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Linking Globally, Coping Locally: Cataloging Internet Resources at the University of Colorado Law Library*

Karen Selden**

Web-based online public access catalogs (OPACs) enable catalogers to provide hotlinks to Internet-based resources of interest to their patrons. However, this capability is not without its challenges. Ms. Selden explores the local policy considerations associated with cataloging Internet resources and describes the policy-making process and some Internet cataloging policies used at the University of Colorado Law Library.

¶1 In her recent *Law Library Journal* article,¹ Hope Breeze acknowledges the challenges involved with cataloging remote electronic resources but argues that libraries nevertheless should make the effort to do so. Breeze also presents a concise general overview of the choices librarians face once they decide to catalog these resources.

¶2 I had the good fortune to read Breeze's article the day before I gave a presentation about the local policy considerations involved in cataloging Internet resources at the annual meeting of the Southwestern Association of Law Libraries (SWALL) in San Antonio on April 1, 2000.² Breeze's article interested, excited, and inspired me. She and I both agree on the value of providing access to Internet resources of interest to patrons via the library's online public access catalog (OPAC). Ultimately, her article inspired me to adapt my SWALL presentation into this follow-up article, which expands upon and affirms Breeze's general ideas with examples of the policies, procedures, and experiences of the University of Colorado Law Library. While Breeze's article gives a good overview of cataloging remote electronic resources, this article is light on theory and heavy on practical ideas and examples for librarians to use as they

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1. Hope Breeze, *Cataloging Remote Electronic Resources*, 92 L. LIBR. J. 91, 2000 L. LIBR. J. 7.
2. See Karen Selden, *Cataloging Internet Resources: Linking Globally, Coping Locally* (last modified Mar. 25, 2000) <<http://www.colorado.edu/law/lib/ts/catinternet>> (links to PowerPoint slides and selected resources handout).

approach the prospect of cataloging Internet resources. Thus I anticipate the two articles will complement each other.

¶13 This article will explore the local policy considerations associated with cataloging Internet resources, and describe the policy-making process and some Internet resource cataloging policies used at the University of Colorado Law Library. Specifically, the topics covered are forming policies, providing access to Internet resources, choosing which bibliographic record to use, enhancing catalog access, selecting Internet resources for inclusion in the catalog, considering OPAC display parameters, and verifying links to cataloged Internet resources.

Background

¶14 While the University of Colorado Law Library's primary mission is to provide materials and services that support the instructional and research programs of the faculty and students of the law school, the library also offers its resources and services to assist the university and legal communities and the public in meeting their legal information needs.³ Thus the law library is both an academic and a public library serving a variety of patrons, including faculty, students, local attorneys, and pro se patrons. The law library's collection contains nearly 400,000 volumes, and the Web-based Innovative Interfaces, Inc. (III) catalog contains more than 600 hotlinked URLs and PURLs. Because the library is a selective federal government document depository (selecting approximately 12 percent of available items), many of the URLs and PURLs in the catalog are the Internet versions of government documents. The law library does not currently use III's new Millennium software. The law library's Technical Services Department is comprised of seven full-time employees—three librarians and four paraprofessionals. The cataloging unit is comprised of the full-time catalog librarian and a half-time paraprofessional. In addition, the full-time government documents technician copy-catalogs most government documents. The law library is a separate entity from the University of Colorado's main library, so the policies and procedures described in this article do not necessarily reflect the practices of that library.

Policy Formation Process

¶15 Based upon the University of Colorado Law Library's experience, there are three key elements in the Internet resource cataloging policy formation process. First, the Technical Services *and* Public Services departments must be involved in the policy formation process. Next, the policies and procedures must reflect the library's unique needs and constraints. Finally, Internet resource cataloging poli-

3. See University of Colo. Law Library, *Law Library Mission Statement* (last modified Dec. 17, 1997) <<http://www.colorado.edu/Law/lawlib/ts/libmiss.htm>>.

cies and procedures require a long-term commitment to revisit and revise them to meet changing needs and circumstances. The following brief history of the creation of the University of Colorado Law Library's LAWPAC on the Web Advisory Committee, the entity that created the library's *Policy Statement and Procedures for Cataloging Internet Resources*,⁴ will illustrate these key elements as well as elaborate upon their importance.

Forming an Oversight Committee

¶16 In early 1998, the law library created a committee to make recommendations for creating a useful and user-friendly Web-based catalog tailored to patrons' needs. Because the new Web-based catalog was named LAWPAC on the Web (LAWPAC),⁵ the committee was appropriately named the LAWPAC on the Web Advisory Committee. Members of the committee included librarians and support staff from both the Public Services and Technical Services departments.⁶ The broad and inclusive composition of the committee was intentional and very important for two reasons. First, by including support staff, the committee would receive input from staff members who actually see and feel the workflow implications of various policy and procedure decisions. Support staff can offer valuable insight for making new policies work or adapting old ones to fit new circumstances. In addition, the composition of the committee reflected the library's service-oriented philosophy. The Technical Services and Public Services departments have a relationship based upon what the author calls "the four Cs." They consistently communicate, collaborate, and cooperate in order to meet the needs of the library's patrons. This mutual relationship is essential for the Technical Services Department to know what patrons want and for the Public Services Department to learn what the catalog can deliver to patrons. Even though each department's role is to serve the library's patrons, each department brings different knowledge, talent, skills, and expertise to the task. Thus, the law library's experiences affirm Breeze's contention that decisions concerning the cataloging of Internet-based resources "will require a cooperative effort between public service and technical service librarians."⁷

¶17 The LAWPAC on the Web Advisory Committee considers design, display, access, and functionality issues associated with any aspect of LAWPAC, while

4. University of Colo. Law Library, *Policy Statement and Procedures for Cataloging Internet Resources* (last modified Aug. 17, 2000) <<http://www.Colorado.EDU/Law/lawlib/ts/man/intcat.htm>> [hereinafter University of Colo., *Policy Statement and Procedures*].

5. University of Colo. Law Library, *LAWPAC on the Web* (visited July 5, 2000) <<http://lawpac.colorado.edu/>>.

6. The current members of the LAWPAC on the Web Advisory Committee are the head of public services, the catalog librarian, the technical services librarian (who maintains the law library's technical services Web site and Web-based LAWPAC's customizable pages), and the government documents technician.

7. Breeze, *supra* note 1, ¶ 12.

weighing the needs of the patrons against the various constraints and capabilities of the law library and III. Because no "one size fits all" solutions exist for the myriad of issues the committee encounters, its policies, procedures, and recommendations reflect the law library's unique needs and constraints. Examples of local factors that influence these policy decisions include staffing (the number, expertise, experience, and capabilities of staff members), the library's integrated software system (especially its display and functionality capabilities and constraints), and the level of support from the library's administration (determining the amount of human and financial resources devoted to the project). Again, the law library's experiences affirm Breeze's point that the choices made about cataloging Internet resources "need to be tailored to the needs of individual libraries."⁸

¶18 The goal of creating a useful and user-friendly OPAC cannot be accomplished quickly, easily, or permanently. For this reason, the committee committed to meeting on a regular basis. The law library and committee made such a long-term commitment to LAWPAC in recognition that various factors—the ever changing nature of Web technology, regular changes and updates to the law library's III software, changes in patrons' needs over time, and changes in cataloging procedures and MARC coding, especially for Internet resources—would require continuous review and modification of the OPAC.

Issues to Consider

¶19 The ability to provide hotlinks to information of interest to a library's patrons via a Web-based OPAC allows catalogers to focus their efforts on access to materials in addition to the traditional description of materials.⁹ However, this capability is not without its challenges. Breeze's article offers the following overview of the issues to consider:

Close attention must be given to a variety of issues, such as whether to create separate bibliographic records for electronic versions of concurrent paper publications. Careful consideration should be given to what notes are needed, where they should display, and how they should be worded. How to represent the hotlink may be another issue. These are not trivial matters to libraries which strive for consistency and clarity in their online catalogs, and some solutions will depend on the particular library system being used.¹⁰

¶10 As the LAWPAC on the Web Advisory Committee took on the challenge of creating an OPAC that would both describe and access materials for the law library's patrons, three main categories of issues emerged for the committee to consider:

1. How will the law library provide access to Internet-based resources?

8. *Id.*, ¶ 11.

9. See Georgia Briscoe & Karen Selden, *Cataloging @ 2000: Over 100 Years of Change at the University of Colorado Law Library*, 30 CATALOGING & CLASSIFICATION Q. (forthcoming 2000).

10. Breeze, *supra* note 1, ¶ 12.

2. What Internet-based resources will the law library provide access to?
3. How will the law library display hotlinks to and information about specific Internet resources?

¶11 As mentioned earlier, the solutions to these types of issues are highly influenced by local needs, constraints, and resources. For this reason, there are no right or wrong answers to the questions posed above. In addition, the solutions that are chosen will need to be modified over time due to such factors as the adoption of new methods to improve patron access and information display, the revision of cataloging rules, and the development of new software enhancements. Indeed, the law library's *Policy Statement and Procedures for Cataloging Internet Resources* debuted as a four-page document in July 1998, but has changed countless times since to reach its current length (as of August 17, 2000) of ten pages. This document is truly a dynamic, ever-evolving "work in progress" that is constantly revisited and revised to meet the changing circumstances and needs of the library and its patrons. Because there are no perfect solutions to the issues encountered when a library begins to consider cataloging Internet resources, what follows are some ideas that librarians can consider as options when making policy and procedure decisions.

Access to Internet Resources: Web vs. OPAC

¶12 Librarians have three options for providing access to Internet resources. The first is to provide access through subject-oriented Web pages, linked to the automated catalog and maintained and updated by library staff. Although purists may not consider this method "cataloging," it does provide some basic organization of selected Internet resources for patrons. However, the maintenance of these Web pages often becomes laborious and time-consuming for library staff members. For example, staff members must select the Web sites to list, use html to create hotlinks to the sites, manually place these hotlinks into an organized, user-friendly scheme, and periodically manually check the hotlinks to make sure they are still functioning and accurate. In addition, this method requires patrons to look in two different "catalogs" to find information—the Web page to find Internet resources and the library's OPAC to find information in other formats. This splitting of resources by format (Internet vs. non-Internet) is inconvenient and nonintuitive for patrons.

¶13 The second option is to provide access to Internet resources at the "point of need"—directly from the bibliographic record retrieved during an OPAC search. This option overcomes the maintenance and "dual catalog" drawbacks of providing access via subject-oriented Web pages. For example, MARC fields are used for hotlink creation rather than html; one search can be performed in one catalog instead of two searches in two separate catalogs; and controlled vocabulary (most commonly the Library of Congress Subject Headings) is used for subject

access. Indeed, contributors to a November 1999 discussion on this topic held on the Autocat discussion list favored integrating Internet resources into the existing OPAC rather than creating or maintaining separate Web pages for Internet resources.¹¹ The main reason for this preference was to avoid the dual catalog problem mentioned above.

¶14 The third option is really a combination of these two methods, using the first option for some resources, and the second for others. However, library staff must think carefully about which items are accessed by which method if this approach is followed. Jim Mumm, acquisitions/serials librarian at Marquette University Law Library, thoughtfully explored the choices that this access option entails in a posting to the December 1999 AALL Professional Development discussion list entitled "The Technical Services Librarian of the 21st Century."

What [Internet resources] do we put in our catalog, versus what do we put on our home page?

Do we put every site that we link to in our catalog also on the home page? I would think not, because then we diminish the reason for the home page.

Do we want our home pages to be reflective of, say, only the most used or most highly regarded sites, and the rest get relegated to the catalog? Should the home page be reflective of sites the library considers the most significant or most immediately pertinent to its clientele? Who then makes that judgment call?

Perhaps we should put only sites that we consider not appropriate for the catalog on the home page. For example, a home page might have links to the state bar association, while the catalog would provide links to electronic titles from the association. Or, for another example, the home page might make a link to publisher sites, something you wouldn't put into the catalog.¹²

¶15 The law library employs this integrated approach to providing access to Internet resources for several reasons. First, the law library had already been providing Web pages with access to selected legal and nonlegal Internet resources since 1994. Because the hotlinks provided on these pages are consistent with Mumm's proposal—they link to Web sites that do not seem appropriate candidates for individual bibliographic records in the catalog but nevertheless contain important information—the committee wished to preserve the pages. Thus these Web pages, with hotlinks divided into broad categories, still exist and are accessed via the law library's home page.¹³ These Web pages include links to various

11. [C]ataloging Web Resources, available in Autocat: Library Cataloging and Authorities Discussion Group Archives (November 1999, Weeks 2 and 3) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>.

12. Jim Mumm <jim.mumm@marquette.edu>, *Re: TS Librarians—Smudging Lines*, Dec. 16, 1999, available in AALL Professional Development ListServ Completed Listserv Discussions (visited Aug. 16, 2000) <<http://www.aallnet.org/prodev/listserv.asp>>.

13. *University of Colorado Law Library Home Page* (last modified Apr. 7, 2000) <<http://www.colorado.edu/Law/lawlib/>>.

Internet Search engines as well as to comprehensive sites covering many legal and nonlegal topics, such as the Microsoft antitrust case, legal directories, tax forms, and GPO Access. As for individual documents available through the Internet, the committee wished to provide access to specifically selected ones and recognized the advantages of providing this access through individual bibliographic records in the OPAC. The committee felt that providing access to this type of item at the "point of need," as well as avoiding the "dual catalog" problem of maintaining a separate database, was ample justification for providing access to these resources via individual bibliographic records. Since this is an article about cataloging Internet resources, not creating Web sites, the remainder of it focuses on the issues encountered when providing access to Internet resources directly from bibliographic records in the OPAC.

Which Bibliographic Record to Use?

¶16 Once the decision has been made to use bibliographic records to provide access to Internet resources, librarians are faced with the choice of what type of bibliographic records to use. The two available options are the single bibliographic record approach and the multiple bibliographic record approach.

Single Bibliographic Record Approach

¶17 As its name implies, the single bibliographic record approach uses one bibliographic record to represent both the physical item and its Internet version. In this approach, the bibliographic record describes the physical item, usually in paper or microfiche format, and two MARC fields are appended to the bibliographic record to represent the Internet version of the title. The first is MARC field 530 (Alternate Format Information), a note field that explains that an alternate version of the resource exists. For example:

Also available via Internet, in Adobe Acrobat format, at: <http://www.usssc.gov.legist.htm>

The second field that must be appended is MARC field 856 (Electronic Location and Access), which contains the URL or PURL and creates the hotlink in the OPAC. This important field is discussed in more detail later.¹⁴

¶18 The first advantage of using the single bibliographic record approach is the ease of implementation. Catalogers and copy-catalogers can adapt an existing bibliographic record just by adding the two MARC fields mentioned above. If an existing bibliographic record is adapted, the considerable time and effort involved in creating a separate, and quite possibly original, bibliographic record for the Internet resource is saved. In addition, the Government Printing Office uses this

14. See *infra* ¶ 23.

method,¹⁵ so libraries that adopt this approach can accept MARC bibliographic records created by GPO catalogers with little or no editing. Obviously, this situation makes the single bibliographic record approach attractive to federal depository libraries.

¶19 A disadvantage of this approach is that the two MARC note fields that specifically describe and clarify an Internet resource's special aspects to the patron are missing, because these notes are used only in bibliographic records that describe electronic resources, including Internet resources. MARC field 516 (Type of Computer File or Data Note) describes the type of computer file or data found in the electronic resource. A common description for Internet resources is "Electronic text." MARC field 538 (System Detail Note) describes the system requirements and mode of access for electronic resources. For Internet resources, common notes are:

System requirements: Internet access

Mode of access: World Wide Web

¶20 A possible second disadvantage of the single bibliographic display approach depends upon the display conventions of a library's integrated library system software package. With some software, displays that clearly explain the existence of multiple versions of a resource (including the Internet version) may be difficult to create. For example, with some software neither the MARC field 530 note nor the hotlink created by the MARC field 856 will display prominently in the bibliographic record that a patron retrieves in the OPAC.

Multiple Bibliographic Record Approach

¶21 In the multiple bibliographic record approach, a separate bibliographic record is created to describe the Internet resource, even if a bibliographic record already exists in the catalog for the item in another format. The first advantage of this approach is that the bibliographic record actually describes the Internet resource, so patrons are clearly informed of the format of the item. In addition, the record contains the MARC note fields (MARC fields 516 and 538 described earlier) that are specifically meant to describe and clarify the Internet resource's special aspects for the patron. One disadvantage of this approach is the possibility of spending a great deal of time and effort creating many original bibliographic records for Internet resources. In addition, MARC records created by GPO catalogers for dual format items will require more local editing to remove MARC fields 530 and 856.

¶22 Because the University of Colorado Law Library is a selective federal depository and most of the URLs and PURLs in LAWPAC point to government

15. See Federal Depository Library Program, *GPO Cataloging Guidelines: Computer Files, No. 1A* (Nov. 1999) <http://www.access.gpo.gov/su_docs/fdlp/cip/cgcomp01.html>.

documents, the law library adopted the single bibliographic record approach. The decision was based upon expediency—using this approach means that little or no local editing is required when using MARC bibliographic records created by GPO catalogers.

MARC Field 856

¶23 Providing access to Internet resources via bibliographic records in the OPAC requires the use of MARC field 856. This field stores the URL or PURL of the Internet resource and creates the hotlink to the Web site that appears in the bibliographic record. In a perfect world, creating access to Internet resources would be no more difficult than accepting each MARC field 856 encountered during copy-cataloging or creating them in bibliographic records and then forgetting about them, as we do with much of the information in our bibliographic records. Unfortunately, using MARC field 856 to create access to Internet resources requires a commitment to local editing of the field for three reasons. First, MARC field 856 experienced relatively recent and significant changes. In July 1997, important indicator values were added,¹⁶ while the status of the field's subfield u (the subfield that stores the URL or PURL and is required to create a hotlink) was changed in January 1999.¹⁷ Originally repeatable, subfield u became nonrepeatable at that time, requiring that a separate MARC field 856 be created for each hotlink desired in a bibliographic record. Bibliographic records created prior to January 1999 usually require at least some local editing during copy-cataloging in order to meet current MARC standards and create useable hotlinks.¹⁸ In addition, ILS software differs widely on what MARC field 856 subfields display in an OPAC, as well as in what order the subfields appear. For this reason, it is imperative to know the display conventions affecting one's OPAC in order to format useable hotlinks and user-friendly displays of hotlinks and associated information. Details of the University of Colorado Law Library's experiences displaying MARC field 856 information in its III catalog are presented in the display considerations section of this article.¹⁹ Finally, URLs and even PURLs can and do change over time, requiring a commitment to periodic link checking and subsequent editing of the MARC field 856 in bibliographic records that contain faulty URLs or PURLs.²⁰

16. See NETWORK DEVELOPMENT & MARC STANDARDS OFFICE, LIBRARY OF CONGRESS, USMARC FORMAT FOR BIBLIOGRAPHIC DATA (1994 ed., update no. 3 (July 1997)).

17. See Machine-Readable Bibliographic Info. (MARBI), *Proposal No. 99-06: Repeatability of Subfield u (URL) in Field 856 of the MARC Formats* (Dec. 11, 1998) <<http://lcWeb.loc.gov/marc/marbi/1999/99-06.html>>.

18. See Karen Selden & Mary Strouse, *Most Commonly Used 856 Indicators and Subfields* (visited June 10, 2000) <<http://www.Colorado.EDU/Law/lawlib/ts/linking/856no1.htm>>. This document presents a concise listing of commonly used MARC field 856 indicators and subfields, as well as examples and explanations of the most frequently encountered editing changes.

19. See *infra* ¶ 36.

20. See *infra* ¶¶ 37–38 for an overview of the law library's link-checking process and experiences.

Enhancing Access within the OPAC

¶24 Once the decision is made to provide access to Internet resources via hotlinks in the OPAC, the next issue to confront is determining how to assist patrons in finding these resources within the OPAC. What follows are brief descriptions of five optional methods librarians can employ to enhance access to Internet resources within the OPAC. The first method (use of MARC Field 655) enhances retrieval of Internet resources, while the others (use of MARC field 246, item records, a general material designation [GMD], and MARC field 300 with a special material designation [SMD]) enhance format clarification for patrons. These five methods can be used in almost any combination—or not at all. MARC fields 246 and 655, as well as item records, can be added to any bibliographic record if so desired. However, a GMD and MARC field 300 with an SMD can only be added to bibliographic records that describe the Internet resource itself (in other words, these two options will seldom, if ever, be used if a library employs the single bibliographic record approach to cataloging Internet resources).

MARC Field 655

¶25 The LAW PAC on the Web Advisory Committee wished to devise a way for patrons to retrieve all Internet resources via an OPAC search. The committee decided to use MARC field 655 (Index Term—Genre/Form Field) for this purpose. Ideally, the terms used in this field would clearly describe the format of Internet resources for patrons. Although this field allows the use of unique, locally devised headings, the committee explored the officially recognized genre/form heading thesauri listed in the *USMARC Code List for Subject/Index Term Sources*²¹ for appropriate terms to describe Internet resources. Currently, the *Library of Congress Subject Headings* (LCSH) is the only officially recognized thesaurus that contains terms that describe Internet resources. However, the AALL Ad Hoc Committee on Genre Terms for Legal Materials, under the auspices of the Cataloging and Classification Standing Committee of the AALL Technical Services Special Interest Section, recently published a thesaurus of genre terms for legal materials.²² The Ad Hoc Committee's eventual goal is to have the thesaurus listed as an official source for genre terms in *The USMARC Code List for Subject/Index Term Sources*. The LAW PAC on the Web Advisory Committee submitted terms describing Internet resources to this project. Hopefully these or similar terms will become authorized for "official" use in the future.

¶26 In the meantime, the LCSH can be used as a source of genre/form terms, but care must be taken to avoid conflict between a LCSH term's use in MARC

21. Network Development & MARC Standards Office, Library of Congress, *The USMARC Code List for Subject/Index Term Sources* (visited June 10, 2000) <<http://lcweb.loc.gov/marc/relators/re9806su.html#top>>.

22. WILLIAM BENEMANN, *GENRE TERMS FOR LAW MATERIALS: A THESAURUS* (2000).

field 655 as a *format* descriptor and its use in a MARC field 650 (Subject Added Entry—Topical Term) to describe what the item is *about*. For this reason, locally derived, unique terms may be preferable. The LAW PAC on the Web Advisory Committee decided to use a combination of LCSH and locally derived terms in MARC field 655. The committee chose to use the following terms: Electronic journals (LCSH term); Internet resources (locally derived term); and Web sites (LCSH term). The terms “Internet resources” and “Web sites” are each placed in a separate MARC field 655 in every bibliographic record that contains a MARC 856 field. The term “Electronic journals” is placed in an additional MARC 655 field in bibliographic records that contain hotlinks to serials with Internet-accessible full-text articles (mainly law reviews and law journals). Thus, a subject search using the term “Electronic journals” will retrieve all bibliographic records that contain hotlinks to Internet-accessible full-text articles, while subject searches using “Internet resources” or “Web sites” retrieve all the Internet resources in the law library’s catalog. Although “Electronic journals” and “Web sites” are LCSHs, the committee decided to use them in the MARC 655 field for two reasons. First, these terms were the best terms available to accurately and succinctly describe these resources. Second, currently no bibliographic records in the law library’s catalog use “Electronic resources” in MARC field 650, and “Web sites” is always qualified by an appropriate subdivision, such as “Design” or “Directories,” when used in a MARC field 650. Thus, the unmodified term “Web sites” is reserved for use as a format designator in MARC field 655. However, using these two LCSHs does mean that the law library’s cataloger and copy-catalogers must be alert whenever these two terms appear in MARC field 650 in new bibliographic records. If these terms occur in MARC field 650, they will be appropriately modified with authorized subdivisions to distinguish them from the designated format descriptor terms used in MARC field 655.

MARC Field 246

¶127 The first method to enhance format clarification for patrons is to add MARC field 246 (Varying Form of Title) to every bibliographic record that contains a MARC field 856. If a full-text Internet-based version of an item is available, the law library’s policy is to add a MARC field 246 that contains the title of the item followed by the qualifier “(Online).” For example:

245 00 Title of item

246 3b Title of item (Online)

If relevant related material is available via the Internet, the qualifier will be altered to reflect the type of material. Qualifiers such as “(Online index),” “(Online forms),” and “(Online bibliography)” will be used after the item’s title in field 246.

¶128 Unfortunately, in the law library’s III system, the parentheses are not displayed to the patron on the search results screen (for example, the search result screen will display: Title of item Online; or Title of item Online forms). Although

this display does not clarify the format as much as the committee would have liked, it gives the patron an idea that the item on the results screen is related to "online" or "Internet" information.

Item Records

¶129 A second method of format clarification is adding an item record for the Internet resource to the bibliographic record. Appendixes A and C illustrate item record displays in two bibliographic records from LAWPAC. Appendix A is an example of the LAWPAC display for an Internet resource available only on the Internet. Appendix C is an example of the LAWPAC display for an item that is available in paper and on the Internet. The MARC coding for these two records is also provided, in appendixes B and D, respectively, to more clearly illustrate the law library's construction of MARC fields 246, 516, 530, 538, 655, and 856.

¶130 The LAWPAC on the Web Advisory Committee used each of the three publicly displayed sections of the III item record to clearly alert patrons that the item exists on the Internet. First, the committee created a location of "LAWPAC" to make clear to patrons that these items are available at the LAWPAC terminal rather than in the stacks of the library. Second, the item's classification number is masked by the phrase "Internet (Click on the hotlink above)." In the law library's III catalog, the hotlink always appears above the first item record, and the committee wanted to direct patrons to this hotlink. In appendix C, the bibliographic record for both the paper and Internet versions of a resource, note that the item record for the Internet version is positioned above the item record for the paper version. This positioning of the item records is intentional, to assure the Internet item record is always closest to the hotlink. Finally, the committee created a status of "ONLINE" (as opposed to the typical "NOT CHECKED OUT"²³) to further clarify the fact that this particular item is not available in the stacks. The goal is to prevent on-site patrons from making a futile trip into the stacks in search of an Internet resource, and to alert patrons accessing the catalog from outside the law library that there is no need to travel to the library to retrieve this resource because it is just a mouse-click away.

General Material Designation

¶131 Another method of format clarification is an unauthorized practice *not* adopted by the law library. In this method, a locally devised general material designation is placed in subfield h of MARC field 245 (Title Statement). Currently, the authorized GMD for Internet resources is "computer file," which many librarians feel is not intuitive to patrons looking for Internet resources. In this method, "electronic resource" or a similarly descriptive phrase is substituted for "computer

23. Actually, the display used in the law library's catalog is "NOT CHECKD OUT" because there are not enough spaces in this field to properly spell the word "checked."

file.” Library catalogs that employ this method include those at the Auburn University Libraries²⁴ and the Utah Valley State College Library.²⁵ In addition to being an unauthorized practice, this method can only be used if the bibliographic record represents the Internet resource itself. For this reason, libraries that employ the single bibliographic record approach to cataloging Internet resources would rarely, if ever, need to use a GMD to describe Internet resources. Although substituting another phrase for “computer file” is currently an unauthorized practice, the Joint Steering Committee for Revision of AACR is currently preparing a discussion paper on the future of the GMD.²⁶ One of the issues under consideration is the replacement of the term “computer file” with the term “electronic resource,”²⁷ a change that will probably be published sometime in 2001.²⁸

MARC Field 300 and SMD

¶132 The final method of format clarification is also an unauthorized practice that has *not* been implemented at the law library. This method involves adding MARC field 300 (Physical Description), with a locally devised special material designation in subfield a, to the bibliographic record for an Internet resource. Currently, MARC field 300 is not authorized for use in a bibliographic record that describes an Internet resource itself. The reason for the omission of this MARC field is that Internet resources technically cannot be physically described since they do not exist in a physical format. However, proponents of this method feel that using an SMD such as “Electronic resource,” or a similarly descriptive phrase, helps the patron know that the bibliographic record represents an Internet resource. They feel the information it provides is intuitive and useful for patrons. However, just like the unauthorized GMD method described earlier, this method will be of little use to libraries that employ the single bibliographic record approach to cataloging Internet resources because it can only be used if the bibliographic record represents the Internet resource itself.

Selection of Resources

¶133 As mentioned earlier, a library’s local needs and circumstances will highly influence the choice of Internet resources to be made accessible through its catalog. For example, because the law library is a selective federal government document

24. Auburn Univ. Libraries, *AUBIE Plus* (visited June 10, 2000) <<http://www.lib.auburn.edu/>>.

25. Utah Valley State College, *Library* (visited June 10, 2000) <<http://www.uvsc.edu/library/>>.

26. See John Attig <jca@psulias.psu.edu>, *GMD*, June 3, 2000, available in Autocat: Library Cataloging and Authorities Discussion Group Archives (June 2000, Week 1) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>.

27. See Wee Joo Gim <cblweejg@leonis.nus.edu.sg>, *GMD*, June 3, 2000, available in Autocat: Library Cataloging and Authorities Discussion Group Archives (June 2000, Week 1) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>.

28. See Attig, *supra* note 26.

depository, many of the hotlinks in its catalog are to the Internet versions of GPO documents. Another decision made by the LAWPAC on the Web Advisory Committee was to generally provide hotlinks only to full-text documents. The few exceptions include Web-based material such as indexes, bibliographies, or supplements related to specific items in the catalog, especially if the related material is not available in printed format.²⁹ A perfect example of this type of resource is the Web-based cumulative index to *CQ Weekly*.³⁰

¶34 Web sites with no print or hardcopy versions, such as *Famous American Trials*³¹ or Seattle Public Library's *Municipal Codes Online*,³² are subject to the same collection development review process as books, videos, audiotapes, microforms, or any other hardcopy materials. According to a recent Autocat survey, this procedure for selecting resources only available on the Internet is typical. In March 2000, Pat Tully of Gettysburg College summarized responses she received when she queried Autocat subscribers for their criteria for selecting free Web sites to catalog.³³ While the respondents generally supported the idea of using the same selection criteria and procedures for Internet resources as for other resources in the collection, the LAWPAC on the Web Advisory Committee was especially intrigued by an idea presented by one respondent to use OCLC's new Cooperative Online Resource Catalog service (CORC)³⁴ as a source of possible Web sites to catalog. CORC's resource catalog database, a component of the CORC service, contains only records of electronic resources, having been "seeded in January 1999 with approximately 100,000 records from NetFirst, 73,000-plus records from the InterCat project and records in WorldCat that have an 856 field."³⁵ The assumption expressed in the Autocat posting was that if someone else had evaluated these Web sites and found them useful enough to catalog, they must be worthwhile Web sites to include in a research library's catalog.³⁶

29. The law library's catalog does not link to author biographies, abstracts, purchasing information, or other Internet resources tangentially related to a hardcopy resource in the catalog.

30. Congressional Quarterly, *CQ Library* (visited June 12, 2000) <<http://libraryip.cq.com/library/help/cqindex.html>>.

31. Doug Linder, *Famous American Trials* (visited June 12, 2000) <<http://www.law.umkc.edu/faculty/projects/ftrials/ftrials.htm>>.

32. Seattle Public Library, *Municipal Codes Online* (last modified Apr. 25, 2000) <<http://www.spl.lib.wa.us/govpubs/municode.html>>.

33. Patricia A. Tully <ptully@gettysburg.edu>, *Summary: Criteria Needed for Cataloging Free Web Sites*, Mar. 21, 2000, available in Autocat: Library Cataloging and Authorities Discussion Group Archives (March 2000, Week 3) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>. Tully provides a very thorough, accurate, and useful summary of the criteria, and even includes links to forms used by libraries to rate and select Internet resources.

34. OCLC, *Cooperative Online Resource Catalog* (visited June 12, 2000) <<http://www.oclc.org/oclc/corc/index.htm>>.

35. Regan W. Harper, *OCLC CORC Service: How It All Works*, ACTION FOR LIBR., June 2000, at 2, 2.

36. See Tom Sanders <sandetr@groupwise1.duc.auburn.edu>, *Criteria Needed for Cataloging Free Web Sites*, Mar. 16, 2000, available in Autocat: Library Cataloging and Authorities Discussion Group

¶135 In late March 2000, the law library's acquisitions assistant performed subject searches in CORC's resource catalog database for subject areas in which the library collects heavily: administrative law; environmental law; immigration law; Native American law; and natural resources law. While some interesting and useful Web sites were found using this method, the experience did not validate the assumption that just because a Web site is cataloged, it is worthy of inclusion in a research library's catalog. First, an initial examination of records in CORC's database revealed some instances of outdated coding in MARC field 856, probably due to the many older records for Internet resources used initially to "seed" the database. Thus older records are included in the database even though the database itself is relatively new. Additionally, checking the URLs in the records retrieved revealed that approximately 15 to 20 percent were dead links, probably also due to the age of some of the records included in the database. Finally, a surprising number of URLs pointed to corporate Web sites, such as law firms specializing in a certain area of law. The lesson to be learned from the law library's experience with CORC's resource catalog database is that no matter how many sources exist to garner ideas for Internet resources to catalog, librarians must still use some criteria and a local collection development policy to separate the "wheat from the chaff." Pat Tully's summary includes some specific criteria for librarians to consider when evaluating Internet resources. Content criteria include curriculum support, authority, accuracy, objectivity, currency and timeliness, and uniqueness of content; other criteria are ease of use, accessibility, cost and copyright considerations, software and hardware requirements, and stability of the site.³⁷

OPAC Display Considerations

¶136 How will the law library display hotlinks to and information about specific Internet-based resources? The answer to this question is completely dependent upon the capabilities of each library's ILS software. Fortunately for the law library, III's software provides a variety of public display options for MARC field 856. In III's Release 12, Revision M, released in May 1999, the introductory text that appears above the hotlink became completely customizable, and each library could choose which 856 subfields to display, and in which order. The LAW PAC on the Web Advisory Committee decided the hotlinked URL or PURL from subfield u in each MARC field 856 would always be the first piece of information to display. The hotlinked URL or PURL is followed by the text in two other subfields, if present: subfield 3 (Materials specified) [for example, Vol. 60 (1995)] and subfield z (Public note) [for example, Adobe Acrobat Reader

Archives (March 2000, Week 3) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>.

37. Tully, *supra* note 33.

required]. The phrase used to introduce the URL or PURL was customized to fit this new display format:

Click on the following to connect to:

In addition, experimentation led to the discovery that the text in subfields 3 and z can be displayed, in most cases, in separate, nonhotlinked boxes below the hotlinked URL or PURL.³⁸

Link Maintenance

¶137 Because URLs, and even PURLs, can and do change over time, committing to providing hotlinks in a catalog also means committing to performing link maintenance. The link checking and maintenance process consists of four basic steps and is not particularly complex, so trained support staff can perform it. First, a list of URLs and PURLs in the catalog must be created. The next step is to convert these URLs and PURLs to html in order to create hotlinked URLs and PURLs. A number of software programs can perform this function, including Word, but the law library uses freeware called MarcXGen, created by Tom Tyler of the University of Denver Library.³⁹ Next, the hotlinked URLs and PURLs must be run through link-checking software to find broken links. Again, a great number of software programs exist to perform this function, including MS FrontPage and Xenu, the law library's current choice. A great source to find and download freeware for this purpose is CNET.com,⁴⁰ which reviews the products that are available. Good news for libraries using III software is that III now offers Web Access Management (WAM) as part of its Millennium package. WAM includes a link-verifying system that condenses the first three steps of the link-checking process.⁴¹

¶138 Finally, one must manually investigate and correct the broken links that the link-checking software reports. Depending upon the number of URLs and PURLs listed in the report of possible broken links, this "sleuthing" step is usually the most time-consuming part of the entire process. Since many of the law library's hotlinks are to GPO items, some of GPO's Web sites, such as *New Electronic Titles*,⁴² *Catalog of U.S. Government Publications*,⁴³ and *GPO*

38. See *infra* appendix C and its accompanying MARC coding in appendix D for an example of these display features; University of Colo. Law Library, *Policy Statement and Procedures*, *supra* note 4 (presenting detailed procedures used by law library to create these displays).

39. Tom Tyler, *MarcXGen—Marc URL Extractor and HTML Generator* (visited Aug. 17, 2000) <<http://www.du.edu/~tyler/freeware/marcxgen.zip>>.

40. CNET.com (visited June 12, 2000) <<http://cnet.com/>>.

41. See Mary Strouse & Tom Tyler, *Maintaining Hyperlinks in the WebPac: Tools and Tradeoffs* (visited Aug. 17, 2000) <<http://www.du.edu/~tyler/iug2000/>>.

42. U.S. Gov't Printing Office, *New Electronic Titles: A GPO Access Finding Aid* (visited Aug. 21, 2000) <http://www.access.gpo.gov/su_docs/locators/net/index.html>.

43. U.S. Gov't Printing Office, *Catalog of U.S. Government Publications* (visited Aug. 17, 2000) <http://www.access.gpo.gov/su_docs/locators/cgpp/index.html>.

Access,⁴⁴ are used to aid this investigative work. Once the correct URL or PURL is found, it must replace the faulty URL or PURL in subfield u of MARC field 856 and in MARC field 530 or 538, as appropriate.

¶139 In January 2000, the Cataloging Committee of the American Library Association's Government Documents Round Table (GODORT) began their monthly *GPO PURL Alert*⁴⁵ service. These monthly lists contain information on titles for which GPO catalogers have added a PURL during the previous month. The list is useful for libraries wishing to add PURLs to bibliographic records already in their catalogs. In February 2000, the law library amended its link-checking procedures to make checking for new GPO PURLs using *GPO PURL Alert* the final step in the monthly link-checking process. In general, the law library finds five to ten broken links per month, and the entire process, including checking *GPO PURL Alert* for new GPO PURLs, takes less than two hours to complete.

Conclusion

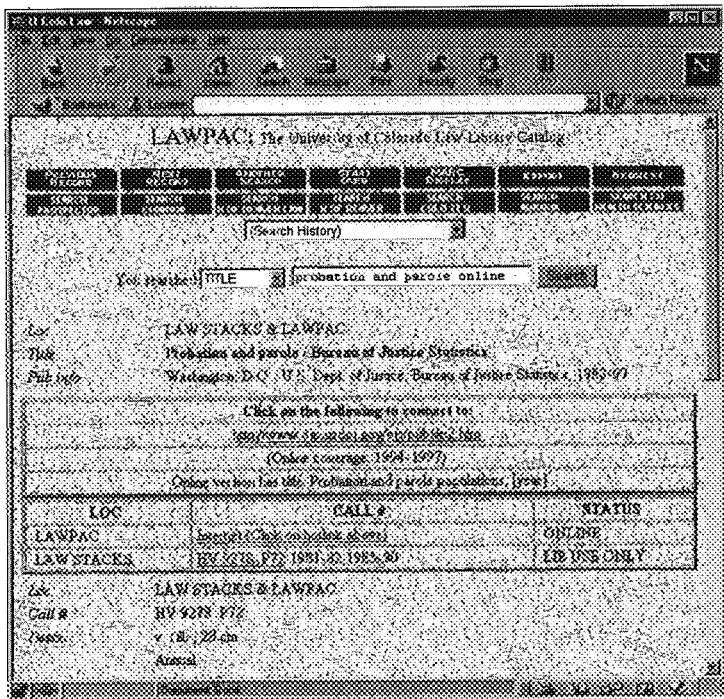
¶140 The words "local" and "commitment" have appeared often and prominently in this article. Providing access to Internet resources, which link to information literally anywhere on the globe, involves a tremendous amount of local decision making, customization, and coping with constraints. It also entails a great deal of time and effort. Making such a commitment means regularly re-examining and readjusting policies and procedures to fit changing circumstances, consistently editing bibliographic records to enhance display of and access to these resources, and regularly performing link maintenance procedures. Before one becomes overwhelmed and discouraged by the prospect of providing access to Internet resources, consider the advice Ed Summers of Old Dominion University contributed to an Autocat discussion on cataloging Internet resources. In fact, this advice is appropriate anytime one is meeting a challenge in life: "Good luck! I guess the main thing is not to be afraid to experiment, but not to make too much of a mess."⁴⁶

44. U.S. Gov't Printing Office, *GPO Access: Official Federal Government Information at Your Fingertips* (visited Aug. 17, 2000) <http://www.access.gpo.gov/su_docs/>.

45. Government Documents Round Table Cataloging Comm., Am. Library Ass'n, *GPO PURL Alert* (visited June 12, 2000) <<http://www2.lib.udel.edu/godort/cataloging/alert/>>.

46. Ed Summers <esummers@ODU.EDU>, *Cataloging Internet Resources*, Jan. 13, 2000, available in Autocat: Library Cataloging and Authorities Discussion Group Archives (January 2000, Week 2) (visited Aug. 16, 2000) <<http://listserv.acsu.buffalo.edu/archives/autocat.html>>.

Appendix C



Appendix D

