

IU Libraries OLE Discovery Layer Task Force  
Summary Report & Recommendation

June 1, 2011

Prepared for the Council of Head Librarians

The IU Libraries OLE Discovery Layer Task Force reviewed the candidate applications (Blacklight and VuFind) for a new public interface for IUCAT, in terms of how each best supports discovery for the IU Libraries. The Task Force created a rubric of core functionality required by all campuses in a catalog user interface, organized into several broad areas: Account Management & Authentication; Export & Share; Search Functionality & Results Display; and General Features & Functionality. Criteria have been designated as required, highly desirable, or desirable, and each product has been reviewed and rated according to the rubric (attached as an appendix).

### *High-level Principles Informing Decision-Making*

- Scalable, flexible architecture that accommodates the multi-campus/multi-library structure of IU and has the potential to accommodate future needs
- Robust development community which prioritizes collaboration on a shared code base
- Maintain baseline functionality present in current IUCAT interface
- Meet user expectations for easy-to-use, attractive interface with powerful search & browse capabilities
- Seamless transitions for users (authentication, account management, export & share records)
- Increased ability to manipulate and share catalog data and to integrate non-MARC metadata

### *Discovery Layer Recommendation*

Based on the rubric and the preceding high-level principles, **the Task Force recommends that Blacklight be selected as the new discovery interface for IUCAT.**

While either candidate system is capable of fulfilling our requirements at a baseline level, Blacklight was considerably stronger in the two areas we believe to be the most crucial to the long-term success of the project:

- Robust development community which prioritizes collaboration on a shared code base
  - There is evidence that VuFind's code base is splintered (that is, many institutions have pursued local customizations which have not been widely implemented and thus have "branched" the code). This would negate many of the advantages of participating in that open source community.
- Scalable, flexible architecture that accommodates the multi-campus/multi-library structure of IU and has the potential to accommodate future needs

- Blacklight's architecture allows for the construction of custom views for data, thus permitting its use as a discovery layer to facilitate access to a wide variety of formats and for diverse purposes: for example, the IU Digital Library Program Scherzo project (<http://vfrbr.info/search>); UVA Art Museum Numismatic Collection ([http://coins.lib.virginia.edu/results?q=\\*.:](http://coins.lib.virginia.edu/results?q=*.)); WGBH's OpenVault (<http://openvault.wgbh.org/>); and NC State's Historical State project (<http://historicalstate.lib.ncsu.edu/>).

Examples of mature implementations of Blacklight as a library catalog discovery layer include the following:

- At the University of Virginia Library, they have developed a customized view for searching music in their VIRGO Blacklight catalog: <http://search.lib.virginia.edu/catalog?portal=music>
- The University of Wisconsin's Blacklight implementation, Forward, focuses on providing access to resources in an environment of multiple campuses: <http://forward.library.wisconsin.edu/>
- Stanford University's SearchWorks is a model for Unicode: <http://searchworks.stanford.edu/>

### *Additional Recommendations*

As we have mentioned, either candidate system is capable of fulfilling our requirements at a baseline level. The most crucial challenge arises in integrating the discovery layer with our existing infrastructure, both within the libraries and with University-level partners (UITS, etc).

Ultimately, public acceptance of the new interface for IUCAT and for the OLE project is dependent upon our ability to integrate with existing local systems used to facilitate identity management, to provide critical patron services related to account management, such as request delivery, holds management, renewals, etc., and to facilitate off-campus access to campus-specific electronic subscription-based resources.

The IU Libraries OLE Discovery Layer Task Force strongly recommends that, as part of the overall strategy for implementation, a task force be appointed and charged to develop an action plan for implementation of essential authentication and account management functionality, as defined in the appendix. In their work, this group must address the coordination of the various components (University departments & units, current and potential software, user expectations and needs) necessary to launch a successful product serving multiple IU campuses, including Fort Wayne. The overall project timeline requires that recommendations in this area be implemented as part of the alpha release of the discovery interface which is, as we understand, scheduled for fall semester 2011; the work of the authentication/account management task force must be completed by September 1, 2011.

### *Task Force*

The task force was appointed and charged in January 2011. Through a series of conference call meetings, we articulated criteria to be included in the rubric of functionality, then organized these criteria into several broad areas, as defined above. The task force divided into smaller sub-groups to

carefully review each area and prioritize the criteria for each. Finally, as a group, we determined our overall ratings of each candidate system and reached consensus on our recommendation. This final report was forwarded to the Council of Head Librarians in June 2011. The task force has also retained a more detailed document further articulating specific requirements for the use of groups charged with implementation.

Courtney Greene (chair), IUB  
Barbara Gushrowski, IUPUI, IU School of Dentistry  
Randy Lent, IUB  
Chris Long, Indiana University School of Law – Indianapolis  
Mary Beth Minick, University Library, IUPUI  
Kate Moore, IU SE  
Gwen Pershing, IUB  
Mary Popp, IUB  
Sue Skekloff, IPFW

## Appendix: Rubric for Core Functionality

### A. General Features/Functionality

This section provides required and desired features and functionalities of the overall interface of the discovery layer as well as features and functionalities not easily classified under the other four rubric categories.

The following specifications are **required** for implementation:

- The ability to create indexes within the discovery layer itself, independent of the indexes created and maintained within SirsiDynix. This allows for the assembling of data for any number of custom views.
- The ability to assemble custom views based on one or more descriptors or set of descriptors (location [campus, library, group of libraries], format, etc.).
- The ability to provide persistent, stable access to each custom view individually, or as a group or groups.
- The underlying technology of the discovery layer must be scalable, having the flexibility and capacity to be adapted to future developments and functionality.
- Robust development community which prioritizes collaboration on a shared code base.
- Interface must appeal to users of commercially popular sites like Amazon, Netflix, etc.
- Interface must readily accessible to persons with disabilities, defined as being ADA-compliant and compatible with major screen readers and other commonly used accessibility software.
- Must be Unicode compatible, allowing both search and display of Unicode scripts.
- Must be OpenURL compliant, enabling linking from subscription databases to bibliographic records in OLE IUCAT.
- Must have the ability to integrate non-MARC metadata from local collections (e.g., digital image and text collections and institutional repositories) into its central index. Local collection data in a variety of formats, including TEI, EAD, and DCMI should be able to be searched and ranked with bibliographic MARC records.
- Must have an interface that is optimized for use on various mobile devices.
- Records and searches must have a permanent and stable URL.
- The ability to customize the display of MARC fields for specific campuses or libraries, and for bibliographic record views (i.e. having a "simple" and full record view). End-users must have the ability to customize the display of MARC fields for bibliographic records. Librarians must have the ability to determine which fields appear in the various displays.
- Allow the inclusion of other data sources alongside or integrated with catalog results and on bibliographic record display to permit flexibility in implementation from campus to campus. (Hathi Trust, Google Books, WorldCat, etc.)

The following specifications are **highly desirable** for implementation:

- Provide campus-specific links to consult with a librarian from that campus via multiple methods (chat, phone, in-person, etc.).

- Users should be able to tag records with their own descriptors. These descriptors would then be searchable by any user through the main interface. The ability for users to comment on, describe, and/or rate resources would also be desirable.

## B. Account Management & Authorization

Many of these functions are highly reliant upon the underlying ILS, and are crucial to maintaining a baseline level of patron services. The Task Force feels that these functions should be first be ported in from SirsiDynix and later provided by the circulation module/functions within OLE, currently to be developed.

Ultimately, public acceptance of the new interface for IUCAT and for the OLE project is dependent upon our ability to integrate with existing local systems used to facilitate identity management, to provide critical patron services related to account management, such as request delivery, holds management, renewals, etc., and to facilitate off-campus access to campus-specific electronic subscription-based resources.

The following specifications are **required** for implementation of the new OLE discovery layer:

- Account management services and access to personal information, such as request delivery, holds management, ALF Requests, renewals, materials checked out ("My Account").
- Ability to integrate with technologies enabling single sign on for login to IUCAT services (My Account, tagging, lists, etc) and off-campus access to online resources.
  - Alignment with University authentication services (e.g., EZProxy, InCommon) to provide these services.
- Secure transfer of personal data.
- Persistent session (ability to authenticate mid-stream without having to recreate search).
- Guest access to search.
- Individual patrons may review
  - materials checked out to their accounts (including author, title, due date, recall due date, and status; overdue, claims returned, missing, etc.).
  - materials on which they have placed holds/requests (including author, title, available status, pick up library, and expiration date)
  - current status information for holds/requests through "my account"; requested, in transit, etc.
- Individual patrons may renew all or a selected subset of the materials that are checked out to their accounts and eligible for renewal, with an on-screen confirmation. List should include author, title, and due date.
- Individual patrons have the ability to place a hold/request on an item that they desire, with an on-screen confirmation. They are able to specify the pickup library where the requested item should be sent for pickup and to specify a date after which the item is no longer needed, if desired.
- Individual patrons may cancel all or a selected subset of the materials that they have placed holds/requests on, with an on-screen confirmation.

The following specifications are **highly desirable** for implementation:

- Individual patrons may review current status information for holds/requests on ALF items through “my account” (including author, title, available status, pick up library, and expiration date).
- Individual patrons may indicate (yes/no check box) on holds/requests if the request should be referred to ILL if a copy is not available within the IU System.

The following specifications are **desirable** for implementation:

- Individual patrons may send a list of checkouts or holds to an email address.

### C. Export & Sharing

The following specifications are **required** for implementation:

- Ability to create multiple lists of resources (both public, shared lists and private lists).
- Data must be formatted such that it can be shared with multiple systems, such as Zotero, other web-based citation services, ILLiad, etc.
- Export records to citation software (Endnote, Refworks, & other citation software, etc)
- Print/Email/Save function, with ability to select multiple items from multiple points in the search process (bibliographic record, search results screen). Results must be delivered in a user-friendly format (no codes, for example).
- Text call number & item data to major cell phone providers.
- Provide RSS feeds for searches, new titles.
- Generate properly formatted citations for major styles (Chicago, APA, MLA).

The following specifications are **highly desirable** for implementation:

- Share records or lists via common social networking applications (Twitter, Facebook, etc).
- Catalog data made directly available as a web service (API).

The following specifications are **desirable** for implementation:

- Ability to sort lists by different criteria (format, title, author, pub date, subject, etc) and to add user-generated data (tags, descriptions, comments).
- Embed QR codes for each item record.

### D. Search Functionality & Results Display

#### General Search Functions

The following specifications are **required** for implementation:

- Ability to sort search results by relevancy, call number, date published (descending or ascending), date received, author A-Z or Z-A, or title A-Z or Z-A.
- Search ignores stopwords (a, an, as, at, be, but, by, do, for, if, in, is, it, of, on, the, to) in major languages, but allows them to be searched with use of punctuation.

- Faceted searching, including but not limited to: author, title, subject, format, publication year, publication place, language, genre, library, library location, call number type (LC, NLM, SuDoc, Dewey), time periods (era). Should have the ability to apply multiple facets, to view the selected facets, and to remove the facets on the search results screen.
- Suggests alternate spelling for a search in English (“Did you mean...?”).
- Option to revise search on the search results screen, the bibliographic record and the browse result screen.
- Headings (subject and name) are clickable in order to redirect the search from the bibliographic record.
- Allow for truncation replacing more than one character. Must be used at the end of a word but may specify the number of characters to be found.
- Allow for truncation replacing one character, either in the middle or at the end of a word.
- Allow the use of Boolean operators (and, not, or) when constructing a search, and allows them to be searched with use of punctuation.
- Search by call number for a single library.
- Ability to display contextual information (e.g., help) on search results, bibliographic record and browse result screens.

The following specifications are **highly desirable** for implementation:

- Ability to search within search results from the search results screen.
- Ability to boost the importance of a word by use of punctuation.
- Search History capability with an option to save, edit and re-execute the search.
- Search by call number for more than one library.
- Allow for phrase searching using punctuation (e.g., paired single quotes to enclose a phrase) and inclusion of standard positional search operators (adj, same, with, near) when constructing a search.
- Allow the use of a number with standard positional operators to specify how many words apart the two terms can be.
- Allow for searching within a particular field of a record by using punctuation or field name/code.
- Nest terms by using punctuation such as parentheses ( ). Adding parentheses to a search tells the computer in which order keywords should be searched. Without parentheses, the computer will search the most specific operator first. The sequence from most to least specific is: adj, near, with, same, and, not, or.

### Search Screens

The following specifications are **required** for implementation:

- Single search box on screen (with access to advanced search) that performs a keyword search using an index defined by librarians.
- Ability to limit searches to a library, a group of libraries.
- Ability to set default search limits or screens to each regional campus library or professional school.
- Ability to perform searches that can be limited to criteria such as home location, classification scheme, type of medium, format, collection, language.

- Ability to select a field to search including: author, title, LC Subject, Medical Subject, Kinsey Subject, issn, isbn.
- Ability to perform an advanced keyword search where more than one field can be searched.
- Ability for programmers to add additional search boxes, defined by librarians, on advanced search screen in order to show some fields to search (i.e. Kinsey subject headings, medical subject headings).
- Ability to limit searches to a library, a group of libraries, location, format, type of medium (VHS, DVD etc.), collection, or publication year, language, publisher, series subject.
- Ability for patron to add search boxes (and to choose field to search from a drop down menu).

The following specifications are **highly desirable** for implementation:

- Ability to perform searches that can exclude criteria such as home location, classification scheme, type of medium, format, collection, language.

### Browse Search Functions

The following specifications are **required** for implementation:

- Option for browse searching by author, title, periodical title, series, and subject (including LC subject, Medical Subject Headings, Kinsey subject headings) or call number using indexes defined by librarians.
- If the Browse search does not find a match for the word(s) entered, it places you in the alphabetical sequence of entries nearest the place your entry would occur if it were there.
- On the browse screen results, display the number of records associated with that heading
- Clicking on a heading on the browse result screen will result in the search result screen if there is more than one record associated with that heading. These results may be sorted and may be limited by facets.
- Clicking on a heading on the browse result screen will result in the bibliographic record if there is only one record associated with that heading.

The following specifications are **desirable** for implementation:

- See related headings should appear on browse search results.

### Search Results

The following specifications are **required** for implementation:

- Display item format (text, icon, etc.) on the search result screens and the bibliographic record.
- Display the item number (3 of 243) and the search terms at the top of the page on the bibliographic record.
- On keyword search results screens, display the number of pages of results, identify the number of the page the user is viewing, and allow users to move to a specific results page.

- Ability to move forward and backward using browser buttons through search result screens, browse result screens (if available) and bibliographic records.
- Ability to request a book and designate pick-up location and to recall an item (for those libraries that provide that service) from the bibliographic record screen.
- Search terms should be highlighted within results for easy scanning.
- Ability to display the call number of each item for each location on the search results screen.

The following specifications are **highly desirable** for implementation:

- Recommend materials based on call numbers or other borrower's data on the bibliographic record similar to Amazon.
- Display book jackets on the search result screens and the bibliographic records. If "No image is available" for the book jacket don't have an image on the search results screen or the bibliographic record; this may require pursuing a subscription service that provides this data.
- Ability to browse table of contents or first chapter from the search results screen and the bibliographic record screen.
- Includes a link to "Return to Search Results" and start a new search on the bibliographic record screen.
- Display similar items in the same call number range on the bibliographic records screens.
- Ability to link an item to a library map or campus map from the bibliographic record.