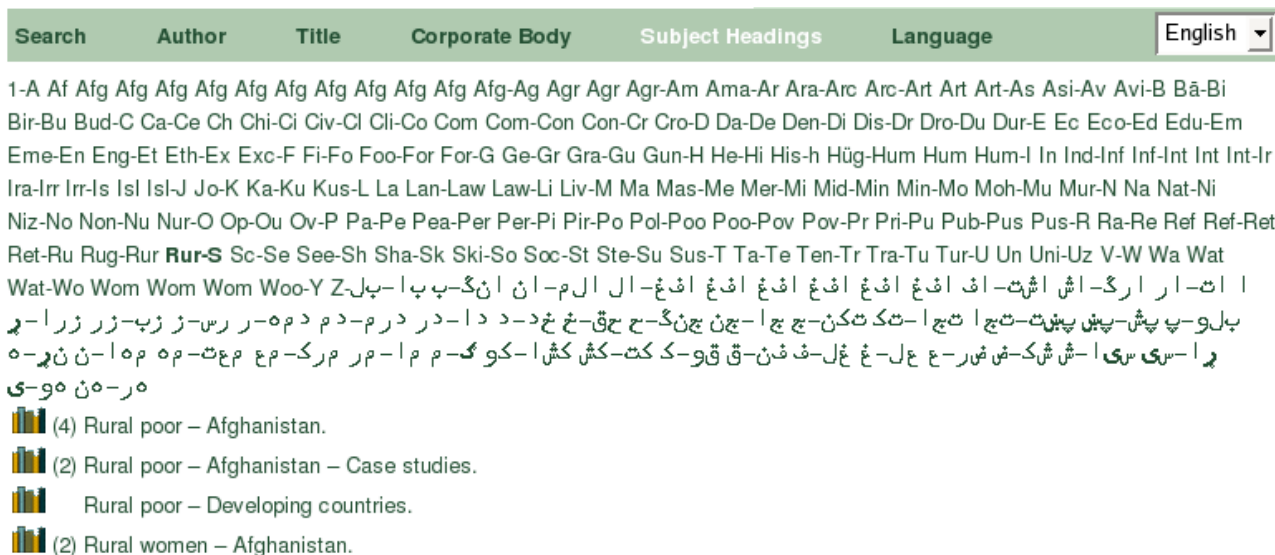


Illustration 3: The (rather long) list of Subject Heading Classifiers

Another problem is that when the script switches from the Roman to the Arabic script the direction of reading changes so (the left to right) Z is associated with the rightmost Arabic (right to left) character on the same line. That is, from Illustration 3 the Z and the ل are associated and not the Z and the ب characters. This abrupt change in presentation can be confusing and it would be better if the meta data in the Roman script and the Arabic script were further divided by a new line.

One feature that helped was to have the number of documents under each category. However since a large number of categories had a single document the value of including a number was diminished. So a slight modification of the format string was done so that the number of documents was displayed only if there is more than one document. This was done as follows:

```
{if}{[numleafdocs] gt 1, ([numleafdocs])}
```

This worked well for most browse categories, but there were some formatting problems with the title where a long title sometimes meant that the cell that contained this value wrapped to the next line, this meant that the browser would then maximise the space available for the title and wrap the bookshelf icon and the number of books onto two lines. The solution to ensure that this appeared on a single line came in the form of the *non-standard* html tag `<nobr>`.

```
format VList "<td valign=top><nobr>[link][icon][link]
{if}{[numleafdocs] gt 1, ([numleafdocs])}</nobr></td>
```

The rest of the format string was the standard entry for the title.

5.1.3 Search results

The search feature was identified as being the main interaction with the collection and it was

expected that researchers would feel comfortable with this so long as it mirrored the plain features of a typical Internet search site. This requires the indexes to be set up and to ensure that the search results were comprehensive and clear.

5.1.3.1 Indexes

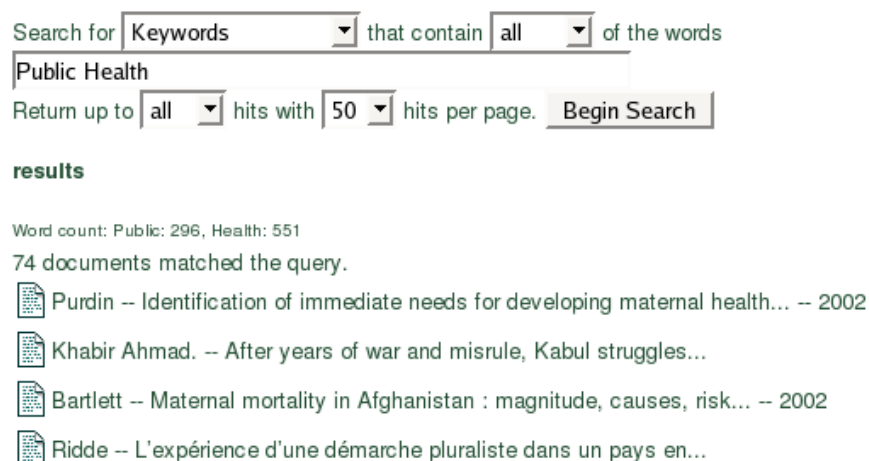
The indexes are set up within the `collect.cfg` file as follows:

```
indexes      document:text document:rft1807.author
             document:rft1807.title document:rft1807.keyword
             document:rft1807.series document:rft1807.id
```

This creates six indices that are automatically incorporated into the search feature.

5.1.3.2 Results

By using the defaults the search results are acceptable and provide a comfortable representation of the matches found.



The search box has been modified slightly to meet the specific needs that we had. We wanted to simplify the search process by removing the ability to change the search features in a separate preferences page and placing the most common search preferences on the search dialogue. The changes that were required are described later.

Illustration 4: Search Results

The results are displayed in a format that we were happy with and so this didn't require any changes.

5.2 Collection style

The primary requirement of the collection style was for it to mirror the organisations web site as closely as possible. This required extensive changes to the macros that define how a Greenstone collection is displayed and the addition of collection specific style sheets.

The most important constraint was that we didn't want to change the core Greenstone macros. Any changes to core macro files would lead the complications when upgrading and we had reached agreement that the collection would be hosted on the examples page of the Greenstone Digital Library www.greenstone.org/examples. Thankfully, whilst tempting it is not necessary, to change the core macros. Instead a collection specific macro can be created. The collection specific macro

should be called `extra.dm` and will reside in the `macros` directory of the collection.

5.2.1 Language Selection

The organisation's web site allows the user to select the language that they would like to view the web site in. This facility is available on any page that the user might be visiting. The languages are limited to English, Dari and Pushto. Whereas to select the language in Greenstone requires navigating to the Preferences page and then all the languages that are available to Greenstone are displayed. This didn't make sense in our context and so the `extra.dm` macro was changed, the complete changes can be seen in the appendix and appear at the start of this file.

The first important point with this piece of code is that we created some new macros. We decided that all new macros will be prefixed with the collection name, hence `_AREULang_` is a new macro which will hold the drop-down list of available languages. The macro itself is quite simple, it is repeated for each language, thus `_AREULang_ [l=prs] {}` is the macro defined for Dari. The macro defines an HTML selection box and depending upon the language the appropriate option is selected within the HTML. Hence when the Dari language has been selected the macro is as follows:

```
_AREULang_ [l=prs] {  
  <option value="prs" selected>  
    د رى  
  </option>  
  <option value="en">  
    English  
  </option>  
  <option value="ps">  
    پښتو  
  </option>  
}
```

Next comes two more collection specific macros. These are used to define cascading style classes that ensure that the drop-down box appears correctly in the rendered HTML page. These are `_AREULangCSS_` and `_AREUBarCSS_` and they just set up the name of CSS class that needs to be used. The drop-down list is created as follows, again in a collection specific macro.

```
_AREULangOptions_ {  
  <div class=_AREULangCSS_>  
    <form name="PrefForm" method="get" action="/gsdl/cgi-bin/library">  
      <select name="l" onchange="update1();">  
        _AREULang_  
      </select>  
    </form>  
  </div>  
}
```

The drop-down list is placed in a form, this is an existing form used by the preference page and a `javascript` macro is triggered if a new element is selected, `onchange`. The form is then wrapped in a division tag, which allows the CSS class to be applied to the whole list. In the case of Dari, the style class will be as follows:

```
span.langrtl  
{
```



```

background-color: #b0cab0;
float: left;
margin-top: -22px;
margin-left: 5px;
}

```

This only differs from the style class used for the English drop-down in that the float directive is left, on the English version the float is to the right.

Finally the language selection box needs to be placed on the page. That is done by using the existing macro `_optnavigationbar_` which defines the navigation bar that appears on every page.

```

_optnavigationbar_{
<div class="navbar">
  <div class="_AREUBarCSS_">
    _navigationbar_
  </div>
  _AREULangOptions_
</div>
}

```

This places the `_navigationbar_` macro and our new `_AREULangOptions_` macro into a couple of HTML division tags which are formatted using CSS classes, `navbar` and the language specific class, which for Dari will be `barrtl`. The final rendering of the navigation bar can be seen in Illustration 6.

There is just one last area to cover. In Greenstone the macros are broken down into packages and since this uses a Greenstone macro, `_optnavigationbar_` it is important to define it in the correct macro. This can be done by finding where the macro is originally defined, unfortunately this is a task of scouring the macro files. The `nav_css.dm` defines this macro and from this file it is clear that the macro belongs to the Global package, this means that in the `extra.dm` file the line `package global` should appear before these definitions.

5.2.2 Query

The default simple query that Greenstone generates has two drop down-list that allow the user to select what part of the document gets searched, and how the words are incorporated into the search, which is either all of the words or some of the words. Finally, of course, there is the text entry area and a search button. Very simple and efficient, however because we are blocking access to the preferences page the query area requires a little more, as shown in Illustration 4 Search Results. We have added two drop-down menus from the preferences page. These allow the user to select how many items are returned in the entire search and how many are returned on each page. This is done with the following code added to the `extra.dm` file.

```

_smallquerybox_
{
  <br /><input type="text" name="q" value="_cgiargq_" size="50"><br />
  _preferences:textprefop_
  <input type="submit" value="_textbeginsearch_">
}

```

The original `_smallquerybox_` is defined in the `query.dm` file and belongs to the query package. It

has the text box and the button on the same line. This is slightly modified by having the text box then on a new line the two new drop-down list followed by the search button. The two drop-down lists are defined in the `_textprefop_` macro, however this macro is defined in a different package, the preferences package, it is used in `pref.dm`, and so this can be inserted using the syntax, `_package:macro_` as follows, `_preferences:textprefop_`

We wanted to set the default values so that from over the LAN the maximum results were returned whilst over the Internet the number of results returned per page were limited. This is done by initially passing the values in through the URL. The value of the number of item returned is held in the variable called `m`, whilst the number returned per page is held in the variable called `o`, so the URL to the collection is modified with the following appended to it, `&m=-1&o=50`.

5.2.3 About Page

We are using the about page as the front page to the collection from the web site and it needed to be significantly modified so that it closely mirrored the look of the organisations web site. The organisations web page is shown in Illustration 5 and the about page is shown in Illustration 6.



Illustration 5: The Organisation's web page

As can be seen there is a clear distinction between the two but there is also a familiar theme running through the two sites. The difference is just to emphasis that the user has moved to a different site but it is important to keep the look so that organisational image is maintained, and emphasised.



Illustration 6: The About Page

The Greenstone page is built up in parts using macros to define each part of the page. To achieve our aims of the page layout we rewrote the header and footer sections.

5.2.3.1 Header

The header sections before and after the rewrite can be seen in the following table. Both versions have a *banner* section whilst the original version has an additional *bannerextra* section. In the revised version the *bannerextra* section is incorporated within the banner section, this is because we don't need the flexibility of the original version.



Illustration 7: The Heading section of each Greenstone page

As can be seen this macro uses three other macros, `_imagecollection_`, `_pagebannerextra_` and `_AREUHome_`. The location of these are shown in Illustration 7.

Original version in <code>style.dm</code>	Modified version in <code>extra.dm</code>
<pre> _pagebanner_ { <!-- page banner (_style:pagebanner\) --> <div id="banner"> <div class="pageinfo"> <p class="bannerlinks">_globallinks_</p> _bannertitle_ </div> <div class="collectimage"> _imagecollection_ </div> </div> <div class="bannerextra"> _pagebannerextra_ </div> <!-- end of page banner --> } </pre>	<pre> _pagebanner_ { <div id="banner"> <div class="collectimage"> _imagecollection_ _pagebannerextra_ _AREUHome_ </div> </div> <!-- end of page banner --> } </pre>

The details of these three macros is shown later. This leaves the navigation bar which is defined as follows:

Original version in <code>nav_css.dm</code>	Modified version in <code>extra.dm</code>
<pre> _optnavigationbar_{ <div class="navbar"> <p class="navbar"> _navigationbar_ </p> </div> </pre>	<pre> _optnavigationbar_{ <div class="navbar"> <div class="_AREUBarCSS_"> _navigationbar_ </div> _AREULangOptions_ </pre>

}	</div>
	}

The original version wrapped the navigationbar in a paragraph which seemed to complicate the layout of the navigation bar and the language options, so the revised version used HTML divisions to separate them, this is covered in greater detail in the earlier section on the Language Selection.

5.2.3.2 Footer

The footer of each page is as follows:

© 2007 Afghanistan Research and Evaluation Unit

This is set up by redefining the footer macro as shown below:

```

_footer_ {
_pagefooterextra_
</div>
<div class="footer">
  <hr width=600px color=#234F33>
  _AREUFullName1_
  <script language="javascript" type="text/javascript">
    var curdate = new Date()
    var year = curdate.getFullYear()
    document.write("&copy; " + year)
  </script>
  _AREUFullName2_
</div>
}

```

This defines a simple javascript macro to garner and then print out the current year, with a copyright symbol. The organisational name is either set up in the macro `_AREUFullName1_` or `_AREUFullName2_`, depending upon whether the name should appear before or after the date, depending upon the language used, as shown below.

```

_AREUFullName1_ {}
_AREUFullName2_ {Afghanistan Research and Evaluation Unit}
_AREUFullName1_ [l=ps] {د افغانستان د کښورنۍ او اړخونې ادارې}
_AREUFullName2_ [l=ps] {}

```

5.2.3.3 Details

The image icon includes both the logo and the text, this ensures that the text appears in the correct font and is correctly positioned across all browsers, on all systems and most importantly in all three languages. Each logo has been translated and stored in a folder related to the language. The logo is set up in the `collect.cfg` file and is done as follows:

```

# Location of Collection Icons
collectionmeta iconcollectionsmall [l=en] "_httpprefix_/collect/areu/images/en/areusm.png"
collectionmeta iconcollection [l=en] "_httpprefix_/collect/areu/images/en/areu.png"

collectionmeta iconcollectionsmall [l=prs] "_httpprefix_/collect/areu/images/prs/areusm.png"
collectionmeta iconcollection [l=prs] "_httpprefix_/collect/areu/images/prs/areu.png"

collectionmeta iconcollectionsmall [l=ps] "_httpprefix_/collect/areu/images/ps/areusm.png"
collectionmeta iconcollection [l=ps] "_httpprefix_/collect/areu/images/ps/areu.png"

```

This sets up the macro called `_iconcollection_` and this is set up to proper HTML in the `base.dm`

file in the macro called `_imagecollection_`, which is then used by the `_pagebanner_` macro, as shown in the section called Header, above.

```

_imagecollection_
{
  _If_("_iconcollection_" ne ""
  '
    <a href="_httppageabout_">
      
    </a>
  '
  _imagecollectionv_
  )
}

```

The `_pagebannerextra_` macro very simply sets up the organisation name and has been set up as follows:

```

_pagebannerextra_ {<span class="titleltr">AREU Library Catalogue</span>}
_pagebannerextra_ [l=prs] {<span class="titlertl">ردوه بندي كتابخانه AREU</span>}
_pagebannerextra_ [l=ps] {<span class="titlertl">ردوه بندي د کتابتون AREU</span>}

```

The `_AREUHome_` macro is a link to the organisations website, it ensures that it is consistent in the language that is displayed, that is if in Greenstone it is currently displaying Dari then the web site link will display the Dari version of the web site. It has been set up as follows:

```

_AREUText_ {AREU website}
_AREUText_ [l=prs] {وېب سايټ AREU}
_AREUText_ [l=ps] {وېب پاڼه AREU د}

_AREUDiv_ {titlertl}
_AREUDiv_ [l=prs] {titleltr}
_AREUDiv_ [l=ps] {titleltr}

_AREULang_ {&lang=en}
_AREULang_ [l=prs] {&lang=prs}
_AREULang_ [l=ps] {&lang=ps}

_AREUHome_ {<span class="_AREUDiv_"><a
href="http://www.areu.org.af/index.php?option=com_content&task=view&
id=11&Itemid=15_AREULang_">_AREUText_</a></span>}

```

5.2.4 Display Details

The details of each record is laid out as shown in Illustration 8, the intended impression is for it to have look of a classical catalogue card. The screen will display the details in the language of the text, hence if the text is available in English then the details will be written up in English, conversely if the text is published in Dari then the details will be presented in Dari. This ensures that the researcher can search in their own language and find texts that will interest them. However, it was also agreed that it would be useful for international researcher to know what is available in the local languages, to assist with this notes can be added to provide a summary in English of Dari

and Pushto texts.

All of the details that appear are created and managed by the separate program mentioned in section 4 that enables multiple librarians to manage the data simultaneously.

no highlighting detach

Schütte -- Emerging trends in urban livelihoods / Stefan Schütte. -- 2005

Call Number p338.958 S396 2005 + PDF	Author	Schütte, Stefan.
	Title	Emerging trends in urban livelihoods / Stefan Schütte.
	Imprint	Kabul : Afghanistan Research and Evaluation Unit (AREU), 2005.
	Physical Description	23 p. ; 30 cm.
	Series	(Working paper series).
	Notes	"August 2005".
	Subject Headings	Poverty research -- Afghanistan. Urban poor -- Afghanistan. Afghanistan -- Economic conditions. Afghanistan -- Social conditions.
	Accession Number	3312, 3313
	Language	English
	Record Number	3053

Illustration 8: Details of a catalogue entry

6 Burning CD's and back-ups

When we started work on this collection access to the Internet in Afghanistan was limited and so it was important to be able to use other mechanisms to distribute the collection. This is where the ability to export the collection to a CD or DVD was very attractive. By the time that this was tested we had already made some design decisions which meant that this process didn't completely work. Essentially we had a couple of directories that were holding collection data but were not standard Greenstone directories and so these were not picked up by the export process. One directory was called `styles` where the css sheets were stored, further investigation showed that the Greenstone standard was to hold the style sheets in the `images` directory. The other directory held the uploaded documents that were not being integrated into the Greenstone indexing process and they were stored in a separate directory at the collection level called `Upload`.

This required a change to the `exportcol.pl` file. It needed to be modified in three separate areas, thankfully though the changes were relatively simple. The first change was to be used when when saving the collection on the CD, for the links to work in the documents that were part of the collection it is necessary to mirror the file structure from the `gsdl` directory. This meant that an extra directory was required, `gsdl/collect`. This code, shown below, creates the directory and a variable, `$colgsdldir`, that can refer to this directory.

```
my $collectdir = &util::filename_cat ($gsdldir, "collect");  
# A fix for AREU & ACKU collections *** Graeme April 2007  
my $colgsdldir = &util::filename_cat ($gsdldir, "gsdl", "collect");  
&util::mk_all_dir ($colgsdldir);  
# End of a fix for AREU & ACKU collections *** Graeme April 2007
```

The next change determines the data that needs to be copied from the collection onto the CD. As already stated there are two extra directories that need to be added to the CD, styles and Upload, which are both held at the root level of the `collect` directory.

```
#old directories
my $colldir = &util::filename_cat ($ENV{'GSDLHOME'}, "collect", $c);
my $colindexdir = &util::filename_cat ($colldir, "index");
my $coletcdir = &util::filename_cat ($colldir, "etc");
my $colimagesdir = &util::filename_cat ($colldir, "images");
my $colmacrosdir = &util::filename_cat ($colldir, "macros");
# new coll directory
my $newcolldir = &util::filename_cat ($colldir, $c);
# A fix for AREU & ACKU collections *** Graeme April 2007
my $colstyledir = &util::filename_cat ($colldir, "styles");
my $coluploaddir = &util::filename_cat ($colldir, "Upload");
my $coltargetuploaddir = &util::filename_cat ($colgsdlldir, $c);
&util::mk_all_dir ($coltargetuploaddir);
# End of a fix for AREU & ACKU collections *** Graeme April 2007
```

The final addition of code copies the contents of the style and Upload directories onto the CD.

```
&util::mk_all_dir ($newcolldir);
&util::cp_r ($colindexdir, $newcolldir);
&util::cp_r ($coletcdir, $newcolldir);
&util::cp_r ($colimagesdir, $newcolldir) if (-e $colimagesdir);
&util::cp_r ($colmacrosdir, $newcolldir) if (-e $colmacrosdir);
# A fix for AREU & ACKU collections *** Graeme April 2007
&util::cp_r ($colstyledir, $newcolldir) if (-e $colstyledir);
&util::cp_r ($coluploaddir, $coltargetuploaddir) if (-e
$coluploaddir);
# End of a fix for AREU & ACKU collections *** Graeme April 2007
```

Despite having limited Perl experience testing showed that these changes worked and now we have the means to making the collection available throughout Afghanistan.

7 Conclusion

The aim of the AREU library, *to gather and preserve relevant materials available both within Afghanistan and abroad for use by national and international researchers*, has been enhanced by its adoption of Greenstone. It is a testament to this open source project that we were successfully able to adapt it to our specific needs and to maintain the integrity of the organisation's image.

The data entry system that was developed for this implementation of Greenstone is a work in progress and will be released to the community. With the conversion of the AREU catalogue to Greenstone, it has made the diversity of Afghan works accessible to everyone.

8 Appendix

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8.1 collect.cfg

```
creator          foster.graeme@gmail.com
maintainer       foster.graeme@gmail.com
public           true

buildtype        mg

beta             false

indexes          document:text document:rfc1807.author document:rfc1807.title
document:rfc1807.keyword document:rfc1807.series document:rfc1807.id

indexoptions     casefold stem

#levels          document

#defaultlevel    document

defaultindex     document:text

plugin           GAPlug
plugin           HTMLPlug -metadata_fields Title -nolinks
plugin           MetadataXMLPlug
plugin           ArcPlug
plugin           RecPlug

classify         GenericList -metadata rfc1807.author -always_bookshelf_last_level
-sort_leaf_nodes_using rfc1807.title -partition_type_within_level constant_size
-partition_size_within_level 50 -sort_using_unicode_collation
classify         GenericList -metadata rfc1807.title -always_bookshelf_last_level
-partition_type_within_level constant_size -partition_size_within_level 50
-sort_using_unicode_collation
classify         GenericList -metadata rfc1807.corp-author
-always_bookshelf_last_level -sort_leaf_nodes_using rfc1807.title
-partition_type_within_level constant_size -partition_size_within_level 50
```



```

-sort_using_unicode_collation
classify GenericList -metadata rfc1807.keyword -always_bookshelf_last_level
-sort_leaf_nodes_using rfc1807.title -partition_type_within_level constant_size
-partition_size_within_level 50 -sort_using_unicode_collation
classify Hierarchy -metadata rfc1807.language

format SearchVList "<td
valign=top>[link][icon][link]</td><td>{If}{[parent(All\':
\'):Title],[parent(All\': \'):Title]:}[link][Title][link]</td>"
format VList "<td valign=top><nobr>[link][icon][link]{if}{[numleafdocs] gt 1,
([numleafdocs])}</nobr></td><td
valign=top>[highlight]{Or}{[Title],Untitled}[highlight]<i><small>{If}{[Date],<b
r>_textdate_[Date]}{If}{[NumPages],<br>_textnumpages_[NumPages]}{If}{[Source],<b
r>_textsource_[Source]}</small></i></td>"

format DocumentText "<h3>[Title]</h3>\\n\\n<p>[Text]"
format DocumentImages true

format DateList
"<td>[link][icon][link]</td><td>[highlight]{Or}{[dls.Title],[dc.Title],[Title],
Untitled}[highlight]</td><td>[Date]</td>"

format HList "[link][highlight][Title][highlight][link]"

format DocumentHeading "{Or}{[parent(Top):Title],[Title],untitled}"

format DocumentButtons "Detach|Highlight"

# Location of Collection Icons
collectionmeta iconcollectionsmall [l=en]
"_httpprefix_/collect/areu/images/en/areusm.png"
collectionmeta iconcollection [l=en]
"_httpprefix_/collect/areu/images/en/areu.png"

collectionmeta iconcollectionsmall [l=prs]
"_httpprefix_/collect/areu/images/prs/areusm.png"
collectionmeta iconcollection [l=prs]
"_httpprefix_/collect/areu/images/prs/areu.png"

collectionmeta iconcollectionsmall [l=ps]
"_httpprefix_/collect/areu/images/ps/areusm.png"
collectionmeta iconcollection [l=ps]
"_httpprefix_/collect/areu/images/ps/areu.png"

collectionmeta collectionname [l=en] "AREU Library Catalogue"

collectionmeta .document:text [l=en] "Keywords"
collectionmeta .document:text [l=prs] "کلمات کلیدی"
collectionmeta .document:text [l=ps] "دېپلېټې ټکړې"

# Browse Categories translation
collectionmeta .document:rfc1807.author [l=en] "Author"
collectionmeta .document:rfc1807.author [l=prs] "مؤلف"
collectionmeta .document:rfc1807.author [l=ps] "ليکوال"

collectionmeta .document:rfc1807.title [l=en] "Title"

```

```

collectionmeta .document:rfdc1807.title [l=prs] "عنوان"
collectionmeta .document:rfdc1807.title [l=ps] "سرليک"

collectionmeta .document:rfdc1807.keyword [l=en] "Subject Headings"
collectionmeta .document:rfdc1807.keyword [l=prs] "سرکنوان موضوعي"
collectionmeta .document:rfdc1807.keyword [l=ps] "فرعي سرليکونه"

collectionmeta .document:rfdc1807.series [l=en] "Series"
collectionmeta .document:rfdc1807.series [l=prs] "سلسله"
collectionmeta .document:rfdc1807.series [l=ps] "سلسله"

collectionmeta .document:rfdc1807.id [l=en] "Accession Number"
collectionmeta .document:rfdc1807.id [l=prs] "نومبره مسلسل"
collectionmeta .document:rfdc1807.id [l=ps] "پرله پيسې شميره"

collectionmeta .document:rfdc1807.corp-author [l=en] "Corporate Body"
collectionmeta .document:rfdc1807.corp-author [l=prs] "شخص حقيقي"
collectionmeta .document:rfdc1807.corp-author [l=ps] "حقيقي شخصيت"
collectionmeta .document [l=en] "document"

receptionist "_gwsgi_?a=p&p=about&c=areu&m=-1&o=20"

```

8.2 extra.dm

```

#####
#### package Global #####
#####
package Global
_bannertitle_{

_navbarspacer_
{
  <span style="margin-left: _widthtspace_px;">&nbsp;</span>
}

_AREULang_ [l=prs] {
  <option value="prs" selected>
د ري
  </option>
  <option value="en">
English
  </option>
  <option value="ps">
پښتو
  </option>
}

_AREULang_ {
  <option value="prs">
د ري
  </option>
  <option value="en" selected>
English
  </option>
  <option value="ps">
پښتو
  </option>
}

```

```

_AREULang_ [l=ps] {
  <option value="prs">
دړی
  </option>
  <option value="en">
English
  </option>
  <option value="ps" selected>
پښتو
  </option>
}

_AREULangCSS_ [l=prs] {langrtl}
_AREULangCSS_ [l=ps] {langrtl}
_AREULangCSS_ {langltr}

_AREUBarCSS_ [l=prs] {barrtl}
_AREUBarCSS_ [l=ps] {barrtl}
_AREUBarCSS_ {barltr}

_AREULangOptions_ {
<div class=_AREULangCSS_>
  <form name="PrefForm" method="get" action="/gsdl/cgi-bin/library">
  <select name="l" onchange="update1();">
    _AREULang_
  </select>
</form>
</div>
}

_optnavigationbar_{
<div class="navbar">
  <div class="_AREUBarCSS_">
    _navigationbar_
  </div>
  _AREULangOptions_
</div>
}

_labeltitle_ [l=en] {Title} # Updated 14-Mar-2007 by graeme
_labeltitle_ [l=prs] {عنوان} # Updated 14-Mar-2007 by graeme
_labeltitle_ [l=ps] {سرليډ} # Updated 14-Mar-2007 by graeme
_texttitle_ [l=en] {Title} # Updated 14-Mar-2007 by graeme
_texttitle_ [l=prs] {عنوان} # Updated 14-Mar-2007 by graeme
_texttitle_ [l=ps] {سرليډ} # Updated 14-Mar-2007 by graeme

_labelauthor_ [l=en] {Author} # Updated 14-Mar-2007 by graeme
_labelauthor_ [l=prs] {مؤلف} # Updated 14-Mar-2007 by graeme
_labelauthor_ [l=ps] {ليکوال} # Updated 14-Mar-2007 by graeme
_textauthor_ [l=en] {Author} # Updated 14-Mar-2007 by graeme
_textauthor_ [l=prs] {مؤلف} # Updated 14-Mar-2007 by graeme
_textauthor_ [l=ps] {ليکوال} # Updated 14-Mar-2007 by graeme

_labelcorp-author_ [l=en] {Corporate Body} # Updated 14-Mar-2007 by graeme
_labelcorp-author_ [l=prs] {شخص حقوقی} # Updated 14-Mar-2007 by graeme
_labelcorp-author_ [l=ps] {حقوقی شخصیت} # Updated 14-Mar-2007 by graeme
_textcorp-author_ [l=en] {Corporate Body} # Updated 14-Mar-2007 by graeme
_textcorp-author_ [l=prs] {شخص حقوقی} # Updated 14-Mar-2007 by graeme
_textcorp-author_ [l=ps] {حقوقی شخصیت} # Updated 14-Mar-2007 by graeme

_labelkeyword_ [l=en] {Subject Headings} # Updated 14-Mar-2007 by graeme
_labelkeyword_ [l=prs] {سریعنوان موضوعی} # Updated 14-Mar-2007 by graeme

```

```

_labelkeyword_ [l=ps] {فرغی سرلیکونه} # Updated 14-Mar-2007 by graeme
_textkeyword_ [l=en] {Subject Headings} # Updated 14-Mar-2007 by graeme
_textkeyword_ [l=prs] {سر عنوان موضوعی} # Updated 14-Mar-2007 by graeme
_textkeyword_ [l=ps] {فرغی سرلیکونه} # Updated 14-Mar-2007 by graeme

_labellanguage_ [l=en] {Language} # Updated 14-Mar-2007 by graeme
_labellanguage_ [l=prs] {لسان} # Updated 14-Mar-2007 by graeme
_labellanguage_ [l=ps] {زبه} # Updated 14-Mar-2007 by graeme
_textlanguage_ [l=en] {Language} # Updated 14-Mar-2007 by graeme
_textlanguage_ [l=prs] {لسان} # Updated 14-Mar-2007 by graeme
_textlanguage_ [l=ps] {زبه} # Updated 14-Mar-2007 by graeme

#####
#### package about #####
#####
_AREUEmail_ {<a href="mailto:library@areu.org.af">library@areu.org.af</a>}
_AREUAboutText_ {This on-line bibliographic catalogue lists materials held in hardcopy in
AREU's research library in Kabul, Afghanistan. AREU's collection includes books,
pamphlets, government publications, periodicals, maps, CDs, DVDs, etc. in English, Dari,
Pashto and other languages. When we know these materials are available for download on
the internet we provide a URL link in the bibliographic record. Some important materials
not available elsewhere are made available here for download. _Global:collectionextra_ If
you see any entries that need correcting or find that URLs no longer work please
email:_AREUEmail_.}
_AREUAboutText_ [l=prs] {
در کتابخانه واحد تحقیق و ارزیابی افغانستان که در کابل، افغانستان موقعیت دارد، همه موادیکه به شکل کتاب، رساله، نشرات دولتی، نشرات
مسلسل، نقشه ها، سی دی وی دی، و غیره که به لسانهای دری، پشتو، انگیلیسی و غیره به نشر رسیده است، لست رده بندی آنها در
این ویب سایت موجود میباشد. وقتیکه میدانیم که این مواد در ویب سایت برای داوون لود نمودن موجود است پس ما برای بدست آوردن
تهیه نمودیم. و بعضی مواد مهم ایکه از جاهای دیگر بدست آورده نمیتوانیم برای داوون لود نمودن در اینجا جا بجا URL آنها یک رابطه
کرده ایم.
_Global:collectionextra_
کار نمی کند لطفا به این آدرس ایمیل بفرستید URL اگر در یکی از ریکارد ها کدام غلطی باشد و یا رابطه
_AREUEmail_
}
_AREUAboutText_ [l=ps] {
د افغانستان دځیرنی اوارځونی د ادارې په کتابتون کې چې په کابل، افغانستان کې موقعیت لري، ټول هغه مواد لکه کتابونه، رسالې، دولتي
ځیروني، نوبتي ځیروني، نخشې، سي ډي، وي ډي، او داسې نور چې په پشتو، دري، انگرېزي او نورو ژبو خپاره شوي دهغوی
د کتابداري رده بندی پدې ویب پایه کې لیدلای شوی. کله چې مونږ پوهیږو چې دمواد دپورته کولو لپاره په ویب پایه کې موجود دی،
ایرېکه په رده بندی کې جوړه کړی ده ترڅو همافه سند وویښی. او ځینې مهم مواد چې دبل ځای څخه URL نودهغوی لپاره مو پوه د
ششې ترلاسه کېدای، مونږ دپورته کولو لپاره دلته ځای په ځای کړی دی.
_Global:collectionextra_
ایرېکه کار ونکړی مهرباني وکړی پدې پته بریښنالیک راواستوی URL که تاسو په کوم ریکارد کې کومه غلطی وویښی، او یا د
_AREUEmail_
}
package about
_bannertitle_{}
_textabout_ {
<div class="section">
<h3>_textabcol_</h3>
_AREUAboutText_</div>
}
#####
#### package query #####
#####
package query
_bannertitle_{}
_smallquerybox_
{

```

```

<br /><input type="text" name="q" value="_cgiargq_" size="50"><br />
_preferences:textprefop_
<input type="submit" value="_textbeginsearch_">
}

#####
#### package preferences #####
#####
package preferences
_bannertitle_{

#####
#### package Style #####
#####
package Style

_globalscripts_
{
  <script language="javascript" type="text/javascript">
    _If(_pagescriptextra_,_pagescriptextra_)
    _preferences:pagescriptextra_
  </script>
}

_AREUFullName1_ {}
_AREUFullName2_ {Afghanistan Research and Evaluation Unit}
_AREUFullName1_ [l=ps] {پښتو ښارونو ادارې}
_AREUFullName2_ [l=ps] {}

_footer_ {
_pagefooterextra_
</div>
<div class="footer">
  <hr width=600px color=#234F33>
  _AREUFullName1_
  <script language="javascript" type="text/javascript">
    var curdate = new Date()
    var year = curdate.getFullYear()
    document.write("&copy; " + year)
  </script>
  _AREUFullName2_
</div>
}

_AREUcss_
{
<link rel="stylesheet" href="_httpcollection_/styles/areu.en.css"
type="text/css" charset="UTF-8" media="screen">
}
_AREUcss_ [l=prs]
{<link rel="stylesheet" href="_httpcollection_/styles/areu.prs.css"
type="text/css" charset="UTF-8" media="screen">
}
_AREUcss_ [l=ps]
{<link rel="stylesheet" href="_httpcollection_/styles/areu.ps.css"
type="text/css" charset="UTF-8" media="screen">
}

_csslink_
{
_AREUcss_

```

```

<link rel="stylesheet" href="_httpcollection_/styles/areu.css"
type="text/css" charset="UTF-8" media="screen">
}

_cssfilelink_
{
<style type="text/css">
div.pageinfo \{ background-image: url("_httpcollection_/images/en/back_all.png");\}
div.collectimage \{ background-image: url("_httpcollection_/images/en/back_all.png");\}
</style>
}

_cssfilelink_ [l=prs]
{
<style type="text/css">
div.pageinfo \{ background-image: url("_httpcollection_/images/prs/back_all.png");\}
div.collectimage \{ background-image: url("_httpcollection_/images/prs/back_all.png");\}
</style>
}

_cssfilelink_ [l=ps]
{
<style type="text/css">
div.pageinfo \{ background-image: url("_httpcollection_/images/ps/back_all.png");\}
div.collectimage \{ background-image: url("_httpcollection_/images/ps/back_all.png");\}
</style>
}

_cssheader_
{
_csslink_
_cssfilelink_
}

_AREUText_ {AREU website}
_AREUText_ [l=prs] {وب سايت AREU}
_AREUText_ [l=ps] {وب پاڼه AREU}

_AREUDiv_ {titlertl}
_AREUDiv_ [l=prs] {titleltr}
_AREUDiv_ [l=ps] {titleltr}

_AREULang_ {&lang=en}
_AREULang_ [l=prs] {&lang=prs}
_AREULang_ [l=ps] {&lang=ps}

_AREUHome_ {<span class="_AREUDiv_"><a
href="http://www.areu.org.af/index.php?option=com_content&task=view&id=11&Itemid=15_AREULang_">_AREUText_</a></span>}

_pagebanner_ {
<div id="banner">
<div class="collectimage">
_imagecollection_
_pagebannerextra_
_AREUHome_
</div>
</div>
<div class="bannerextra">
</div>
<!-- end of page banner -->

```

```

}

_pagebannerextra_ {<span class="titleltr">AREU Library Catalogue</span>}
_pagebannerextra_ [l=prs] {<span class="titlertl">ردۀ بندي کتابخانه AREU</span>}
_pagebannerextra_ [l=ps] {<span class="titlertl">د کتابتون رده بندي AREU</span>}

#####
#### package document #####
#####
package document
_globallinks_{

_textheader_ {
_cgihead_
_htmlhead_
<div id="page">
<div id="banner">
  <div class="collectimage">
    _imagecollection_
    _pagebannerextra_
    _Style:AREUHome_
  </div>
</div>
  <div class="bannerextra">
  </div>
<!-- end of page banner -->
}

```

8.3 areu.css

```

/* default stylesheet for greenstone. */

#page {
  width:770px;
  margin-left:auto;
  margin-right:auto;
}

#banner {
  margin: 0;
  padding:0;
  width: 100%;
}

/* this div contains the bannerlinks and bannertitle paragraphs */
div.pageinfo {
  float: right;
  text-align: right;
  padding: 0;
  margin:0;
  width: 100%;
}

/* home, help, preferences links */
p.bannerlinks {
  margin:0;
  padding:0;
}

```

```

span.titleltr
{
  padding: 0;
  margin:0;
  font-size: 30px;
  float: left;
  text-align: bottom;
}

span.titlertl
{
  padding: 0;
  margin:0;
  font-size: 30px;
  float: right;
  text-align: bottom;
}

span.titleltr a
{
  font-size: 20px;
}

span.titlertl a
{
  font-size: 20px;
}

/* make sure this is shown under the other divs (which may be floating) */
div.bannerextra
{
  clear: both;
}

/* the image for the collection, shown in the banner */
div.collectimage {
  float: left;
  padding:0;
  margin:0;
  border:0;
}

img
{
  padding:0;
  margin:0;
  border: 0;
}

span.langltr
{
  background-color: #b0cab0;
}

```



```

    float: right;
    margin-top: -22px;
    margin-right: 5px;
}

span.langrtl
{
    background-color: #b0cab0;
    float: left;
    margin-top: -22px;
    margin-left: 5px;
}

/* bg image set in style macro */
div.navbar {
    background-color: #b0cab0;
    width: 770px;
    white-space: nowrap;
    font-weight: bold;
    text-transform: capitalize;
    padding: 5px 0;
    margin: 0;
    height: 22px;
}

div.barltr { /* opt navbar text inside a divbar div */
    float: left;
    background-color: #b0cab0;
    text-align: left;
    height: 22px;
    width: 700;
}

div.barrtl { /* opt navbar text inside a divbar div */
    float: right;
    background-color: #b0cab0;
    text-align: right;
    width: 700;
}

div.langltr
{
    background-color: #b0cab0;
    float: right;
    padding:0;
    margin:0;
    margin-right: 5px;
    width: 70;
    margin-top: -3px;
}

div.langrtl
{
    background-color: #b0cab0;
    float: left;

```

```

padding:0;
margin:0;
margin-left: 5px;
width: 70;
margin-top: -3px;
}

div.langltr form
{
background-color: #b0cab0;
padding:0;
margin:0;
}

div.langrtl form
{
background-color: #b0cab0;
padding:0;
margin:0;
}

/* anchors */
a {
margin: 0px;
padding: 0px;
font-weight: 400;
line-height: 20px;
text-decoration: none;
color: #234F33;
border: none;
}

a:hover {
text-decoration: underline;
}

/* bg image set in style macro */
a.navlink {
vertical-align: top;
padding: 0 5px 0 5px;
background-color: #b0cab0;
color: #234F33;
font-weight: bold;
}

/* bg image set in style macro */
a.navlink_sel {
vertical-align: top;
padding: 0 5px 0 5px;
background-color: #b0cab0;
color: #FFFFFF;
font-weight: bold;
}

a.navlink_sel:hover {

```

```

text-decoration: none;
}

/* for the nav_ns4.dm macro only (for netscape4 support) */
a.navlink_ns4 {
  background-color: #FFFFFF;
}

a.navlink_sel_ns4 {
  background-color: #FFFFFF;
}

span.button
{
  margin:0 0 0 5px;
  white-space: nowrap;
  vertical-align: top;
  padding: 0 5px 0 5px;
  background-color: #234F33;
  float:right;
  text-transform: lowercase;
}

span.button a{
  color: #FFFFFF;
  font-weight: bold;
}

div.footer
{
  height: 40px;
  width:100%;
  font-size: 10px;
  text-align: center;
}

div.rtl {background-color: transparent; color: #234F33; direction: rtl;}
div.ltr {background-color: transparent; color: #234F33; direction: ltr;}
table.bdr {border-width: 2px; border-style: solid;}
table.bdr td {border-width: 1px;border-style: none; text-align: center;}
table.nobdr {border-width: 1px; border-style: none;}
td.head {font-weight: bold; vertical-align: top; border-width: 1px; border-
style: solid none none none;}
td.body {border-width: 1px; border-style: solid none none none;}

/* this contains everything - all the other divs */
/* blankiconbar */
div.section p.bar {
  text-align: center;
}

```

```

/* bg image set in style macro */
div.divbar { /* for "select a collection" */
  font-family: arial;
  font-size: 10pt;
  font-weight: bold;
  border: 0;
  width: 100%; /* for ns4 */
}

span.highlight {
  background: #ffff77;
}

span.textselect { white-space: nowrap; }

div.document {
  padding: .2em 0 0 0;
  clear: both;
  background-color: transparent;
}

div.documenttext { clear: both;} /* come after any floating divs */

div.searchresults{
  padding: 0;
  margin: .2em 0 .2em 0;
  background-color: transparent;
}

div.nextresult{
  display: inline;
  text-align:right;
  float:right;
  width:50%
}

div.prevresult{
  display:inline;
  float:left;
  width:50%;
}

div.heading_image {
  padding: 0;
  margin:0;
  float: left;
} /* optional cover image */

```

8.4 areu.en.css

```

body
{

```

```

margin: 0;
padding:0;
background-color: #FFFFFF;
font-family: "Trebuchet MS", sans-serif;
font-size: 13px;
color: #234F33;
}

```

8.5 areu.prs.css

```

body
{
margin: 0;
padding:0;
background-color: #FFFFFF;
font-family: "Trebuchet MS", sans-serif;
font-size: 14px;
color: #234F33;
}

```

8.6 areu.ps.css

```

body
{
margin: 0;
padding:0;
background-color: #FFFFFF;
font-family: "Trebuchet MS", sans-serif;
font-size: 14px;
color: #234F33;
}

```

8.7 HTML file 856.html

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="content-type" content="text/html; charset=UTF-8">
<title>Pain -- The unromantic carpet bazaar of Andkhoy / Adam... -- 2002?]</title>
<link rel="stylesheet" type="text/css" href="css/areu.css">
</head>
<body>
<div class="ltr">
<table class="nobdr">
<tr valign="top">
<td>
<table class="bdr">
<tr valign="top">
<td class="head">Call Number</td>
</tr>
<tr valign="top">
<td class="body">p381.09581
<br />(1812)
<br />P144
<br />[2002?]
<br />+
<br />PDF
<br />(38 KB)</td>
</tr>
<tr>
<td class="file"><a href="/gsdl/collect/areu/import/../../Upload/856/Pain_The Unromantic Carpet

```

```

Bazaar of Andkhoy.doc" target="_blank"><br /></a></td>
</tr>
</table></td>
<td>
<table class="nobdr">
<tr valign="top">
<td class="head">Author</td>
<td class="body">Pain, Adam.
<br />Moharram Ali.</td>
</tr>
<tr valign="top">
<td class="head">Title</td>
<td class="body">The unromantic carpet bazaar of Andkhoy / Adam Pain and Moharram Ali.</td>
</tr>
<tr valign="top">
<td class="head">Imprint</td>
<td class="body">[Kabul : Afghanistan Research and Evaluation Unit, Save the Children (US),
2002?].</td>
</tr>
<tr valign="top">
<td class="head">Physical Description</td>
<td class="body">4 p. ; 30 cm.</td>
</tr>
<tr valign="top">
<td class="head">Subject Headings</td>
<td class="body">Rug and carpet industry - Afghanistan - Faryab (Province) - Andhkoy.
<br />Bazaars (Markets) - Afghanistan - Faryab (Province) - Andhkoy.
<br />Afghanistan - Faryab (Province) - Andhkoy - Economic conditions.</td>
</tr>
<tr valign="top">
<td class="head">Accession Number</td>
<td class="body">0735</td>
</tr>
<tr valign="top">
<td class="head">Language</td>
<td class="body">English</td>
</tr>
<tr valign="top">
<td class="head">Copies</td>
<td class="body">1</td>
</tr>
<tr valign="top">
<td class="head">Record Number</td>
<td class="body">856</td>
</tr>
</table></td>
</tr>
</table></div>
</body>
</html>

```

8.8 Metadata.xml file associated with 856.html

The XML file of the meta data extracts certain elements of the HTML file which is used to create the search indices.

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE DirectoryMetadata SYSTEM
"http://greenstone.org/dtd/DirectoryMetadata/1.0/DirectoryMetadata.dtd">
<DirectoryMetadata>
<FileSet>
<Description>
<Metadata name="rfc1807.author" mode="accumulate">Pain, Adam.</Metadata>
<Metadata name="rfc1807.author" mode="accumulate">Moharram Ali.</Metadata>
<Metadata name="rfc1807.title" mode="accumulate">The unromantic carpet bazaar of Andkhoy / Adam
Pain and Moharram Ali.</Metadata>
<Metadata name="rfc1807.keyword" mode="accumulate">Rug and carpet industry - Afghanistan -
Faryab (Province) - Andhkoy.</Metadata>
<Metadata name="rfc1807.keyword" mode="accumulate">Bazaars (Markets) - Afghanistan - Faryab
(Province) - Andhkoy.</Metadata>

```

```
<Metadata name="rfc1807.keyword" mode="accumulate">Afghanistan - Faryab (Province) - Andhkoy -  
Economic conditions.</Metadata>  
<Metadata name="rfc1807.id" mode="accumulate">0735</Metadata>  
<Metadata name="rfc1807.language" mode="accumulate">English</Metadata>  
</Description>  
<FileName>.*</FileName>  
</FileSet>  
</DirectoryMetadata>
```