

Discovering a New IUCAT

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After over two years of preparation and development, at the end of this semester the primary interface for IUCAT will transition from the current SirsiDynix Symphony OPAC to the new discovery layer interface powered by Blacklight.

Discovery layers and next-generation catalogs are terms often used interchangeably to describe library services that offer access to a greater diversity of sources than those represented within the traditional OPAC, all with features and functionality similar to commercial products like Amazon, Google, and Facebook. The shift to discovery is more than just swapping out products; it's a sea change in the underlying philosophy of *what the interface is meant to do*.

I'd like to take a moment or two to consider the fundamentally different underpinnings of a discovery layer like Blacklight and a traditional Integrated Library System (ILS) OPAC like Symphony by considering how they support two overarching, and sometimes opposing, goals of search: precision and recall. To briefly define the terms, precision could be expressed as "hitting the bulls-eye," or effectiveness in retrieving exactly those results that are relevant or related. Recall would be the completeness of the related results retrieved: if you are fishing, recall would be the certainty that you have every single fish in the pond in your bucket— you can always throw some back later.

Traditional OPACs are integrated parts of their ILS and thus have full access to all the functions of the system including data structures such as authority records, left-anchored browse searches and circulation status, but as we know traditional ILS products have varying degrees of transparency around how results sets are ordered and variable degrees to which they can be altered or customized. Traditional OPACs tend to lean toward prioritizing precision in search & retrieval.

Blacklight is powered by Apache Solr, an open source search platform also used by VuFind, HathiTrust, Open Library, and Open Folklore. The technical details are out of scope for this article (phew, right?), but the big takeaway is that this approach is all about indexing large sets of data (metadata or full text or both) and then assembling results based on relevancy. Relevancy calculation is customizable and prioritizes data appearing in indexed fields¹; beyond that, we can adjust the "boosting" as well. We also map against particular data points and create facets such as Format, Publication Year, or Library—these facets are more like a report of the contents of our catalog than anything else, although we can use them to easily filter results sets. This orientation towards robust indexing and customizable relevancy supports powerful search and retrieval with

¹ A more concrete example: in the new IUCAT, the subject index includes several MARC 6xx fields and selected subfields; a subject search is executed against the primary subject index as well as a secondary subject index (which includes more subfields). When we return the results for a subject search, we "boost" the relevancy of records with term matches in those various 6xx fields, then do a lesser "boost" for records including the search term in other important fields, AKA fields that appear in another index such as title, author or series. A record including the search term in a Contents field would still be returned, but would not be ranked as high. For those who speak MARC, the full index properties document for the new IUCAT can be accessed via SharePoint at <http://go.iu.edu/77i>

an emphasis on recall—in this paradigm, precision comes later when the user adds terms or employs filters to narrow a results set. One significant and valid concern about discovery systems such as Blacklight is their lack of support for structured data (authority records, etc., as mentioned previously). This is too large a topic to cover in this article but is a priority for future development.

What then are some concrete positives for us as we transition from IUCAT Classic (the current SirsiDynix Symphony OPAC) to the new IUCAT? To begin with, we'll gain considerably on what I like to think of as "modern conveniences":

- We can finally *just use the back button*.
- Cite this—immediate formatting into MLA, APA, and Chicago style. Often, it's quite correct; if not, it's usually a good start.
- Book covers—nice to see some pretty images on the detailed bibliographic screen.
- Zotero compatibility
- Every URL a permalink. Wait, let me say that again—every URL a permalink! Yes, you can just take the URL from the browser bar for a record and you are done. For example: <http://new.iucatsiu.edu/catalog/4867015> (How easy was that!)
- Faceted searching, a paradigm our users are increasingly coming to expect from their daily, around-the-Web experiences at Amazon, Zappo's, or even EBSCO products.
- Highly customizable Advanced Search—we can add fields at any time simply by defining a set of data to be indexed and then adding a search field. (Let's not get too wild with this though, having the Longest Advanced Search Screen Ever might *not* be winning, exactly.)

On a larger scale, we've gained a lot of flexibility, which enabled us to develop branded "campus views" that scope the record set to items held at a particular campus, but in which searches can be easily expanded out to the full system-wide database. In the future, the same capabilities that allowed for the creation of campus views could also support library views or format-based views—wouldn't it be great to be able to customize the display and index all visual media items, for example, in a special interface?

We've also gained flexibility in terms of the type of data that can be processed; although there are significant implications both from the perspective of the interface (usability and appearance) and from the perspective of the programming around the data itself, Blacklight is capable of ingesting non-MARC metadata. This means that we can begin to consider how we might include our rich digital collections in our search interface, or investigate returning article results together with catalog data through use of a vendor API.²

But much of that is for future development. Right now we have a system to launch, and while we've come a long way, there's still much to be done. The system is still very much in Beta through the middle of May, and we are constantly reviewing bug reports, suggestions and requests, conducting testing, and developing training materials.³

Even better, once we get all this taped up, it'll be time to transition to OLE and we'll get to do it all over again. Onward ho!

² One example of a school using Blacklight to do just this is the University of Virginia, which presents catalog data and data from the web-scale discovery product Primo:

<http://search.lib.virginia.edu/catalog>.

³ Find the latest and greatest info at the IUCAT Beta blog: <https://blogs.libraries.iub.edu/iucatbeta/>.