The LLMC-Digital Newsletter
Issue No. 16: December 2005

Contents:

Rounding Off Our Production Line

The content for *LLMC-Digital* is created cooperatively by LLMC, St. Louis University, and the University of Michigan. In this partnership, St. Louis provides the metadata by cataloging each title. Michigan does the OCRing and runs the servers which deliver the product. (Endnote 1) LLMC's role is image capture and enhancement. We scan the images. We proof and process the scans to assure maximum quality. We tag the separate images so that they can be identified and retrieved on-line. And we back up the digital images with preservation-quality microfiche. Of course, much of our work is done on standard computers; which explains why we have eighteen computer stations at our Hawaii headquarters — up from six two years ago and growing. But the yeoman work is done by a production line comprised of industrial-scale equipment. We can now report that, after two years of testing and trials, LLMC has settled on the basic configuration of its image-capture production line and purchased most of the components. The main items are as follows: (Endnote 2)

— *Step-and-repeat book scanners* These machines operate somewhat like the old industrial-scale film cameras we used for years. They are the machines we use for scanning bound books. As our current standard, (Endnote 3) we have settled on two models of the same basic machine made by the German company SMA. For most purposes, both at headquarters and at our remote-scanning sites, we will use the SMA 21 (roughly $45K apiece with thruput of ca. 300 images-per-hour, IPH, or lower depending on the complexity of targets). By February, we will own four such machines. At our request, SMA also is developing a backup "90-degree scanner" (SMA 49, cost roughly $30K, with thruput of something less than 300 IPH due to presumed complexity of material). The SMA 49 is being designed to scan books so delicate that they cannot be opened more than part way. We have inspected and approved the prototype, and the production model will be ready early in 2006. It will be rotated among our various scanning sites as

needed. A final nicety in the step-and-repeat area is a special cradle for holding very oversized books during scanning. We have purchased one such, at a cost of about $2,700, which, like the SMA 49, will be rotated among sites as needed.

— *Hi-speed book scanners* These machines operate somewhat like high-end Xerox copiers, scanning target pages on both sides in one pass. They can scan only disbound materials which can be fed through as loose paper. We have chosen a model made by another German company called Staude. At present we have two of these machines (Staude HQ Autoscan, cost ca. $48K apiece, with thruput of roughly 3,500 IPH for materials of average complexity). These machines are the workhorses of our production operation, upon which we mainly depend for meeting our announced production goals. (Endnote 4)

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— **Digital-to-Fiche Image Writer** This system enables us to fulfill our vow to back up all of our digital images with analog versions on preservation-quality, silver-halide film. The system, called DigiFiche, is also made by Staude. The system utilizes an in-line processor and closed-loop chemical circulation to permit the production of laboratory-certified, preservation-quality microfiche two minutes after each separate fiche is "written" from our digital data. These pristine master copies are used only once, to create an intermediate working master. They then are shipped off for permanent archival storage in the Harvard Depository. The intermediate working master is used to produce diazo fiche to fulfill any orders LLMC may receive for consumer copies. At this time LLMC owns only one DigiFiche system, which cost roughly $82,000. Meeting projected production requirements will require an additional system, scheduled for purchase in mid-2006. (Endnote 5)

— **Microfiche Duplicator** Our two pre-*LLMC-Digital* era duplicators are over 25 years old, with one last leg between them. They could die at any time. LLMC would then lack capacity to support its still substantial stable of microfiche customers. Fortunately, there is still one company left, Staude again, which makes a production-scale fiche duplicator. This machine, called Dicofiche, cost us roughly $46,500. The downside is that, because it is semiautomatic, it can operate efficiently only with fiche of unvarying density, such as that created by the DigiFiche system described above. So it will be a while before it fully meets our needs. Meanwhile, we have shifted to relying on outsourcing to handle current large orders. On the upside, since the new machine is really semiautomatic, requiring less labor, our duplication costs will go way down over time, as more and more work migrates to the new machine.

In addition to the major equipment described above, LLMC has purchased

the hardware and software needed for 12 computer stations and is in the process of acquiring and phasing in a major new server, for total peripheral costs of roughly $47K. In addition, at the very beginning of this venture we spent a total of $78,000 on two Zeutschel book scanners (see next story). In summary, after the second DigiFiche system is purchased in July, we will have spent roughly $656,000 of your subscription money to build up a state-of-the-art production line.

LLMC Giving Away Two Book Scanners

As mentioned above, *LLMC-Digital's* first equipment expense was for two step-and-repeat book scanners, the Zeutschel Omniscan 5000 model. [(Endnote 6)](#) At the time of our purchase the Omniscan 5000 was widely regarded as the best industrial-scale book scanner available in the U.S. It remains the best selling machine in the

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 country. However, as described earlier in this venue, [(Endnote 7)](#) we soon discovered in Europe a new machine (the SMA 21 described above), never exhibited in North America, which more closely met our actual needs, and which, in our context, lowered our costs substantially. This explains why we have decided to standardize our operations around the SMA 21, and why we now have two surplus, almost-new Zeutschels.

 We have tried to sell off these machines at half price, but we soon discovered that there is almost no market for this type of used equipment. We were further handicapped by our feeling that this is not neophyte-friendly technology, and thus probably not appropriate for institutions with no previous scanning experience. So we have come to the conclusion that the ideal placement would be with an institution which already owns an Omniscan 5000, has mastered the complexities of integrating one into a production context, and could use an additional machine to augment the volume of its scanning operations.

 Therefore, LLMC is offering these machines free for the cost of shipping (est. ca. $300.00 apiece) to (a) non-profit institutions which (b) already use and have an active maintenance contract on a Zeutschel Omniscan 5000. All readers are invited to review the landscape of their affiliations to see if there isn't an institution near and dear to them which might benefit by this offer. Even if you are not sure about the equipment holdings of your home institution's scanning services, please consider bringing this offer to their attention.

 Interested institutions should convey their interest briefly in writing, and a statement that they meet the two criteria above, to LLMC Executive

Director, Jerry Dupont, at P.O. Box 1599, Kaneohe, HI 96744. The award of the free book scanners will involve a judicious application of generally accepted principles of equity: The early bird gets the worm – LLMC-Digital subscribers and their kith and kin get special consideration – Two new friends are better than one – Ties get decided by coin toss – And, the judge's decisions is final.

Additional Off-Site Scanning Partner

LLMC was recently offered an unusual opportunity to participate in a large federal grant aimed, among other things, at improving the University of Hawaii's Law Library's holdings of early Hawaiian constitutional materials. The Dean offered to fund a full FTE of operator time ($31,455 per annum, for up to two years) for on-site scanning of unique constitutional, legislative, and judicial materials held in the Hawaii State Archives. As it happened, we already were in negotiations with the Archives to access portions of their holdings. However, despite good will on both sides, we had made only minor progress due to the physical security problems involved in getting rare materials over to our plant in Kaneohe. So we jumped at the chance to position a step-and-repeat scanner (S/RS) right in the sanctum.

The funding will lapse at a date certain, so time was of the essence. We quickly reached a three-sided agreement. The Archives provides the site, texts, and bibliographic supervision. LLMC provides an S/RS, a trained operator from its staff, equipment maintenance, post-capture image processing, and OCRing for the printed texts. (Endnote 8) The Law School funds the operator. All materials captured will go on to appear on *LLMC-Digital.* This new partnership is structured differently from those announced previously in these pages for George Washington University (GWU) and Saint Louis University (SLU). (Endnote 9) Most significantly, we are being very specific with our Hawaii partners that this scanner is in the Archives on

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temporary loan. The crux is the uncertainty of future funding. In our view, our upcoming arrangement with SLU has now set the "gold standard" for how these off-site-scanning partnerships ideally should be structured. SLU has gone the extra mile and made a commitment for two FTE personnel as their indefinite contribution to the project. The Hawaii Law School and Archives know how our relationship with SLU will function. We have told them that we will be willing to reconsider the "loan" aspect if they can eventually come up with a longer-term commitment in some way similar to that at SLU.

Speeding Up the Site's Response

Subscribers will soon benefit by several major equipment enhancements being made by our partner, the University of Michigan's Scholarly Publishing Office (SPO). In the words of Cory Snaverly, our chief SPO contact in the serving area: "We are in the process of migrating several resources, including *LLMC-Digital,* from the current single server to two new machines, which will share the service load equally. Shortly after that, two more servers in a completely different location on campus will be added to that capacity, both to further improve performance, and also to increase redundancy in the event of problems that may affect one of the two data centers. We should see noticeable improvements in performance at both stages, but most significantly at the first stage when the first two new servers become operational. That should take effect by the end of 2005.

To give some context to this work, these are infrastructure and scaling improvements that were originally conceived at least a year ago to accommodate the size and performance requirements of the *LLMC-Digital* project. We have reached a level of volume in terms of both size and usage where it makes sense to put these plans into place. The architectural changes also dovetail with the need to continuously improve the digital library's general hosting infrastructure."

New Subscribers' Fiche Discount Lowered

As reported before, rather to our surprise the market for LLMC microfiche remains remarkably robust. Some might even suspect that we are seeing a bit of "irrational exuberance." For whatever reason, in the past year alone we have sold over $1.5-million dollars (list price) of microfiche . (Endnote 10)

One of the apparent reasons why some of our new customers (e.g., new law schools) are buying fiche in such large quantities is that, by signing up for *LLMC-Digital,* they qualify for the subscribers' 66% discount. We now feel that the purpose of that discount, getting a large number of libraries to sign up sooner rather than later, has been largely fulfilled. Furthermore, that option has been out there for more than two years. Everybody has had more than a fair chance to take advantage of it. Therefore, while we will retain the 66% discount for all subscribers on board as of Dec. 31, 2005, we will lower the subscriber discount to 33% for all subscribers who sign on after that date.

Six Recently Asked Questions

In the nature of things, *LLMC-Digital* will appear on people's personal radar screens at different times. So questions that some folks thought were answered long ago are occurring to others only now. Each of the questions below was asked by at least two subscribers in the past month. Therefore, with apologies to those who will find them repetitive, we feel it is worthwhile

to summarize the responses.

— ***Do you have a list of what's on-line?*** The LLMC-Digital collections now contain over 300 titles and over 10,000 volumes. Those numbers will grow constantly with each monthly upload of additional content.

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A paper list of holdings would be both cumbersome and outdated within weeks. Therefore users will have to learn to navigate and rely upon the lists which are provided right on the site. On the home page, to the left of the name of each separate collection, is an information icon. (Currently it is the letter "i" in a circle. A design change is under development that soon will make it more explicit.) Clicking on that icon will produce a holdings list for that one collection. At the top of that separate list is a link which can take one to the full list of holdings for all collections (the Content Status Table). These lists are updated monthly as part of the monthly new-content upload process. At the request of our cataloger friends, who sometimes need to know when certain changes were made, the information lists also contain an historical section called "Log of Past Monthly Additions." This enables a user to backtrack through the changes to the point in time when they last checked.

— ***To whom can we provide access?*** Any subscribing library can provide in-library access to any legitimate patron of that library; "legitimate" being defined by the library. Any subscribing library may also provide interlibrary loan service for material gleaned from *LLMC-Digital* to the same extent as they would be permitted to provide that service from the hardcopy version if they happened to own it. Finally, academic-law-library subscribers (who are required to pay at a higher annual subscription level) may provide remote access to any member of their wider college or university community (faculty, students and staff) so long they can control such remote access using IPs or their equivalent.

— **Can I track my library's user statistics?** User statistics are maintained for each separate subscriber. You can access the statistics for your library by going to http://stats.umdl.umich.edu. For help in interpreting the presentation of your libraries statistics, you may find it useful to check out back issues of this Newsletter, which discuss this subject. In particular check out Issue No. 5, which stresses the importance of understanding the general layout of *LLMC-Digital* and how it is organized into discrete "collections," as a basis for understanding your statistics. (Endnote 11)

— ***I found the title, but where is "Vol. 1"?*** "When I use a URL from my library's catalog to access a title on *LLMC-Digital,* I get a list of the volume holdings, but the lists all start with 'Vol. 2.' Where are your volume ones?"

Sorry for the confusion. It's understandable enough. Try using the URL once again. When that list of volumes or parts comes up, make sure that you are scrolled all the way to the top of your screen. You will find that the URL for volume one is embedded in the full bibliographic description for that title, while the URLs for the subsequent volumes follow with abbreviated titles. This is because, when you call for all volumes, the Michigan system defaults to the first available item in the set, and that item is embedded in the first, full description.

— ***Why don't some LLMC URL's work?*** Some libraries have been notifying us that they have found *LLMC-Digital* URLs on OCLC which do not connect to any title on the site. Fortunately this problem is restricted to catalogers, since nobody else would know how to find these non-functioning URLs on OCLC in the first place. Solving the problem requires an understanding of how the records and URLs for *LLMC-Digital* titles are first created, then stored, and then finally matched to their correct title. As readers know, our cataloging records and their URL's are created by our partners at St. Louis University Law Library (SLU). For efficiency sake, the SLU catalogers try to stay ahead of everybody else, so that records will be ready for the titles as they emerge from the data-capture/OCRing production process. Because they have to be accessible to our partners at Michigan (SPO), these pre-done records are stored in the OCLC

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system in the WorldCat set using the OCLC symbol "LLMC2." These LLMC2 records and URL's are not intended for public use. Each month, after the regular new-content upload, SPO notifies SLU which new titles were mounted. SLU then goes back into OCLC and moves the records for those new titles from the category "LLMC2" to the "LLMC3" category. Only then are those LLMC URLs available for purchase and for delivery to those wise libraries which have standing orders. At that time also, the usable URLs are entered into the collection lists described above on page four in the response to: "What's on line?" To summarize, in the words of our chief SLU guru, Richard Amelung: "Some people are finding the records while they are being stored temporarily under the symbol 'LLMC2' and think that the data is already on the site. However, these records are not yet usable because they have not yet been 'blessed' by SLU for inclusion under OCLC's symbol 'LLMC3'. We suggest that subscribers blindly follow the Content Status Table provided by LLMC, and not pay attention to what they may find on OCLC. Once the title is truly up on the site, it will show up in LLMC's Content Status Table with its correct OCLC number and correct *LLMC-Digital* URL."

— ***Which setting is best for printing?*** The display options provided for viewing a page of text on *LLMC-Digital* (see the upper left corner of your screen when a page is displayed) are threefold: "Image," "PDF" and "Text."

The "Image" setting displays a GIF image This image is suitable for printing purposes if speed is the goal and some degradation of quality is acceptable. However, the highest print quality is achieved by switching the display setting to PDF. The down side of PDF printing is that you will pay for the higher image quality with slower printing.

Great Gifts in Small Packages

This issue we extend our sincere thanks to two libraries which are providing materials calculated to enrich existing collections.

— ***Military Law Collection:*** For some years the U.S. Army JAG School Law Library has taken the lead in expanding and updating this collection. Given the current controversy over questions like the limits applicable to field interrogations, etc., the Library has assembled an historical collection of the Army field manuals covering the Rules of Land Warfare as these manuals have been developed by JAG lawyers over the years since World War I and the adoption of the Geneva conventions. We will be putting this small but significant collection to the head of the line and hope to have it up on *LLMC-Digital* in several months. In addition, the JAG School Library has secured permission for LLMC to scan its full library of theses written by degree-candidate officers at the School. Only a small subsection of this scholarship is available from other sources. We will scan this literature in alphabetical order by author, and expect the project to last about three years.

— ***Common Law Abroad:*** Although they are often small pamphlets, one of the most difficult classes of CLA material for us to assemble is the constitutional documents of the former colonies, only some of which were collected by our twelve main source libraries. For the vastly important decolonialization period following World War II, most of these basic documents appear in the British Command Paper Series. A deduping process now underway within the University of Chicago's Library System has given our friends at the U.C. Law Library an opportunity to offer us the decades 1950 through 1980. Obtaining this gift will greatly accelerate making these elusive materials available.

Endnotes:

1.) See below, page 4A, "Speeding up …"
2.) Technophiles may be interested to learn that the five pieces of SMA and Staude equipment described in this story are so new that, for now, LLMC is the only user in the Western Hemisphere.
3.) Adopting standard equipment in this industry is important because, among other reasons, much of the regular technical improvement in this digital machinery comes, not in mechanical refinements, but in computer

program enhancements. Having a standard helps insure that all of the equipment is upgraded regularly and on the same schedule; especially when we have some of this equipment positioned in remote locations such as the scanner at George Washington University.

4.) Our initial years of producing image content for *LLMC-Digital* have not yet produced the annual quantities of images (an annual average of about 10-million) necessary to achieve our announced long-range goals for the project. This was predictable, since we knew that it would take time to get LLMC's equipment base, and more importantly its technical staff, up to full time operations. However, while we were willing to accept lower productivity in the startup period, it was only because we expected to exceed the target annual average in the out years and thus "even things out." Charter Members will be gratified to know that we now own the necessary equipment, and are well on our way to recruiting and training the required staff, to enable us to substantially overshoot the 10-million image annual target by mid-2007. Our projections for that year anticipate production from our high-speed scanners of roughly 11.5-million images per year coupled to roughly 1.7-million images obtained from our step-and-repeat scanners operations. This means that, using only our current equipment base, by 2007 we will be producing a total of roughly 13.2-million tiffs annually; well more than enough to play the catch-up game described above.

5.) This operation also provides a fortuitous and wholly unexpected upgrade opportunity. As we digitize all of the texts contained in our historical fiche backfile, we will gradually replace all of our 20th-century legacy fiche with pristine new preservation-quality microfiche created and stored to 21st-century standards.

6.) The Zeutschel 5000 scans only in black-and-white. The two LLMC machines have copy counts of 180,867 and 127,861 respectively, making them effectively almost new. North American maintenance is provided by Crowley Micrographics Inc., located in Frederick, MD, near DC.

7.) See *Newsletter* [Issue # 12, pp. 1–2](#)

8.) OCRing of manuscript material is not yet feasible using Michigan's current technology base.

9.) Update on SLU installation. The SMA factory technician will do the equipment setup on Feb. 20, 2006. Two LLMC technicians, our Production Manager and Data Capture Supervisor, will be in town for the rest of that week to conduct operator training and to familiarize themselves with all aspects of the SLU operation. We found this pattern useful for both sides during the pioneering installation at GWU. In the meantime, SLU is currently recruiting for a Digital Resources Librarian. It expects to have that person and the two half-time operators (already working elsewhere in the system) on board and ready to go well before the installation date.

10.) Of course fiche sales in such quantities merit large discounts, and new *LLMC-Digital* subscribers have rightly been claiming the fabulous 66% discount. So, after discounts and expenses, LLMC nets far less in actual

contribution to the overall enterprise; although even that is welcome and has made possible some of the investment we have made in our digital equipment base. Our main concern is that, regardless of the discount, $1.5-million in list prices still amounts to a million separate fiche; more than we manufactured in any previous year. Handling that much fiche duping is a real distraction from our primary mission, getting *LLMC-Digital* up to full potential, and a real strain on our ancient microfiche duplicating machines. This is why we have resorted to outsourcing a large portion of this work.

11.) Access to and interpretation of an institution's patrons' use of statistics is covered in Newsletters: [#3, pp. 2–3](); [#4, pp. 1–2 &](); [#5, p. 1]().

12.) LLMC actually captures its texts in the TIFF image format. Tiffs are easier to read than GIFs and look significantly better. Unfortunately, the technology currently supporting internet delivery of images is such that transmitting TIFFS would lead to unacceptable sluggishness in the system. Therefore, our TIFFs are "dumbed down" into GIFs for transmission and display purposes. It seems likely that eventually the whole internet system will be upgraded. If so, we will then transmit our original TIFFs in all their splendor.