

Title: “Come for the Free Analysis, Stay for the Community: the ILL Cost Calculator Can Be the New Global Watering Hole for Interlending Data”

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Abstract: *Over five years in the making, the OCLC ILL Cost Calculator will be open for business soon after collection-sharing professionals from across the globe gather in Paris. Designed by staff from the ILL community and built by OCLC Research, this free Internet resource will function as a real-time virtual ILL cost study. Anyone with Internet access will be able to click a button and learn how many libraries have entered data and what the average unit costs are for processing a filled borrowing or lending request. Those who register and contribute their library’s data will be able to learn their own unit costs broken down by request type and expense category, compare their costs with anonymized peers, and apply and remove filters in order to gauge the potential financial impacts of various choices involving technology, workflow, and affiliation. As users return to enter their data in subsequent years, this free tool will evolve into an historical window into global resource sharing trends. This paper will describe the original aspirations for the calculator, the development process with working group members and beta testers, lessons learned from use by early adopters, and ideas for future developments and benefits.*

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Introduction

In this paper I will examine four global sources of data that inspire and excite me. The first of these will be the newly-launched Library Map of the World, conceived by IFLA. The second is Google Street View. The third is actually two related sources of data: the OCLC ILL Policies Directory, and the OCLC Usage Statistics, available online to consumers of OCLC resource sharing products and services. And finally, the fourth source of data I will discuss is one that doesn’t quite exist in its finished form yet. But it will be available for use very soon: the OCLC ILL Cost Calculator.

For the past several years, with the help of OCLC Research colleagues and experts from the global interlending community, I have been busy guiding the design and construction of the ILL Cost Calculator (*OCLC Research 2016*). At different stages of this project, the first three data sources listed above have profoundly affected my thinking about this work. In this paper, I will attempt to share the lessons and bits of inspiration I’ve gleaned from these three wonderful data sources, and how those ideas have been applied to the making of the ILL Cost Calculator. I hope that by the time I am finished you will agree with the sentiment expressed in the subtitle of my paper: the ILL cost calculator can be the new watering hole for interlending data.

Chapter 1: IFLA Library Map of the World

The IFLA Library Map of the World (*IFLA 2017*) is already a marvel and has the potential to become an extremely powerful tool for promoting and understanding libraries everywhere. I found out about it just two months ago, when one of the conference organizers, Peter Bae, posted about it on Facebook. No doubt many of you have already interacted with the map and the underlying data.

Figure 1.

IFLA Library Map of the World



The user interface is beautifully designed and beckons you to explore every aspect of the site. At a glance, you can see which countries have contributed data, and which have not. A dashboard across the top of the map tells you that there are 1.8 million libraries in the world, and also gives you totals for how many of those libraries have internet access, how many fulltime staff are employed in them, how many people have volunteered, and how many have registered as library users. The dashboard will also tell you how many physical visits, physical loans, and electronic loans take place annually at these 1.8 million libraries. Click on the Worldwide Totals button, and a new window opens up with breakdowns of all the dashboard categories by continent. Click on any category icon in the dashboard and, in a sidebar to the left, you will see a breakdown by library type of the data for that category. Simply by clicking on a country on the map, you can limit the dashboard and the data breakdown in the sidebar to that particular country.

It is plain to see that this is a wonderful resource for anyone who cares about libraries. As fabulous as it is, however, in its current form, the map's limitations are also readily apparent. This is not meant as a criticism, because this world map is a grand undertaking, and you have to start somewhere. But users would do well to make themselves aware of the limitations of any tool they are using. So here we go:

First, while North American, Western Europe, and Australia are well-covered by the map, most of the rest of the world is largely greyed out. And it isn't easy to anticipate which countries will be covered and

which will not be. For instance, would you have guessed that Mongolia has data included in the map, but the United Kingdom and Ireland do not? And you must look closely at the data for each country. For the United States, for instance, the lone data source in the current version of the map is the American Library Association. While breakdowns of all types of libraries are provided when it comes to some categories, such as number of libraries and full-time staff, data regarding visits and loans comes only from the US's public libraries. The map in its current form provides a fascinating picture, but an incomplete one.

Still, one can't help but see the vast potential here. With time, hopefully the map will include more complete data from more countries. And, one would hope – I know I do! – that one of the categories of data that will be included in future iterations of the IFLA Library Map of the World will be interlinking data.

Some lessons I took away from the IFLA Library Map of the World include:

- One source for global library data is a powerful idea.
- Interactive visualizations of data can be compelling, even thrilling.
- The value of the tool grows in direct proportion to the comprehensiveness of the data.
- Data breakdowns and comparisons can tell a riveting story.
- Even with the grandest ambitions, you have to start somewhere.

Chapter 2: Google Street View

Google Street View was released to the world on May 25, 2007, just over ten years ago (*Wikipedia contributors 2017*). Wikipedia tells us that “Google Street View is a technology featured in Google Maps and Google Earth that provides panoramic views from positions along many streets in the world.” It started out depicting views in several American cities but has since expanded to include cities and rural areas worldwide. Again, to quote Wikipedia, “Google Street View displays panoramas of stitched images. Most photography is done by car, but some is done by trekker, tricycle, walking, boat, snowmobile, and underwater apparatus.” I am sure that many of you have spent time exploring Google Street View.

I mention Google Street View in the context of this paper because of a feature that was added in 2014: the ability to see Google Street imagery from the past, if it is available for a particular view. Today, for quite a large proportion of views available within the application, you can use a slider to scroll back and forth through images of that same place across time. This capability is quite incredible, and it will only grow more incredible as the years go by. For some views, there are only one or two images from the past, but for others there may be half a dozen, going all the way back to 2007.

For fun let's look at a certain corner of a quaint little neighborhood called West Portal in the city of San Francisco, California. Here is the southwest corner of West Portal Avenue and Ulloa Street, which for many years has been the home of a restaurant with the amusing name of Squat and Gobble. (In French, that would be *S'accroupier et Avaler*.) The latest view of this corner is from a sunny day in June 2016. A box to the left of the full-screen image shows that there are six previous images of this view and offers a thumbnail view of the earliest one, from April 2008. Clicking on the thumbnail brings the earlier to full screen. It's clear that the restaurant and the building around the corner have gone through an extensive renovation sometime between 2008 and 2016. The building next door actually looks like a completely new structure. By clicking along the date slider in the thumbnail view, we arrive at a place in November 2013 when the restaurant is almost completely obscured by netting and scaffolding, while the building next door is a wooden frame – a new building in the middle stages of construction. The previous

depiction of these buildings in their former state is from April 2011. Something happened on this corner in the thirty-one months separating April 2011 from November 2013. We can't learn anything further about this from Google Street View. But, knowing the location and the timeframe, we have enough clues to be able to find out what happened.

Figure 2.

Google Street View with date slider



By plugging “Squat and Gobble West Portal” into Google, and selecting Images, we see what took place on this corner: a devastating fire. By clicking on News, we learn that the Squat and Gobble and the building next door burned down on October 12, 2012, in a 4-alarm blaze that began at 4:40am and caused more than \$7 million in damage.

Some lessons I took away from Google Street View's date slider feature include:

- Data is powerful. Data over time is transcendent.
- Even when data doesn't answer all your questions, it can provide clues about where to find those answers.
- Data over time can suggest new questions not indicated by a simple, static view of that data.
- Compiling comprehensive, big-picture data is a worthy goal, no matter the obstacles.
- Even with the grandest ambitions, you have to start somewhere.

Chapter 3: OCLC Policies Directory and OCLC Usage Statistics

Let's turn to two related services provided by OCLC – an online ILL policies directory, and online usage statistics available to consumers of OCLC products and services. First, the ILL policies directory.

The OCLC Web site tells us that “the OCLC Policies Directory is the repository of lending and copying policies of libraries participating in WorldShare Interlibrary Loan and WorldCat Resource Sharing.” (OCLC 2016) You need a password to access the database. After logging in, you can learn essential facts

about all the libraries that use the OCLC resource sharing system: lending and copying policies, collection information, and billing, system, and contact information. You can also learn which consortia a library belongs to on the network, and which libraries belong to a particular consortium.

Besides making your own interlending policies and contact information discoverable, and learning these same things about other libraries, you can also use the OCLC ILL Policies Directory to extract high-level information about the nature of the global collection sharing environment – limited, of course, to the extent that this environment is represented on the OCLC ILL network.

For instance, by conducting a series of searches within the ILL policies directory, I discovered that there are 8,247 active suppliers on the OCLC ILL network, spread across 242 countries and territories. Perhaps it is no surprise that 7,569 of these suppliers, or 91.8%, are located within the United States. There are two main reasons for this: 1) OCLC is a US-based company, and 2) while most countries have a national library that provides the technical infrastructure for sharing library collections, the United States does not, and for many years OCLC has played a significant role in supplying that infrastructure to US libraries looking to share. The result is that 91.8% of the suppliers on the OCLC ILL network reside in the United States. Still, there are 678 active suppliers, or 8.2% of the whole, in the other 241 countries and territories represented on the network. And I learned this by searching the OCLC ILL Policies Directory.

I mentioned before how you can use the Policies Directory to see which consortia a library belongs to, and which libraries belong to a particular consortium. For the sake of this paper, I thought it would be fun to take the twelve countries represented by the members of this conference’s organizing committee and think of them as a resource sharing consortium. One of these countries is the United States. The other eleven countries in this new consortium (Canada, China, Finland, France, Germany, Italy, Lebanon, Norway, Saudi Arabia, South Africa, Sweden, and Turkey), have 296 suppliers active on the OCLC ILL network. You will recall that, worldwide, there are 678 active non-US ILL suppliers on the network. Our twelve-country consortium accounts for 296 of them, or 43.7%. That seems like a high percentage for such a small number of countries, doesn’t it? Hopefully, as we move on to examine the online OCLC Usage Statistics, this new consortium of ours will become even more interesting.

Figure 3.

Active Supplier Libraries on OCLC ILL

OCLC ILL Suppliers	8,247	100%	
Within the United States	7,569	91.8%	
Outside the United States	678	8.2%	
Non-US Within “Organizer” Consortium	296	43.7%	Of all non-US ILL Suppliers

The OCLC Web site tells us that “WorldCat Resource Sharing...reports become available by the tenth day of each month for the preceding month.” (*OCLC 2017*) After signing in to the OCLC Usage Statistics online, you can see interlending activity for your own OCLC symbol, and, if you belong to a consortium that has been set up in the OCLC system tables, you can view group reports depicting the ILL activity among members of the group. (These consortial reports -- and indeed nearly all of the reports available to you -- cover one month. For this paper, the data has been aggregated to cover a 12-month period. You can do this yourself by exporting your monthly reports into a spreadsheet.)

Using the OCLC Usage Statistics, what might we learn about our artificial consortium? The first is that the libraries within the consortium are big lenders. Within any group, of course, the borrows and lends even out. But as this is not a real consortium, merely one that lives in my imagination, the reports I'm consulting depict all activity for each of these libraries, not just those transactions that happen among the group members. This results in the strange phenomenon where, as a whole, the group is a big net lender. Still, it's interesting. If you include all twelve countries, in Fiscal Year 2017 our consortium loaned just under 15 million items and borrowed just under 7 million. If we remove the data for US libraries, the net lending trend continues for the other eleven countries: 165K loans and 65K borrows in 2017. Remove Canada as well, and the non-North American totals for Fiscal Year 2017 look like this: 74K loans, 19K borrowers. I did not anticipate this outcome. The gap between lending and borrowing is even more pronounced in favor of lending when you take out the North American numbers, 80% lending to 20% borrowing for the non-US libraries.

We can learn even more about our imaginary consortium by drilling down to compare data for individual countries. As a lender, which country has the highest fill rate? For the entire group, the fill rate for Fiscal Year 2017 was 38%. Would it surprise you to learn that China had the highest fill rate as a lender of any country in the group, at 51%? Other countries with high lending fill rates are Italy (43%), Germany (42%), and France (40%). When borrowing, the group has an 80% fill rate. The highest fill rate as a borrower is our host country, France, at 82%.

For my last bit of number slicing, I will make a smaller, non-North American consortium by removing the data for both the US and Canada. That leaves us with 10 countries. For these, let's look at the percentage of the group's lending each country did in Fiscal Year 2017, and the percentage of the group's borrowing each country did. Germany has the biggest split between lending and borrowing: libraries in Germany did 73% of our consortium's lending and only 1% of the consortium's borrowing. China's activity was almost perfectly balanced: 11% of the lending and 10% of the borrowing. France and South Africa had splits between lending and borrowing that were very similar: France did 5% of the lending and 29% of the borrowing, while South Africa did 7% of the lending and 23% of the borrowing.

This analysis should give you some idea of what you can learn about your own institution, about other libraries, about your consortia, and about the interlending environment as a whole, from these two tools provided by OCLC. I should note, however, that many of the institutional profiles contained within the OCLC ILL Policies Directory are mere placeholders. A significant number of directory users have not edited library profiles, and they contain only their symbol and address, which is prepopulated by OCLC. Obviously, more complete data would make the tool much more effective and useful.

Some lessons I took away from the OCLC ILL Policies Directory and the OCLC Usage Statistics include:

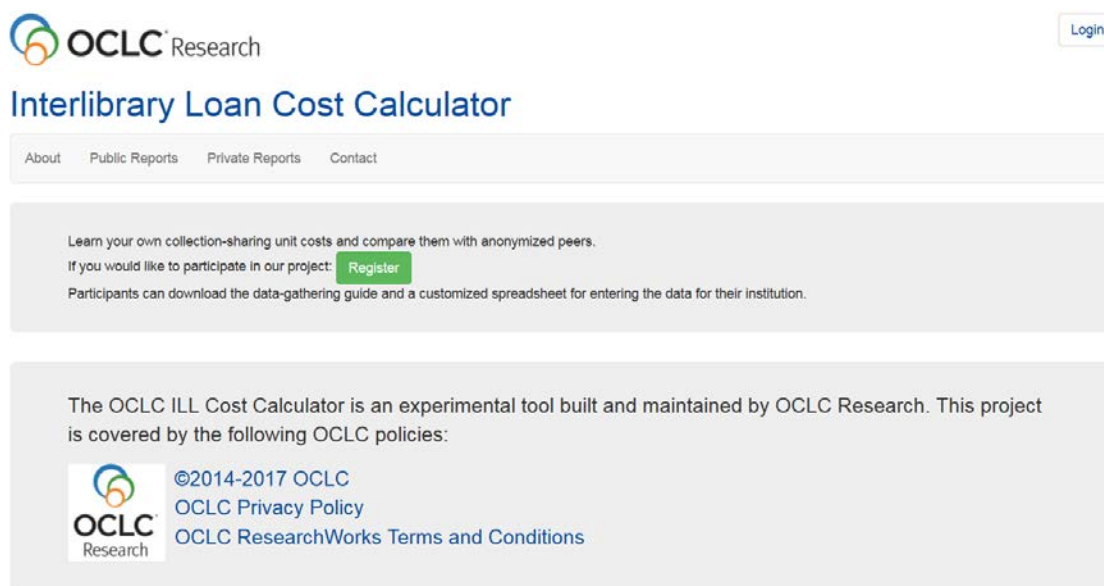
- Even a partial view of the whole environment can be interesting and useful, even actionable.
- Being able to see, compile, and track your own data is essential. Being able to see data within your consortia is becoming equally important.
- The ability to track your own activity and that of your consortium, over time, can be transcendent.
- More institutions contributing data to a tool increases the effectiveness of that tool.
- Even with the grandest ambitions, you have to start somewhere.

Chapter 4: OCLC ILL Cost Calculator

The ILL Cost Calculator is more real than the imaginary consortium whose interlending data I analyzed in the previous section of this paper. But it is not quite ready for general use. Its release will happen within the next four-to-six months. It will be freely available on the Web, for anyone anywhere to use. Various components have been in beta test for two years this month, and a working group of library experts has been hard at work with me on this project since before the 12th IFLA Interlending and Document Supply Conference happened in Chicago in 2011, with intensive work on it happening over the past four years.

Figure 4.

OCLC ILL Cost Calculator Web interface



From the beginning the calculator was designed to allow users to know their own unit costs for sharing collections, divided into categories such as staff, systems, equipment, and shipping, and further apportioned by type of sharing: borrowing copies via traditional ILL, or supplying books via the expanded circulation model, or supplying copies and books to your own library users from your own collections. Early on we decided that we wanted users to be able to compare their costs with those of anonymized peers, and to apply and remove certain filters, such as the degree of automation for processes such as building a lender string, to see what effect that had on unit costs across the data pool. More recently we came around to believing that it is essential that users should be able to compare interlending unit costs against the average costs within a consortium, and that the calculator should be able to provide an average percentage that peers report for specific costs that a particular user cannot provide. (For instance, if a user cannot provide shipping costs for her library, the calculator will report what percentage of the whole shipping makes up, on average, for peer institutions that *have* been able to provide that data within the calculator.)

Recently, while contemplating the joys and benefits of interacting with the IFLA Library Map of the World, and the date slider in Google Street View, and the powerful combination of the OCLC ILL Policies Directory and the OCLC Usage Statistics, I have come to the conclusion that the ILL Cost Calculator should have grander ambitions than just revealing a library's interlending unit costs, as useful

and as actionable as that modest objective continues to be. The IFLA Library Map of the World clearly demonstrates the power of compelling, interactive data visualizations, coupled with the ability to sort data by country and by category. Google Street View's date slider clearly demonstrates the amazing potential of being able to compare data over time, leading to revelations and to further questions that you would otherwise never have thought to ask. The OCLC ILL Policies Directory and the OCLC Usage Statistics team up to teach us plenty about our own library, the activity within our consortia, and the contours of the global collection-sharing environment.

The ILL Cost Calculator has potential for doing all these things as well. It can be a tool for learning about your own interlending unit costs, certainly. But it can also become a teacher -- an educational piece of equipment -- or toy, if you prefer -- with which to play and from which to learn. It can become a destination, one that attracts interlending birds-of-a-feather to a central place that, by taking what we all bring to it and presenting it in the aggregate, and slicing it in interesting ways, can set us on the path to creating efficiencies, and changing our behaviors, and telling our stories. And, finally, if enough of you come, and contribute your data, and participate, it can become a global meeting place for the interlending community, a place where we can come together, and have conversations, and derive nourishment that will feed our collection-sharing dreams and aspirations.

In short, the ILL Cost Calculator can become a global interlending watering hole.

Conclusion

What must happen before this vision of the OCLC ILL Cost Calculator becomes reality?

First, obviously, we must finish testing and release the tool for general use. Second, I need to arrange for some of the same sorts of visual and interactive aspects that we see in the IFLA Map of the World to be constructed around the ILL Cost Calculator, and to provide some social mechanism by which users of the calculator can interact with each other and share their thoughts and experiences. But, most importantly, people like you need to come and register and contribute your transactional and cost data.

This is what we Americans like to call "a big ask." Gathering the necessary cost and transactional data is not trivial; indeed, it is a labor-intensive task that will consume significant time and staffing resources. It may involve gathering sensitive data from other divisions within your institution. The work involves some thought exercises, such as estimating what percentage each staff member spends on a given type of collection sharing each year. Senior library administrators will need to see real value from this project before they sign off on spending the resources necessary for gathering and submitting the data. The size of the data-collection task has negatively impacted previous interlending cost studies. The study most often quoted today, published by Association of Research Libraries in 2004 (which found that the average cost to process an ILL borrowing request was \$17.50 USD, a lending request cost \$9.27 USD) was based on responses from just 72 institutions. The interlending cost study presented at the 12th IFLA Interlending and Document Supply Conference in Chicago in 2011, by Lars Leon and Nancy Kress (which found that the average cost to process an ILL borrowing request was \$9.62 USD, while a lending request cost \$3.93 USD), was based on responses from 23 institutions. (*Leon 2012*)

The enormity of the data-gathering task is not the only obstacle to libraries contributing their numbers to the ILL cost calculator. For many institutions, particularly those financed primarily with private funds, some of the cost data can be quite sensitive, not only when revealing to an outside entity like OCLC but also to gather internally. Staff salary information, for instance. Some libraries have entered into non-

disclosure agreements with shipping companies or the vendors of automated resource sharing systems. And even among the small group of ILL Cost Calculator beta testers – 11 institutions in the United States and Australia – every library had some significant piece of data that they were unable to come up with.

We've addressed these obstacles in the design of the cost calculator. Data elements will be gathered by users in detail, but only totals will be reported to OCLC, for each subcategory. For instance, for staffing the user will only submit totals and task-breakdowns for Supervisors, Full-time staff, part-time staff, student workers, and volunteers. For systems, users will report only totals for the subcategories of ILL systems that are currently in play: request movers, consortial borrowing systems, and request managers, with no actual system names or individual costs being revealed to OCLC. And users who are unable to gather certain data elements, or who do not wish to contribute certain categories of information, can simply check boxes to indicate which data points are not being reported. The calculator will compensate for this lack of data in two ways: 1) it will compare with peer institutions only those costs that the user reported, and 2) it will report what percentage of the whole the missing costs represented for peer institutions that have submitted complete data. Clearly, the more data submitted, the more useful the tool will be for each user. But we want to ensure that even those libraries submitting only partial data can contribute to the ILL cost calculator, and derive some benefit. I sincerely hope that this aspect of the calculator serves to lower the barriers to participation.

How many participants will we attract to our interlending watering hole? Twenty-three? Seventy-two? Hundreds? A thousand? Or zero? Zero would mean we built more of a mud puddle than a watering hole, wouldn't it?

I have no idea what will happen. The working group and I are doing everything we can to get the word out. We believe in the potential for this tool and for the community that could form itself around the ILL Cost Calculator. My hope is that, early on, a few consortia will decide to use the tool, with members comparing their unit costs with each other. As the data pool grows the tool will become more valuable and interesting, and the force of attraction will hopefully multiply. By then there will be some stories to tell and conversations to be had. When we have two years' worth of data to compare, the pull will get even stronger.

All of you can do something about making the ILL Cost Calculator a watering hole that is worth visiting. I hope you will consider joining the working group and me in this endeavor. It will start small; *very* small. And the picture it presents will necessarily remain fragmented and incomplete, for quite some time.

But, as I've noted a few times already in this paper: even with the grandest ambitions, you do have to start somewhere.

So, in conclusion: see you all around the watering hole!

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