1. Background information

The Labels Processing Working Group was charged by PACC in November 2006 with investigating and recommending efficient and sustainable methods of producing call number labels for the library collection. Members of the group represented relevant areas of the library:

Donna Abbott (Acquisitions Services)
Barbara Bushor (Cataloging & Metadata Services)
Maxine Cameron (Preservation Services)
John DeSantis (Cataloging & Metadata Services), Chair
Joanne Messineo (Access Services)
Stephanie Wolff (Preservation Services)

The group began meeting regularly from January 2007 through August 2007 with one long hiatus during this period.

2. Overview of current system

The current system of producing call number labels has been in place in the Dartmouth College Library for decades. The software used to produce the labels is a local program designed by Information Systems and currently maintained by the Digital Library Technologies Group.

A daily process requires a CatMet staff member to run Anzio software which interacts with the review file produced by our local labels program. Output of labels is accomplished primarily on an Okidata dot-matrix printer using continuous feed Selin labels. Separate sheets of label stock are used to produce labels for paper serial volumes and issues. A small number of labels for government documents are hand-typed in horizontal format on foil-backed label stock.

Individual labels are cut from the continuous feed roll and affixed to the print items in Preservation Services. (Labels for non-print items are usually sent with the item to the
affiliated library for end processing).  For most items labels are heat-sealed on, and no clear label protector is needed.

One of the group’s first tasks was to examine the labels currently affixed to books in the library’s collection.  The results of this examination clearly underscored the need to appoint a task force to address the issue of spine labels in the Dartmouth College Library.  Legibility of spine labels is an issue which affects both users and staff, particularly those who work in Stacks Maintenance.  Most of the problems with the fading of spine labels occur with Selin labels produced on the Okidata printer.  Constant daily use of the ribbon results in significant fading during the printing process after approximately one month.  Labels also fade over a period of years on books in the stacks.  Other spine label problems affecting legibility are: labels which are too closely cropped, so that there is no white space around the dimensions of the call number; bubbling of labels due to degradation of the adhesive; cracked labels resulting from books with rounded spines.  Other common problems include labels falling off books when the adhesive dries up.  (Ironically among the most durable and legible spine labels in the library’s collection are those produced in the late 19th and early 20th centuries, written in library script and shellacked over the book’s spine.)

3. Survey of labels processing at other libraries

The group conducted a survey of peer libraries in order to determine trends, make comparisons, and become aware of the variety of options.  We specifically surveyed libraries which are (or were) also Innovative sites:

- Michigan State University
- Plymouth State University
- Tufts University
- Union College
- University of Colorado at Denver
- University of Massachusetts, Amherst
- University of Michigan, Dearborn
- University of Washington
- Washington State University
- Washington University

While almost all of the respondents admitted to using the Millennium labels program for requesting labels, the responses for method of printing varied.  Many use an Okidata printer, as we do, with Selin labels in sheets or continuous feed.  Others use laserjet printers (such as Hewlett Packard) with sheets of foil labels.  One or two respondents indicated that they have recently migrated to a thermal transfer printer.
4. Methodology of research

The group studied the documentation available for both the Innovative Millennium and the OCLC labels programs. We also demonstrated within each system how labels can be requested and marked for printing.

The group examined spine labels on Dartmouth materials from a variety of sources (stacks, preservation, serials reading room, media center). We also examined spine labels on books from other libraries.

Following our survey of peer libraries, we discussed the pros and cons of both the labels software programs and the printers (see #5 and #6).

In February 2007 Jennifer Kortfelt (Head of Digital Library Technologies Group) visited our group to discuss her department’s perspective on the current labels program. The program is a batch process which is run overnight, resulting in the creation of a review file of items for which we wish to produce a label on a given day. While the program runs smoothly, with only occasional glitches, Jennifer pointed out the following concerns:

- a great deal of maintenance is involved, especially with adding new locations to the program
- the program itself is not flexible and allows very little control
- every time there is a new Millennium release or patch we need to adjust our labels program to match the new menus

In March 2007 John DeSantis traveled to Plymouth State University where he met with their Head of Technical Services. During his visit he was given a hands-on demonstration of the use of the Millennium labels program, including the process of queuing labels, accessing the individual review files for labels, and previewing the labels with Anzio PrintWizard software. He also observed the printing process, which required the sheets of labels to be fed twice through the laserjet printer (once in reverse) in order to avoid waste. Of particular interest was the fact that this library had conducted testing on fading of labels over a long period of time, the result being that little or no fading occurred with these labels.

Based on the high level of satisfaction of colleagues at other institutions who had migrated their label printing to an emerging technology known as thermal transfer, we invited Gaylord to visit Dartmouth and make a presentation on thermal transfer printers. This visit finally occurred in June 2007.

The presentation was extremely informative. The vendors made the point that libraries, including Library of Congress, are aggressively migrating to this new technology.1 The printer requires the use of continuous feed labels which are made from polyester and do

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1 See: Specifications for Pressure Sensitive Adhesive Labels at:
http://www.loc.gov/preserv/supply/spec/700-711.html
not fade or smudge, nor do they require a label protector. The labels, however, have a
strong adhesive and are not easily removable. The printer can automatically guillotine
the labels. Rolls of labels are shipped with a new ribbon, ensuring that the ribbon is
changed regularly. The label rolls are 175 feet in length, although the last 10 feet on a
given roll is not usable. A rough cost analysis concluded that the cost of the polyester
labels is less than the overall cost of Selin labels.

Following the Gaylord visit, we arranged for them to ship us on approval a thermal
transfer printer in order to do further assessment. We are currently in the initial stages of
testing this printer (T2824TLP).

5. Report on labeling software

Strengths and weaknesses for the OCLC Labels Program, Millennium Labels, and the
Dartmouth-created software are listed below.

<table>
<thead>
<tr>
<th>OCLC</th>
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<tr>
<td><strong>Strengths:</strong></td>
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<tr>
<td>➢ Catalogers can print their own labels</td>
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<tr>
<td>➢ Easy to preview entire label before printing</td>
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<tr>
<td>➢ Easy to print shelf list cards</td>
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<tr>
<td><strong>Weaknesses:</strong></td>
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<tr>
<td>➢ Only 2 levels of descriptors after call no</td>
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<tr>
<td>➢ Staff have to type out all of the locations or create hundreds of macros</td>
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<tr>
<td>➢ Limited spine label length</td>
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<tr>
<td>➢ Not suitable for corrections, transfers, etc.</td>
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<tr>
<td>➢ Not suitable as the single labels program, since not all of our records are in OCLC</td>
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<tr>
<td>➢ Cannot produce author-title labels</td>
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Millennium

**Strengths:**
- Can serve as the single spine labels program
- Ongoing development and enhancements from III

**Weaknesses:**
- Requires use of multiple review files and queues; may need to purchase additional review files
- Laser – label stock – not able to split up and staple to slips
- Does not print shelf list cards
- Less flexibility in translation of locations
- In OCLC cataloging: need to go into Millennium to request label
- Needs programmer to maintain queues?
### Dartmouth

**Strengths:**
- Preservation receives books in call # order and dated.
- Prints continuous roll of labels – no label length restrictions
- Ability to print multiple formatted labels, (spine, shelf list & Gaylord)
- Translates locations
- Staff do not have to go into MilCat in order to get labels
- Ability to batch labels

**Weaknesses:**
- Labels produced by Preservation are integrated with others in daily label run instead of batched
- Requires additional fields in bib. records and item records to request labels
- Software maintenance can be time consuming for DLTG staff

### 6. Report on printing technology

Strengths and weaknesses of the Okidata (dot-matrix), Hewlett Packard (laserjet) and thermal transfer printers are listed below.

### Okidata

**Strengths:**
- Versatile – prints spine, shelf list and author/title labels
- Reliable, robust
- Compatible with Anzio program
- Supports Selin labels
- Inexpensive supplies
- Flexibility of length of label
- Workflow convenience
- Preservation friendly

**Weaknesses:**
- Poor legibility (at times)
- Frequent ribbon-changing
- Potential for smudging and/or fading
- Need for manual cutting/trimming
- Clear tape required – can cause problems
- Need for heat setting
- Cleaning & maintenance of rollers
- Need for rolling apparatus (Selin labeler)
**Laserjet**

**Strengths:**
- Good legibility
- Compatible with software
- Variety of label stock
- No fading (per tests)
- No trimming needed
- No heating needed to affix labels
- Affordable labels

**Weaknesses:**
- Need for label protector
- Folding labels may cause cracking
- Difficult to remove
- Potential for waste
- *Preservation: serial labels printed from MilSer have to have label protector put over them*
- Workflow issues for label/book matching
- No author/title labels
- Possible length restrictions

**Thermal Transfer**

**Strengths:**
- No need for label protector
- Will not smudge
- Labels are durable
- Excellent legibility
- Choice of labels (paper/polyester)
- Good adhesion
- No fading
- Offers barcode printing
- Can accommodate direct individual printing

**Weaknesses:**
- Difficult to remove labels
- No Author/title labels
- Compatibility issues with label programs?
7. Recommendations

Software:
Our discussion and research indicated that the Dartmouth College Library has more specialized needs and requirements than the average library of our size. The salient distinguishing feature seems to be the multitude of locations which are printed on the label above the call number. In many cases the printing of the location occupies several lines on the spine label, which makes programs containing a limit to the number of lines in a spine label impractical for us. For this reason we were not able to consider OCLC seriously, despite the relative ease in requesting labels as compared to other systems. We did, however, consider the option of printing shelflist cards through OCLC (for locations which require them) in the event that we migrated away from our current labels program.

We deliberated between migrating to the Millennium labels program and maintaining our current system. The current Dartmouth software for producing labels has functioned reliably for several years and has the added advantage of being able to print Gaylord labels and labels for shelflist cards. Staff concerns related to the present system are related more to the labels output than the program itself. The group recognizes and appreciates the maintenance concerns raised by the Digital Library Technologies Group, but the tangible benefits gained from the use of this program do actually warrant the continued maintenance of the program. If the library were to continue to use this program, we may wish to consider transferring some of the maintenance issues to other departments in order to lessen the burden on DLTG.

While there were many aspects of the Millennium labels program which were quite appealing, the implementation of this program would require extensive training for staff, additional costs for review files, and major changes to current workflows in both CatMet and Preservation.

➢ The group recommends that for the time being we continue using the Dartmouth labels program.

Printers:
It was considerably easier to reach a decision regarding a recommendation for printing labels, as it was clearly acknowledged that the labels produced on the Okidata dot-matrix printer represent an outdated technology and cause numerous problems for staff and users. It also became clear that Dartmouth needed to maintain the use of continuous feed labels, and therefore we needed a printer which could accommodate them. Despite the ease of printing and the aesthetic appeal of the labels produced on the laserjet printer, the labels produced would not be practical for the variety of materials and the complexity of the data to be printed on the labels. There were some noteworthy drawbacks to the label stock used in the thermal transfer printer, but the final product proved to be superior in
every other respect. The portability of the printer and its relative low cost also allow us to consider individual label printers or printers distributed over a number of departments.

➢ The group recommends that, upon satisfactory completion of the testing, we migrate the printing of labels to the Zebra 2824TLP thermal transfer printer.