Improving and Streamlining Updates to the Archival Catalogs
of the
Department of Archives and History

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Class of 2012

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Problem:
Multiple system-wide catalogs and finding aids have been created to provide access to the archival collection at the Department of Archives and History. Updating the various catalogs and finding aids is a time consuming process at a time that the staff responsible for that task has been reduced by budget cuts. Can the process be streamlined and still provide the necessary information to staff and patrons?

Background:
The South Carolina Department of Archives and History is charged with the selection and administration of public records deemed to be of permanent or historical value and with the stimulation of research, study and other activity in the field of South Carolina history and genealogy. An important function of the department in this regard is providing the taxpayers and general public with access to the record in its custody. Access means more than just allowing the public to view the records. The archival collection of the department included 28,850 cubic feet of paper records and 24,234 reels of microfilm divided into 11,084 distinct record series or filing systems. This material represents the historical records of 208 past and current state agencies, departments, boards, commissions and other administrative organizations, 59 past governors, and 108 county or municipal governments. A vital component of accessing the record is establishing intellectual control over the records in the holdings. In the archival field, intellectual control is
defined as the creation of tools such as catalogs, finding aids, or other guides that enable researchers to locate relevant materials relevant to their interests. Establishing and maintaining intellectual control is one of the functions of the Archival Processing Unit of the Division of Archives within the Department of Archives and History.

In the early decades of the twentieth century, the department used a subject catalog system and the knowledge of its sole employee to manage access to what was then a small collection. By the mid 1960's, the complexity of state government and the department’s archival holdings had grown and the department established a system of arrangement based on national and international archival standards that is still used today. This system established record groups based on state agencies and local governments. A record group included all the records created or collected by a single agency or local government. The record group could be divided into sub-groups to differentiate between different offices, division or branches within an agency or local government, such as the Office of Human Resources as a subgroup of the Budget and Control Board record group or the Clerk of Court subgroup of a county record group. A single filing system within the agency would be identified as a record series within that record group, such as the death certificate record series of the Public Health Statistics and Information Services sub-group of the Department of Health and Environmental Control record group.

The archival staff at the department created a list or summary guide to track what records series it held for each record group. The summary guide was divided by type of record (state, local, federal, etc.), thereunder by the record group, thereunder by the sub-group, and finally by the record series. The information recorded for each series included the creator (group/subgroup), series name, inclusive dates of the records, and the quantity of the records held. Initially, this list was typed and manually put together in a series of binders by staff.
Because of the need of different branches of the Archives to have access to this list, several copies of the summary guide were maintained, including one used in the Reference Room to assist patrons. As new material was accessioned into the collection, a master copy in the Inventory Branch would be updated in pencil. Pertinent pages would be retyped at the end of each month, copied and manually inserted into the different copies of the guides. The structural nature of guide would often mean retyping whole sections of the guide on a monthly basis to fit the new series into its proper place. In the early 1980's, when this system was fully developed, the Inventory and Processing Branch (the forerunner of the Archival Processing Unit) had approximately 8 staff members.

Word processing programs that became available to Archives staff in the mid-1980's made it possible to maintain an electronic version of the guide. The new version consisted of a separate electronic document for each record group. This eased the addition of new series into the list, but limited availability of computer terminals in the agency meant the continuation of the multiple paper copies and the monthly process of making updates to them. In addition, the question of the permanence of electronic records led staff to designate the master copy of the summary guide held by the Inventory Branch staff as the record copy.

An additional problem developed in that the administrative staff person tasked with word processing, copying and inserting the updates had a habit of creating hybrid pages to print out for the paper copies in an effort to cut down on the amount of paper used on a monthly basis. Over time, the paper copy of summary guide began to have different pagination and the number of pages than the electronic version of the guide. This became a substantial problem when that person no longer had the responsibility of doing the updates.
The computerization of the workplace in the 1980's also led the Department of Archives and History to join the growing number of archival institutions in creating a more detailed electronic guide that would make management of the collection easier, provided more information on each record series in the collection and could be disseminated to a wider audience through national databases. Budget restraints stunted progress, but the impending move of the agency to a new facility in the mid-1990's led to the development of AIIMS, the Archival Integrated Inventory Management System. The AIIMS was a custom developed database that included the basic summary guide information of the creator, the record series name, the inclusive dates and quantity, but also included a unique number for each series, accession data, stack locations, container information and fields that would allow detailed notes on historical or descriptive information about the individual record series. Initially, access to the AIIMS database was limited to certain staff and was not available to patrons. During the development of the AIIMS catalog, the Inventory and Processing staff consisted of 7 staff members, although several student interns were also employed in collecting and inputting information into the system.

After the move to our new facility, AIIMS was made available to patrons in the Reference Room. Its search function, however, was difficult to use which generally limited its use to staff already familiar with the collection. In addition, AIIMS was a DOS based system that became increasingly unstable and difficult to maintain as different operating systems became commonplace and the company that developed AIIMS dropped its support of the software. During this period, the summary guide continued to be maintained as the primary means of providing patrons with access to the collection. This reliance on the summary guide was due to
the Reference staff's familiarity with the guide and the unstable nature of the AIIMS database that occasionally resulted in system crashes and downtime.

A windows based replacement system for AIIMS called Re:discovery was purchased at a considerable cost and after a lengthy conversion process, was activated in 2008. During the conversion process, the Archival Processing Unit underwent several staff cuts. In 2008, the staff consisted of 5 staff members and 1 full time volunteer. For a short time, new accessions and changes to the collection were added into both systems while the conversion data was tested and the reliability of the conversion was checked. Since 2009, collection information is entered only into the Re:discovery database, although the AIIMS database is still on the department's network and accessible to staff. The only cost currently associated with the AIIMS database is the cost of its storage on the agency's computer network.

One of the benefits of the Re:discovery program was a public component that is mounted on the department's website. The public component reflects the pertinent information entered through the staff component and its accessibility through the internet allows widespread access to information on our collection. It should be noted that accurate location data and detailed descriptive notes for record series can only be found in Re:discovery.

The summary guide continues to be maintained both electronically as a word document and in paper form although currently only two paper copies of the guide are kept. One master or record copy is maintained in the Archival Processing Unit. The other copy of the guide is kept in the Reference Room and is used mainly by staff and occasionally by patrons. Because of constant use, it often needs other pages than those updated to be copied and replaced. In 2005, the summary guide was also converted into a series of html files and mounted on the agency
website. The html version is also updated on a monthly basis at the same time as the paper version. The job of making all of the updates and maintaining the guide is just one of several tasks assigned to the Archival Processing Unit which has been reduced by budget cuts to 1 staff member and 1 full time volunteer.

The organizational culture of the department may also play a factor in the reliance of staff on multiple guides. In particular, older staff have a mistrust of the reliability of electronic records such as the Re:discovery program as well as a resistance to change and technological advances.
Current Process

1. New accessions to the collection or processing changes to any record series in the archival collection are entered into the Re:discovery database as they occur during the month. The new information is instantly available to staff or patrons through the staff or public portal of the Re:discovery program.

2. Handwritten notations of additions and updates are made in the master copy of the Summary Guide at the time they are entered into the Re:discovery database.

3. The changes are incorporated into the word document version of the Summary Guide at the end of the month.

4. Two copies of each new or updated page of the Summary Guide are printed, punched, and inserted into the two copies of the Summary Guide.

5. The changes are made to html files of the online Summary Guide using Microsoft Frontpage software at the end of the month. A list of files updated is sent to the department webmaster so that the web pages can be updated.
Data Collection

Data collection was centered on two points. The first (Appendix 1) was to measure use patterns of the various guides to provide a concrete evaluation of their relative importance in guiding research efforts of staff or patrons. A chart was set up at the Reference Desk and reference staff was asked to mark the appropriate column each time they used either the staff or public portal of Re:discovery or the online and paper summary guide or helped a patron use any of the guides. In addition, Google Analytics account was set up to measure use of the online visits to the public component of the Re:discovery database and the online Summary Guide. There were several weaknesses in the data collection. The Google Analytics did not register online visits to the Re:discovery database and the technical staff at the department was unable to correct the problem. Google Analytics did provide counts for online visits to the Summary Guide. A second weakness was that there was no accurate way to measure patron’s solo use of the paper summary guides or Re:discovery. Several times, personal surveillance of the Reference Room was conducted to observe patron behavior. The number of solo use of the paper summary guide or Re:discovery by patrons during these observations was low and it was determined that it would not adversely affect the overall numbers.

The second set of data (Appendix 2) to be collect concerned the cost of updating the guides. The data to be collected was the time spent updating the various guides to determine the staff cost of the process. This data was considered important because agency staff cuts over the last three years have left the agency without the administrative assistant position that did most of the staff updates. This work is now done by professional archival staff at a much higher rate of pay. The hourly cost of change determined as $21.14 based on the annual salary of the staff member now charged with making the changes divided by the 1,950 hours of standard work
year. Fringe benefits were not included in the computation. The number of pages replaced in the paper guides was also measured to determine the supply cost of updating the guides.
Evaluation of Data

The data on collection guide use (Appendix 1) shows a total use of the various guides at 4,227 uses over four months. The summary guide was the most active access tool with 3,009 uses (71%) over the four month period. Rediscovery had 1,127 uses (27%) and AIIMS had 91 uses (2%). A total of 2,600 uses or 86.4% of summary guide use was through the online version. The paper summary guide shows 409 uses or 13.6% of the total summary guide use. Based on observations of the Reference Room, most of the paper use is by staff. Of the 2,600 online uses, 646 uses (21.5% of the total) were recorded in the Reference Room with the remainder (1,954 or 78.5%) being from outside the agency.

The Re:discovery guide was accessed by staff 1,127 times over the four month period. No reliable data was collected on use of Re:discovery by patrons, but observations of Reference staff based on email, phone and letters queries and entrance interviews in the Reference Room indicates regular use by patrons. Re:discovery use by staff was almost double the summary guide use by staff, although it can not be assumed that patron use of Re:discovery would follow a similar pattern. Re:discovery is more difficult to navigate than the summary guide which would likely be a limiting factor in its use by the general public.

The use of AIIMS despite its obsolete information reflects the reluctant nature of the Reference staff to change their use patterns.

An analysis of the cost data (Appendix 2) show the most time consuming and highest cost was in making changes to Re:discovery. Each change in Re:discovery took an average of 14 minutes and cost $4.90. The second most costly change was to the paper summary guide at
an average of six and half minutes and a cost of $2.30 per change. The least expensive change was to the online summary guide at an average of two and quarter minutes and $0.78 per change.
Recommendations

The vital and unique information collected in the Re:discovery database makes it a vital component of the intellectual control of the department's collection and the data shows extensive use. While eliminating the database would result in the most savings, additional tools to provide the detailed descriptive and location information would have to be developed. Also significant agency investment in developing the database as well as the information in the database would be wasted. Staff training should be developed to better educate Reference staff in using the database and online instructions should be reviewed to increase patron use. In addition, the AIIMS database should be deactivated so that staff uses the more accurate Re:discovery database.

The summary guides while useful and popular are not vital to accessing the collection and are possible points of streamlining the process. The paper summary guide is the least used and based on the cost data, eliminating it would be the most effective means of cutting the cost of the multiple guides while still providing access to the collection. Eliminating the online guide would provide modest savings, but would cut off a popular access point. Based on average of 264 accessions and processing projects per year over the last four years, the average savings from eliminating the paper guide would be a modest $607.20, but more important would be the yearly savings of 1,716 minutes or 28.6 hours of work time for a staff that has been cut dramatically during the recent budget problems.
### Appendix 1

**Use Patterns of Collection Guides (Fall 2011)**

<table>
<thead>
<tr>
<th></th>
<th>Re:discovery</th>
<th></th>
<th></th>
<th>Summary Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Staff Reference Room</td>
<td>Patron</td>
<td>AIIMS Website</td>
<td>Google (Staff)</td>
</tr>
<tr>
<td>Sep</td>
<td>134</td>
<td>197</td>
<td>31</td>
<td>765</td>
</tr>
<tr>
<td>Oct</td>
<td>129</td>
<td>194</td>
<td>19</td>
<td>751</td>
</tr>
<tr>
<td>Nov</td>
<td>137</td>
<td>161</td>
<td>20</td>
<td>596</td>
</tr>
<tr>
<td>Dec</td>
<td>67</td>
<td>108</td>
<td>21</td>
<td>488</td>
</tr>
<tr>
<td>Totals</td>
<td>467</td>
<td>660</td>
<td>91</td>
<td>2600</td>
</tr>
</tbody>
</table>
## Appendix 2

### Costs of updates and changes

<table>
<thead>
<tr>
<th></th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paper SG</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent (min)</td>
<td>185m</td>
<td>65m</td>
<td>178m</td>
<td>115m</td>
<td>543m</td>
</tr>
<tr>
<td>Staff cost ($0.35/m)</td>
<td>$64.75</td>
<td>$22.75</td>
<td>$62.30</td>
<td>$40.25</td>
<td>$190.05</td>
</tr>
<tr>
<td># of changes</td>
<td>21</td>
<td>7</td>
<td>24</td>
<td>31</td>
<td>83</td>
</tr>
<tr>
<td># of pages printed (2 sets)</td>
<td>66</td>
<td>38</td>
<td>96</td>
<td>98</td>
<td>298</td>
</tr>
<tr>
<td>Cost of pages ($0.01/pg)</td>
<td>$.66</td>
<td>$.38</td>
<td>$.96</td>
<td>$.98</td>
<td>$2.98</td>
</tr>
</tbody>
</table>

Average change took 6 ½ minutes and involved 2.8 pages and cost $2.30.

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<table>
<thead>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online SG</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent</td>
<td>50m</td>
<td>39m</td>
<td>51m</td>
<td>49m</td>
<td>189</td>
</tr>
<tr>
<td>Staff cost ($0.35/m)</td>
<td>$17.50</td>
<td>$13.65</td>
<td>$17.85</td>
<td>$17.15</td>
<td>$66.15</td>
</tr>
<tr>
<td># of changes</td>
<td>21</td>
<td>7</td>
<td>24</td>
<td>31</td>
<td>83</td>
</tr>
</tbody>
</table>

Average change took 2 ¼ minutes and cost $0.78.

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<thead>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Re:discovery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent</td>
<td>389m</td>
<td>149m</td>
<td>425m</td>
<td>479m</td>
<td>1442m</td>
</tr>
<tr>
<td>Staff cost ($0.35/m)</td>
<td>$136.15</td>
<td>$52.15</td>
<td>$148.75</td>
<td>$167.65</td>
<td>$504.70</td>
</tr>
<tr>
<td># of changes</td>
<td>28</td>
<td>11</td>
<td>29</td>
<td>35</td>
<td>103</td>
</tr>
</tbody>
</table>

Average change took 14 minutes and cost $4.90.