Cornell University Library

REPORT COVER

Title	**User Services and Technical Services Analysis of Ex Libris vs EBSCO Discovery Layer and Electronic Resources Management Tools**
Brief Summary	With CUL's planned move to FOLIO for library resource management, it makes sense to consider implementing EBSCO's Discover Service (EDS) and related electronic resources management (ERM) tools, as they will integrate more closely with FOLIO than does our Discovery and ERM solution from Ex Libris, Summon and Intota. Separate groups worked to assess the pros and cons from both a user services and technical services perspective. After considered analysis, the groups' consensus is to recommend that CUL shift to the EBSCO-based discovery and ERM services.
Purpose	Assess EBSCO Discovery Service (EDS) and related e-resource management tools as a potential replacement for Summon and Intota from both a user services and technical services perspective. Provide a recommendation to LEG.
For whom	Cornell University Library Executive Group
Submitted By	Jesse Koennecke
Contributors	Peter McCracken, Adam Chandler, Jesse Koennecke, and Liisa Mobley; and the EDUSAT report contributors: Hannah Chapman Tripp, Lynn Thitchener, Sarah J. Wright, Kevin Kidwell and Alison Shea
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Contact name and email	Jesse Koennecke <jtk1@cornell.edu>
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Technical Services Analysis of Ex Libris vs EBSCO
Discovery Layer and Electronic Resources Management Tools

January 2019; revised & expanded March 2019
Peter McCracken, Adam Chandler, Jesse Koennecke, Liisa Mobley

Executive Summary

With CUL's planned move to FOLIO for library resource management, it makes sense to consider implementing EBSCO's electronic resources management (ERM) tools, as they will integrate more closely with FOLIO than does our current solution from Ex Libris. After considered analysis, this group believes that our best path forward is to use EBSCO's ERM tools as a bridge to fully implementing FOLIO. Maintaining the same electronic resources management vendor as discovery layer vendor will save us money and simplify our activities, but if the EDUSAT group feels we should maintain the existing Summon discovery layer, we believe that maintaining different tools is worth the cost and added work.

The products from Ex Libris (Summon, Intota, Intota Assessment, MARC Updates, 360 Link, and 360 A-to-Z) cost approximately [redacted] per year. The equivalent collection of services from EBSCO (EDS, EBSCO Knowledgebase, Full-Text Finder, MARC records service, and Usage Consolidation) cost approximately [redacted] per year. Please see the cost breakdown section in the following Implementation Plan. *We must notify ProQuest of any plans to cancel or change our contract by* ***April 15****.*

This report has been revised to include additional requested information, to add new information, and to incorporate a draft proposed Implementation Plan. A Glossary at the end of the report defines several terms used in the report, and EBSCO's quote for services is included at the end, as well.

Background / Charge

We were asked to explore the pros and cons of moving to EBSCO's discovery layer and ERM tools, rather than sticking with those from ProQuest / Ex Libris. We currently use Ex Libris' Summon discovery service, and Intota and its associated electronic resources management tools. Maintaining multiple knowledge-bases could lead to significant duplicative effort and direct costs, so it is important to evaluate the potential of migrating all relevant e-resource management functions from Intota to EBSCO.

This analysis does not address the discovery layers or their functionality, apart from how LTS staff will interact with them and make resources active in those discovery layers.

Comparison Points

Many aspects of the tools provided by both vendors are essentially interchangeable. For example, both vendors provide A-to-Z lists of the journals and ebooks we can access, and both provide link resolvers. The group identified the following points as essentially interchangeable, or as differentiators; in this report we will ignore the interchangeable points and analyze the differentiators.

Interchangeable Services	Differentiating Services	Additional Points
• Link Resolver functionality • A-to-Z title list functionality • APIs for adding discovery layer content to our bento box presentation	• Knowledgebase accuracy • MARC record services • Direct integration with FOLIO ERM • Cost • Usage data collection • Better long-term customer service	• Authentication services, only offered by EBSCO • High switching costs if implementing EBSCO • Inadequacy of both MARC record products

Interchangeable Services

The functionality of various services provided by these tools, such as the OpenURL link resolver, the A-to-Z title list, and the MARC records service, are minimally different between Ex Libris and EBSCO. All are fully developed products, and any improved functionality in one is generally matched by the other. The primary differences for these tools lays in the underlying data, rather than functionality.

Both vendors provide effective and open APIs that would allow us to receive the data we need and reuse it in our existing public-facing library home page and results pages.

Differentiating Services

Knowledgebase Accuracy: Ex Libris provides a somewhat superior knowledgebase, though it is also woefully inadequate. MARC records inform the quality of each knowledgebase, but neither vendor is doing great work with MARC records. Ex Libris has added better quality MARC records for monographs, but until recently has failed to go beyond journals and monographs. In March, Ex Libris finally announced that they would be tracking video content within their knowledgebase, so it is possible that they are committing themselves to improving data for this format, and perhaps others. It is hard to know; they did not mention this initiative during knowledgebase-focused conversations in January.

EBSCO similarly touts the "more than 30 data specialists" working on their knowledgebase, but despite years of tracking monographs, they have continually failed to implement distribution of high-quality MARC records for those monographs. We don't know if they will match Ex Libris' recent inclusion of video records in their knowledgebase. Based on our past interactions with them regarding the future of their knowledgebase, we should not expect that they will improve in this area.

CUL uses the MARC records service provided by Ex Libris extensively, and regularly incorporates those records into the library catalog. EBSCO executives have stated that their MARC records product is not as good as Ex Libris', and apparently they don't intend to do much about that.

That said, we *may* have opportunities to help EBSCO improve their metadata. Our ebook record enhancement project, for example, could improve EBSCO's ebook data. We could also work with them to improve record sets that are especially important to us. The FOLIO Marketplace offers a platform on which Cornell could create and distribute more accurate metadata for specific resources.

FOLIO Integration: We have contacted Ex Libris about integrating directly with FOLIO, and have not yet gotten a positive response. Group members have differing opinions about the difficulty of implementing

Ex Libris data in FOLIO, but all recognize that it will not be easy. Taking on this undefined challenge seems foolhardy, just as fully implementing FOLIO seems like an important win for CUL.

Update Expediency: When we make changes to the Ex Libris knowledgebase, those changes do not appear to patrons for 24 hours or more. Changes to the EBSCO knowledgebase appear immediately.

Cost: The EBSCO service would be significantly cheaper than Ex Libris; ProQuest has regularly priced its comparable products at levels higher than EBSCO. EBSCO's cost for all associated services, including OpenAthens, starts at [redacted] (plus a one-time [redacted] OpenAthens setup fee), while Ex Libris' fee for renewing all associated services through June 2019 was approximately [redacted]. EBSCO's quote does not include potential charges associated with hosting FOLIO ERM on our behalf. The Costs section, below, breaks down these costs further.

Data Collection: Both vendors offer tools for collecting and managing usage data from subscribed electronic resources, but EBSCO has the most knowledgeable experts in this complex and evolving area. At present, errors associated with data collection take 2 to 5 months to be resolved by Ex Libris.

Long-Term Customer Service: In an admittedly uncertain analysis, we expect better service from EBSCO than from Ex Libris. Over time, we anticipate that ProQuest's reliance on private equity ownership will force it to continue to cut costs, while family-owned EBSCO will see fewer necessary cutbacks. Such cuts will always impact data quality and customer support. In addition, one electronic resources publisher with extensive ERM experience reported to us that, in their view, EBSCO is more effective, more current, and more transparent than Ex Libris in working with them to update electronic holdings.

Additional Points of Information

Authentication Services: EBSCO also offers the ability to implement OpenAthens as part of our implementation of their electronic resources management tools. EBSCO is the sole US distributor for OpenAthens, a UK-based authentication service that could replace EZProxy. (We manage EZProxy locally; it is sold by OCLC.) Ex Libris does not provide a similar service, and isn't expected to; for this reason, OpenAthens is an additional, not-comparable, item. With a few caveats that still need investigating, we believe implementing OpenAthens would be a beneficial move for CUL. We do not need to use EBSCO's electronic resources management tools to implement OpenAthens, but the price is likely better as a result of doing so.

High Switching Costs: Moving all of our ERM functionality from Ex Libris to EBSCO will require a great deal of time and energy. These staff costs are mostly addressed in the CUL FOLIO Implementation Costs documents, and are required for any full implementation of FOLIO. For many databases, the time may be minimal, but for publishers from whom we have customized collections, it could take dozens of hours per provider to get all of our content updated. However, this will provide a valuable opportunity to review and proactively identify numerous access problems that we have not known about in the past. Please see the Implementation Overview section for specifics.

Implementation Options

It is not necessary to implement both the public-facing discovery layer and the backend management tools from the same company, but this would add complexity, as we would need to duplicate many aspects of data management. We might be able to mitigate this to some extent, but it would require

extra work. The following chart shows pros and cons related to implementing each of the various discovery layer and ERM tool combinations.

Knowledgebase Management \ Discovery Layer	EBSCO	Ex Libris
EBSCO	Pros: - Discovery layer and data management work together - All tools work well with FOLIO - Easy to implement OpenAthens - Potential morale boost and win for FOLIO if we implement successfully Cons: - Major cost in switching all electronic resources tracking to EBSCO - Underlying data likely not as good	Pros: - No visible changes for patrons - Knowledgebase integrates with FOLIO Cons: - Duplication of effort in tracking resources - Significant switching costs in moving primary knowledgebase to EBSCO - Higher cost, due to multiple vendors
Ex Libris	Pros: - Biggest switching cost (knowledge-base work) is not necessary Cons: - Minimal interaction with FOLIO ERM - Most difficult platform combination - Higher cost, due to multiple vendors	Pros: - No switching costs; no work needed to maintain structure - No visible changes for patrons - Underlying data doesn't get worse Cons: - Minimal interaction with FOLIO ERM

Peer Institution Practices

We contacted several peer institutions to learn how they manage these services. There was no clear consensus from these libraries around shifting completely to EBSCO services along with EDS, and each institution manages a unique blend of systems and services.

- Brown University switched from Summon to EDS in 2017, but continues to use the Ex Libris knowledgebase services. They manage their holdings in Intota, then use a monthly data load to update the EBSCO discovery layer.
- Caltech uses mostly customized EBSCO-based services, managing their holdings via the EBSCO knowledgebase.
- Texas A&M, a fellow FOLIO library, uses Ex Libris' SFX system to manage their e-resource holdings. They have explored switching to EBSCO, and probably will consider it again as part of their FOLIO implementation planning.
- The University of Chicago currently exports holdings metadata from SFX to the EBSCO discovery layer. They are considering a switch to all EBSCO-based knowledgebase management services and would be watching our experience with great interest.

After speaking with these institutions, it is clear that CUL would be at the forefront of this transition; other libraries are waiting to see what path we take, and how successful it is for us.

Recommendations

If we maintain two different vendors for our discovery layer and our electronic resources management tools, some portion of LTS work will always need to be duplicated, because we'll need to add resources in both the knowledgebase, for managing metadata, and in the discovery layer, for discovery services. For long term workflows, it seems better to stick with just one vendor for both services. If we stay with Ex Libris, we will likely not be able to take advantage of all the functionality being built into FOLIO. While Ex Libris could decide to build an API to connect its knowledgebase with FOLIO functionality (and we are actively trying to get Ex Libris involved in this), it seems unlikely that they will agree to participate. If Ex Libris will not participate, we could probably find or build a tool that would allow us to transfer data between Ex Libris and our FOLIO instance. But any such implementation seems like a failure to fully use FOLIO functionality.

EBSCO's metadata is not as good as Ex Libris', but Ex Libris' isn't that great, either. We cannot expect either to markedly improve, but we likely have a greater opportunity with EBSCO than with Ex Libris.

Implementing OpenAthens is slightly outside this proposal, as we still have questions that need answering before fully recommending it, and because we could implement OpenAthens regardless of our decision here. If we do decide to recommend implementing OpenAthens, we believe it would be easier and cheaper to do so as part of using the EBSCO admin tools.

While there is no completely clear choice, the group feels that we should aim for a full integration of FOLIO, and using the EBSCO knowledgebase management tools is a valuable and important step in that direction. It would be easier and less expensive to have a single vendor for both services, but we believe that, if necessary, we can develop a solution to transfer relevant data from FOLIO to Ex Libris for managing Summon.

For these reasons, we recommend a switch from Ex Libris' electronic resources management tools to EBSCO's equivalent tools. While we believe we should leave recommendation of the discovery layer to the EDUSAT group, we believe that using EDS, rather than Summon, would provide the most efficient and cost-effective solution for all.

Implementation Overview

Using EBSCO's tools to support FOLIO ERM is a valuable and important bridge to a full implementation of FOLIO, and this project will provide us with extensive experience that will be applicable to further FOLIO implementation. This project also offers us a valuable opportunity to improve management of our electronic resources, which will improve our students' experiences with those resources, and better prioritization of the work we do. In the electronic resources environment, this work is very similar to the data cleanup work that must happen before records for print resources are migrated to FOLIO.

We believe the first phase of this process will take about six months from the point at which we make a decision to implement FOLIO ERM. Since we currently have just 3 months remaining in our contract for our existing ERM tool, we will need to extend that contact to provide us with the time to effectively transfer the majority of our content, and to create and implement functionality and an effective interface for the discovery layer tool. *We must notify ProQuest of our plans to cancel or change this contract by **April 15**.*

This project assumes implementation of the following products:

- EBSCO Discovery Service (EDS) – a public-facing discovery layer that will provide access to the vast majority of our electronic resources through a single interface. EDS will replace our current Summon product
- EBSCO Link Resolver – a tool to connect a user from a citation in one source to the full text of the same item in another source, and replacement of 360 Link
- EBSCO A-to-Z list – a listing of the e-journals and e-books that we can access through the databases to which we subscribe, and replacement of Serials Solutions EJP
- OpenAthens – a tool for off-campus access to electronic resources; a replacement of EZProxy, our existing tool
- IPRegistry – a free tool to simplify sharing our IP ranges with authorized content providers
- License management through FOLIO Agreements app
- Organized storage of license documents, most likely in Box

We'll use a temporary database to track the implementation of every electronic resources through each of the products or services listed above. We will divide this work based on our expected level of skill needed, from among student employees, current staffmembers, temporary staffmembers, librarians, and others, as needed.

Timeline

In a prior estimate of the time it will take us to implement FOLIO ERM, we estimated that, of about 1500 electronic resources, 5% are extra large, 20% are large, 40% are medium, and 35% are small. We estimated the hours needed to complete each of these resources, and came up with a rough guess of just over 4000 hours. The type and length of work was broken down by resource size, time to complete, and percentage that could be done by students or staff. Our final analysis was as follows:

- Access work will take 1000 hrs (6.25 FTE months), and 30% can be done by students
- License work will take 400 hrs (2.5 FTE months), and 15% can be done by students
- Metadata work will take 2300 hrs (14.5 FTE months), and 60% can be done by students
- Supporting Data work will take 300 hrs (2 FTE months), and 80% can be done by students

To implement FOLIO ERM, we expect a three-phased approach of Preparation & Migration, Implementation & Refining, and Correction & Maintenance. We anticipate the following tasks to be completed in each of those phases, though some tasks may occur in multiple phases.

Rough breakdown of tasks by phase
Decision-making work, before beginning the process
• Determine hosting plan for FOLIO ERM tools – will EBSCO host a ResourceIQ instance for us, or will we do that in FOLIO, or some other solution? • Ensure that OpenAthens path can definitely meet our privacy expectations • Develop the design and expected functionality for a Project Management tool • Negotiate with EBSCO to see if they will provide hosting services to us at reduced cost, with benefits to both sides

Phase 1: Preparation & Migration; months 1-6, roughly July-December 2019)
• Configure MARC record structure, link resolver linking, and A-to-Z list interfaces • Implement products using data pre-populated by EBSCO (we anticipate this will be roughly 60% correct, or so; it will allow for testing and customization) • Work with public services staff on customizing and using EDS, link resolver, etc., before they go live • Build Project Management tool to track all needed data changes • Determine how to display Terms of Use, patron privacy, license data, and other information through A-to-Z list or other method
Phase 2: Implementation & Refining; months 7-12; roughly January-June 2020)
• Go live with EBSCO services in January 2020 • End subscription to Summon and Ex Libris products; remove Ex Libris MARC records from Voyager • Begin testing and reviewing all holdings data • Convert off-campus access path to OpenAthens • Develop paths for scanning and storing all licenses, using FOLIO's functional structure
Phase 3: Correction & Maintenance; months 12-18; roughly July-December 2020)
• Continue data correction within EBSCO HoldingsIQ (which will inform FOLIO) • Continue working through all electronic resources to ensure they are accurately represented in all appropriate tools for all appropriate users • Train staff on all aspects of FOLIO ERM tools

Staff needs

In the CUL FOLIO Implementation Projections document, LTS requested one full-time student, one full time e-resources assistant, and one full time e-resources librarian. We are slightly refining the request in this document.

Proposed hires related to ERM implementation
Student positions
We'll hire at least four students (each expected to work about 10 hours per week) per semester to check and correct data as skills allow. If abilities and budget allow, we will expand this work to take advantage of the most efficient labor costs.
Staff positions
The LTS staff request in FOLIO included one full-time e-resources assistant position. In practice, this person will do some FOLIO work, but will spend most of their time providing backfill work for existing staff who will do more advanced work on FOLIO ERM implementation.
Professional positions
One time-limited post-graduate MLS fellowship will provide useful service from a new librarian. (This was defined in the CUL FOLIO Implementation Staff Plan as one e-resources librarian.)

The time-limited post-graduate MLS fellowship is an especially exciting part of the project: we can incorporate some excellent new insights while providing a recent graduate with great on-the-ground experiences associated with working in a major research library. With a time-limited position, the

incumbent will have a conclusion date in mind from the beginning, and will be able to use their experience in helping implement FOLIO within Cornell as an excellent start to their career.

Costs

ProQuest's annual licensing and services costs for its Ex Libris products comes to about [redacted] per year, as noted below:

Current annual costs for Ex Libris ERM services	
Summon, Intota, 360 Link, 360 A-to-Z, Intota Assessment	[redacted]
MARC Updates Service (journals and monographs)	[redacted]
TOTAL	[redacted]

EBSCO's most recent quote for annual licensing and service costs vary from [redacted], based on what we elect to use. Further information and clarification follows:

Estimated annual costs for EBSCO ERM services		
EBSCO Discovery, EBSCO Knowledgebase Tools, Link Resolver, A-to-Z site, MARC Updates, Basic Usage Consolidation (for usage analysis)	[redacted]	This includes a [redacted]% "Partner Discount" across all of the services' individual costs.
Additional Usage Consolidation platforms, up to 222 platforms	Up to [redacted]	See notes below
OpenAthens	[redacted]	See notes below
TOTAL	[redacted]	

Regarding the Additional Usage Consolidation platforms, CUL maintains access to hundreds of e-resource sites. EBSCO estimates that these sites represent approximately 222 "platforms" from which they can harvest usage data. The cost for this tool will vary, depending on the number of platforms we want them to harvest usage statistics from. The quote for expanding Usage Consolidation includes no charge for the Usage Consolidation portion in Year 1, a [redacted]% discount on the Usage Consolidation portion in Year 2 and a [redacted]% discount on the Usage Consolidation portion in subsequent years.

Regarding the OpenAthens product, CUL currently uses EZProxy, and ProQuest does not have an equivalent product. OpenAthens would replace EZProxy. OpenAthens also has a [redacted] one-time set-up fee for the first year. Maintaining EZProxy would require costs associated with training a CUL individual in effective EZProxy management. The team thinks this might be a beneficial service to implement as well, but will require more stakeholder input to understand the privacy and user experience implications.

First-year cost estimates for switching from ProQuest to EBSCO		
Six month extension on the ProQuest Summon and Intota services to carry through December 31, 2019	[redacted]	Estimated: This must be negotiated with ProQuest ***before April 15***
EBSCO EDS and knowledgebase services	[redacted]	Assuming basic level Usage Consolidation
Optional: expanded Usage Consolidation platforms	[redacted]	Dependent on number of platforms
Optional: OpenAthens	[redacted]	
Optional: OpenAthens set-up	[redacted]	
TOTAL	[redacted]	

Project Management

A temporary project management tool will track, at the resource level, which resources have been completely transitioned from the Ex Libris 360 knowledgebase to the EBSCO knowledgebase. It will give us an opportunity to review and update access issues for each resource. The database will track the following issues, and will indicate what level of staff support is needed to do each part of the work:

- Accurate holdings information
- Updated off-campus access (OpenAthens)
- IP ranges added to IPRegistry database
- Licensing data and documents tracked and stored
- All relevant vendor, licensing, agreements, and financial data stored in FOLIO
- Content findable in discovery layer
- Add TOU/Concurrent user data
- Track patron privacy issues

Completing all the checks and work in this database is expected to take much longer than the transition process – it may take 18 months or more to check and update all resources. However, because we are tracking it in the database, and will have a clear completion goal to work toward, we believe that it will be more manageable than an open-ended project.

The project management tool will be retired when essentially all resources have been migrated to the EBSCO and FOLIO knowledgebases and systems.

Risks Associated with Implementing this Solution

This project, like every aspect of FOLIO, is filled with risks. However, this is why we're doing it; we want to create something new, and that requires extensive risk-taking. We *know* that estimates are wrong, that we're forgetting very important issues, and that some of our biggest concerns will not amount to anything. We don't know which of those guesses are wrong, but we look forward to finding out.

It's hard to overestimate the risks involved with implementing the FOLIO ERM in the next twelve months; no library has yet done so, and we would, without question, be a leader in making it happen – and therefore, a leader in making it succeed.

If, for some reason, not all FOLIO modules are implemented in 2020, we will have a partial implementation of FOLIO, supported by EBSCO's electronic resources management tools. The more likely risk is that FOLIO ERM will not be ready by early 2020, but with Chalmers, Cornell, German universities, and other institutions preparing to implement FOLIO ERM, we do not expect significant delays to FOLIO ERM delivery. Even if other modules of FOLIO are not delivered on time, use of the FOLIO ERM will bring great value to LTS as we work toward implementation of all FOLIO modules.

Risks Associated with Maintaining the Status Quo

If we continue to use Ex Libris products, we will need to maintain two separate knowledgebase management layers and pay for two separate systems. As their product development resources continue to focus on Alma, Ex Libris has committed minimal development to Intota over the past several years, and we do not anticipate that changing. Moving data files from one system to the other will be challenging to begin with, and may get more complex as FOLIO functionality grows and Intota functionality stagnates.

In addition, maintaining two systems would lead to complicated staffing issues, in which we would find it necessary to train new staff on both an older system and a developing system at the same time.

Conclusion

LTS is excited about remaining a leader in FOLIO development, and sharing our knowledge and experiences with other libraries. We believe we have the expertise, and have identified and described the needed financial and personnel resources, to implement FOLIO ERM as early as is reasonably manageable. We absolutely look forward to being the first unit in CUL to implement a live instance of FOLIO. We welcome the challenges we'll face and look forward to sharing our experiences and gained knowledge with our colleagues at Cornell and beyond.

Glossary

The following terms may need some slight clarification:

API: Application Programming Interface; a method for defining how data or another system can interact with a given program. A defined API guides programmers in how they can allow their resource to interact with the API host's resource.

EBSCO Discovery Service (EDS): EDS is EBSCO's proprietary discovery layer, providing access to a wide range of licensed electronic content. EDS contains full-text content from EBSCO databases and does not contain any full-text content from ProQuest databases.

EZProxy: A solution for managing patron access and identification for off-campus access to electronic resources. EZProxy is owned by OCLC. OCLC offers a hosted solution for using EZProxy, in which OCLC manages a library's EZProxy instance. OCLC also offers a licensed model, in which a library manages EZProxy locally, on its own server. At CUL we currently use this last model, but we do not currently have anyone on staff with sufficient skills in managing our EZProxy instance. If we remain with EZProxy, we must fill this gap.

FOLIO ERMS: FOLIO is building an electronic resources management system (ERMS) that is a subset of the Resource Management project. The FOLIO ERMS subgroup is being funded and led by German libraries and library consortia. The FOLIO ERMS is now called the "Agreements" module; there is also a "License" module that is an important part of it, as well. The "Acquisitions" module, while not limited to electronic resources, is also a crucial part of ERMS.

Intota: Intota is Ex Libris' Electronic Resources Management System, based on its knowledgebase, developed by Serials Solutions. Because Ex Libris prefers customers to migrate to Alma, Intota now only receives limited support and upgrading.

Knowledgebase: A knowledgebase tracks the journals, books, and other resources that can be accessed by patrons at a particular library. Because of the challenges inherent in maintaining an accurate knowledgebase, they are generally only available from third-party vendors. Ex Libris manage the former Serials Solutions knowledgebase and the SFX knowledgebase; EBSCO manages its own knowledgebase; OCLC also offers a knowledgebase.

OpenAthens: OpenAthens offers a solution for managing patron access and identification for off-campus access to electronic resources. OpenAthens is built by UK-based Jisc, and is sold in the US by EBSCO. It uses a different type of access management from EZProxy.

Summon: Summon was the first commercially available discovery layer, and was created by ProQuest's Serials Solutions unit, which is now managed by Ex Libris. (Ex Libris also manages and offers SFX's Primo discovery layer, as well.) Summon is a direct competitor to EDS; in contrast to EDS, Summon contains all ProQuest full-text content, and no full-text content from EBSCO.

EBSCO Discovery User Services Assessment Team
Final Report

January 2019

Hannah Chapman Tripp, Lynn Thichener, Sarah J. Wright, Kevin Kidwell and Alison Shea

Executive Summary:

The Discovery & Access Committee and then EDUSAT, were asked to assess EBSCO Discovery Service (EDS) as a potential replacement for Summon. EDUSAT (EBSCO Discovery User Services Assessment Team) took a three-tiered approach to the assessment activities utilized in the user services analysis. This consisted of a Cognitive Walkthrough, User Testing and a Librarian Assessathon. The results of our testing were very similar for both EDS and Summon, resulting in no clear mandate to alter our current discovery system. However, there is also not a strong reason to stay with Summon should upcoming systems changes warrant it.

Charge:

EDUSAT was formed to compare, from a public services standpoint, CUL's discovery service currently provided through ProQuest's Summon and a competing service, EBSCO Discovery Service. Summon currently comes into play in the Articles & Full-Text segment of the Bento Box search results. It is also available from library.cornell.edu by clicking on the Articles & Full-Text link.

Background:

With Folio implementation on the horizon in 2019, this is an advantageous time to evaluate EDS as a contender to replace Summon. Folio implementation may mean an adjustment to our backend resource management systems and, because EBSCO has participated in developing Folio (providing coder time), it is possible that EBSCO tools will "play better" with Folio. In addition, the development process for Summon appears to have stalled as Proquest focuses most of their resources on Alma and Primo.

In mid-April, D&A invited the EDS Team to campus for a presentation of their product and to facilitate further testing, the EBSCO group created a trial instance of EDS for Cornell. Proquest was also asked to come in and demonstrate new improvements and future directions for development of Summon. In October, the EBSCO team returned to provide a public demonstration of EDS for all interested library staff members (see recording).

To further evaluate the system, the Discovery & Access, User Representative Chair, Hannah Chapman Tripp, in coordination with the Director of Acquisitions and E-Resource Licensing Services, Jesse Koennecke, created two teams, one composed primarily of public services staff, to evaluate user experience, and the other composed of staff in technical services to examine the implementation/technical services end. Below are the results from the EBSCO Discovery User Assessment Team.

Activities undertaken by the EDUSAT team include the following:

1. Cognitive Walk Through with the Cornell Library Usability Working Group. The cognitive walkthrough is a task-driven evaluation of both Summon and EBSCO Discovery Service. For each task, the real actions that a user would take and the system display they would receive are mapped. The tester follows that mapped process and for each step asks a set of predetermined process questions. [See Appendix A]
2. Usability Flash Test - work with usability group to run Flash testing with students. For this type of test, we had four tasks for students to work through in each system while EDUSAT group members observed and took notes. Questions were specific and task-based. For example, "Find a peer-reviewed journal article from 2015?" [See Appendix B]
3. Subject Librarian Assessment – Two 2-hour sessions were held, in which we asked subject experts to examine the first 10 or so results from a given query within their subject area in each system and provide feedback on the relevance of the results. [See Appendix C]

Summary:

We began our assessment with a "cognitive walkthrough" performed by members of the task force and overseen by the Usability Team. The walkthrough consisted of five multi-step tasks to test various aspects of each system, including ease of sharing, downloading, finding known items, refining search results, and filtering results based on peer review or other content types. While stumbling blocks were observed in both systems, no clear "winner" emerged from the cognitive walkthrough.

In addition to the cognitive walkthrough, we also implemented "flash testing," a rapid method of testing system features and usability, with student volunteers. These tests are typically five minutes long and ask a focused set of questions to get to the core functionality of the feature being tested. In this test, we evaluated both EDS and Summon on the same criteria. The results of both systems were similar. We found that the student participants adapted quickly to the system they were using, although they sometimes needed prompts to notice particular features.

Finally, in addition to the "cognitive walkthrough" and student "flash testing," the task force hosted two sessions with subject librarians, in order to assess the quality and relevance of search results. Responses were wide-ranging, but in general no platform came out exceptionally ahead of the other in terms of relevancy ranking. The only clear pattern that emerges is that Summon appears to work better for some disciplines, EDS, better for others. It's possible that the different assessments of relevance are the results of the different vendor contracts and database holdings between Summon and EDS. See: Methodology and Results in the appendices, below.

Further Questions:

Exclusive Indexing Agreements with Discovery Systems

We have recently learned that the Modern Language Association has entered an exclusive agreement for indexing and abstracting metadata in the MLA Bibliography, (a core database for literature, poetry,

film, theater, and more). This may significantly impact the quality of search results for this, and related, disciplines in favor of EBSCO. We do not know to what extent this practice is, or will be, a factor in the quality of Discovery Systems between different disciplines. Summon will continue to include MLA provided indexing and metadata until early November 2019.

Conclusions:

The assessment activities planned and executed by EDUSAT have garnered no clear winner in these two products. Both systems perform well in some areas, less well in others. If CUL were to adopt EDS as our Discovery System, the task force would have a number of recommendations for customization to improve usability. With regard to the quality of search results, there was a slight preference for EDS overall, but it was not significant enough to prompt an immediate change to the discovery service. The testing does reveal that there is also no strong reason for CUL to remain with Summon, as the two are very similar products.

A final note:

It may be helpful to have an individual specifically charged with the responsibility for continuous assessment of our Articles & Full Text Discovery Service, whichever one we choose, to examine new offerings, make determinations and continuous assessments, and to communicate with the provider. The Discovery & Access Committee (D&A) is primarily focused on improvements and fixes to the coding and backend management of the Blacklight catalog and may lack the resources to add maintaining the library's Article & Full-Text aggregator to the charge of the committee.

Appendix A: Cognitive Walkthrough final report

Study website: testing EBSCO Discovery System vs. Summon Articles & Full Text Search
Study URL:
Summon: http://cornell.summon.serialssolutions.com.proxy.library.cornell.edu/
Ebsco Discovery Service: https://resolver.library.cornell.edu/misc/EDS
Date of Test(s): 11/26/2018
Method: Cognitive Walkthrough
Test administered by: Kevin Kidwell
Number of participants: 10

Questions/tasks asked:
Please go through the tasks at your own pace and bring your findings to the meeting on the 26th.

Summon: http://cornell.summon.serialssolutions.com.proxy.library.cornell.edu/
Ebsco Discovery Service: https://resolver.library.cornell.edu/misc/EDS

1.) You are writing a research paper on hybrid cars. You are required to have one peer-reviewed journal article and newspaper article for your paper. Identify one of each and email them to yourself.

2.) You are giving a presentation on mental health in high schools. Your sources must be from the last five years. Identify one source and view the full-text on the screen, then download it.

3.) You are doing a presentation on the effects of increased screen time on attention spans. Identify an appropriate peer-reviewed article and share it with the member in your group.

4.) You have an assignment to create an annotated bibliography containing scholarly resources on renewable energy resources. Identify a resource and cite it in APA style.

5.) Your professor has requested that you read the article "Women and Global Freedom," by Lagon. Does the library have access and can you download it?

Main stumbling blocks observed

1. Concerns were voiced about research starter at top of EDS search results - what is it and where does it come from?
2. Summon metadata for newspapers a little sketchy, and newspaper content seems old.
3. Date slider in EDS doesn't always work, might be a little buggy? All of the filters are very sticky and gave problems clearing - need clear all filters option.
4. Would prefer search display at top of EDS so the user knows what is being searched, and that filters are in use.
5. EDS save to folder option is confusing, not all realized where folder is.
6. Summon did a much better job in natural language processing, at least in this case (mental health in high schools).
7. In EDS, search results vastly improved when use the advanced search option fields.
8. EDS gives lots of options for sharing - Twitter, gmail (overwhelming number of options), but nice to have integration with google throughout.

9. Easy to get to citation from either EDS or Summon, scroll bar of styles in EDS less obvious than pull-down for style in Summon.

Appendix B: Flash test results

Study website: testing EBSCO Discovery System vs. Summon Articles & Full Text Search
Study URL:
Summon: http://cornell.summon.serialssolutions.com.proxy.library.cornell.edu/
Ebsco Discovery Service: https://resolver.library.cornell.edu/misc/EDS
Date of Test: 12/11/2018
Method: Flash
Test administered by: Kevin Kidwell, Alison Shea, Hannah Chapman Tripp, Sarah J. Wright, Lynn Thitchener
Number of participants: 17

Tasks

- Find a scholarly or peer-reviewed article on hybrid cars and email it to yourself
- Find a news article on hybrid cars published within the past year and cite it in APA format
- Pretend this is a group project, how would you send what you found to your teammates?

Stumbling Blocks

EDS:

- Students rarely filtered for peer-reviewed articles
- Only half of the students used the in-system email feature. The other half would open their email manually to send it.
- Students regularly did not know that the citations block that appears could be scrolled within for more formats

Summon:

- Students rarely filtered for peer-reviewed articles, seemed to lack understanding of how to identify peer-reviewed articles (and didn't notice the option to filter at top of list)
- Only half of the students used the in-system email feature. The other half would open their email manually to send it, or send from the publisher's page.
- Some students needed pointing to filters to know where to look
- One student noted that the layout seems to discourage noticing the filters (noticed near the end of testing)

Positive notes and feedback

EDS:

- Half of the students used the auto-complete when typing their search to make it more in-depth
- All students were able to filter by News
- 3/4 students adjusted date, others just browsed through the articles
- Half of the students liked the ability to add to Google Drive when sharing with teammates
- Half of the students had positive comments about intuitiveness and ease-of-use

Summon:

- All but one student found the news filter
- Most students found the on-site citation function, and easily scrolled to the style they wanted; some went directly to publisher site and would cite article from there.
- Most students would email to share from within Summon; two students noticed the permalink to use for sharing by copying and pasting into Google Drive or OneFile; a couple went directly to publisher site and would email article pdf or link from there.
- Half of students mentioned it was easy

Notes that apply to Discovery systems in general

- Two students asked where this search engine was, had used library home page to get to bento box, but hadn't gotten this deep to discover Summon with its additional filters, etc. They were very impressed with this search in comparison to the bento box results.
- Several students wanted to go straight to Google or Google Scholar, as that is their typical starting place.
- One student said they would use this instead of Google Scholar in future b/c the filters made it so much easier to filter to what they wanted.

Appendix C: Librarian Assessment of the quality and relevance of search results

A number of subject librarians have voiced concerns about the quality of search results in our current Discovery System, Summon. The team decided that, in addition to the Cognitive Walkthrough and student flash testing, the group would also host an "assessathon" for subject librarians to assess the quality and relevance of search results.

Two sessions were held – one in Olin and one in Mann – and a total of 15 subject specialist librarians participated (some performing more than one search). Librarians were presented with two windows – one for EDS and one for Summon, along with a Qualtrics survey -- and asked to perform a search based on an actual research question they had worked on with a patron or could imagine receiving in their discipline. They were then prompted to answer the following questions on Qualtrics survey:

- Their subject area.
- Description of the search performed. (What they were looking for, in terms of content or format, and what search terms did they use?
- Rank for the results on a scale of 1-10 (1 being not relevant, 10 being extremely relevant)?
- Why they ranked as they did
- Additional comments

Responses were wide-ranging, but in general no platform came out exceptionally ahead of the other in terms of relevancy ranking; in a 1-10 scale, with 1 being not relevant and 10 being most relevant, overall across 43 survey responses Summon ranked 6.28 and EDS 6.74

There were some differences in how librarians viewed the relevance of each platform's results when broken down by subjects:

Discipline (searches)	**Summon score**	**EDS score**
Sciences (12)	7.83	8.08
Humanities (21)	5.67	6.43
Business (7)	4.71	5.43

Access Full Assessathon Report

Comments ranged from both systems failing to retrieve any relevant results, one system performing better than the other, or both systems providing reasonably relevant results. The only clear pattern that emerges is that Summon appears to work better for some disciplines, EDS, better for others. It's possible that the different assessments of relevance are the results of the different vendor contracts between Summon and EBSCO. See Exclusive Indexing Agreements with Discovery Systems, above.

Beyond the issue of relevance, testers offered additional comments on functionality. A fair number of testers volunteered that they preferred the look and feel of EDS, but one tester strongly preferred the look and feel of Summon. A number of testers noted numerous duplicate records in Summon results, cluttering the result set.

Several testers pointed out the advantages in EBSCO of seeing the source for a record (e.g. JSTOR, ScienceDirect) which helps to educate searchers about relevant databases and of filtering by source which leads to improved search results.