Appendix: Data Sources Inventory

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AWStats

Basic Counts
awstats records the following activities and user characteristics:

- Summary
  - Unique visitors
  - Number of visits
  - Pages
  - Hits
  - Bandwidth
  - Visits/Visitor
  - Pages/Visit
  - Hits/Visit
  - KB/Visit
- When:
  - Monthly history
  - Days of month
  - Days of week
  - Hours
- Who:
  - Countries
    - ... Full list
    - ... Cities
  - Hosts
    - ... Full list
    - ... Last visit
    - ... Unresolved IP Address
  - Robots/Spiders visitors
    - ... Full list
    - ... Last visit
- Navigation:
  - Visits duration
  - File type
  - Pages Viewed
    - ... Full list
    - ... Entry
    - ... Exit
  - Operating Systems
    - ... Versions
    - ... Unknown
  - Browsers
    - ... Versions
- Unknown
  - Referrers:
    - Origin
      - Referring search engines
      - Referring sites
    - Search
      - Search Keyphrases
      - Search Keywords
  - Others:
    - Miscellaneous
    - HTTP Status codes
      - Pages not found

Raw counts provided by awstats include number of unique visitors, number of visits, unique pages visited, total hits, and bandwidth. It also provides scope and range data such as geographical variety (country and city of origin), host names (if IP can be resolved), software used (operating system, web browser), referring sites and search engines, and search terms used. These can be quantified and then compared to the total universe, or to similar measurements for other sites. For example, how many different countries are represented among the users of a particular web site.

**Behavioral Context**

awstats provides some data in the form or ratios, such as visits/visitor, pages/visit, hits/visit, and KB/visit. These are revealing of user behaviors that may correlate with content. For example, some sites may tend to attract deep exploration while others are used more superficially. We can also calculate proportions for the scoping data. Some sites may attract a higher proportion of off-campus users, or those from non-English-speaking countries, or those who are referred from our own discovery systems as opposed to Google.

awstats doesn't track multiple characteristics for individual users, so we can't generate our own ratios between individual variables. For example, it might be useful to know if users coming from certain referrers access different parts of a site, or use it more or less intensively. Because the logs systems retains raw log files, it does have the potential for that kind of analysis, though the system doesn't currently support it.

Other behaviors are evident through tracking of when (time of day, day of week, month, season, semester, etc.) access is made.

**Satisfaction Indicators**

awstats keeps track of http status codes, including totals for pages not found. This kind of failure event is a potential source of user frustration or dissatisfaction, though it doesn't measure it directly. Certain inferences can potentially be made by tracking changes in use over time (is interest in the site steady, increasing, or decreasing), and by comparing those trends to those of sites with similar content, or designed for a similar purpose.
**Work Practice**

By examining use data from many different sites over time, we may be able to discern shifts in usage patterns that are indicative of behavioral changes driven by attitude changes. For example, if traffic to one site rises in proportion to the fall at another, and the two sites can be considered "competitors," such an observation might be the result of users comparing the two and choosing the one they like better.

**Services/Resources Covered**

awstats is a web site analytics service, currently running on 120 CUL web sites, including those for unit libraries, and a variety of digital assets and services. awstats provides some of the same data as the home-grown logs system, but they aren't identical, and each does some things well that the other doesn't.

**Notes**

Staff source: Rich Entlich
Borrow Direct

Basic Counts
BD transaction data is collected by the Relais software that also manages the transactions themselves. At present, Relais is able to collect the following transaction details:

- BORROWER
- LENDER
- REQUEST NUMBER
- PICK UP LOCATION
- REQUEST DATE
- SHIP DATE
- RECEIVED DATE
- STATUS
- SHELVING LOCATION
- PATRON TYPE
- AUTHOR
- TITLE
- PUBLISHER
- PUBLICATION PLACE
- PUBLICATION YEAR
- ISBN
- LCCN
- CALL NUMBER

Thus we can count the number of borrow and lend transactions for each institution, the elapsed time between different steps in the loan process, a few different bibliographic characteristics (though currently not language of publication), a status indicator (was the request ultimately filled) and some very basic categorical information about the users. BD is trying to gather a unique bibliographic identifier for all transactions so additional data can be extracted from local catalogs about the items being borrowed, since using Relais to extract the data risks making the entire system unstable.

In addition to providing individual transaction data, the University of Pennsylvania data farm also offers some dashboards for producing several kinds of summary reports. These include fill rates for the different members, breakdown of transactions by LC classification, and titles requested multiple times. Data goes back several years, but prior to 8/23/2010, a different system handled the transactions, and the data isn't completely comparable to the data being collected by the current system.

Behavioral Context
We can identify user behaviors and preferences in many areas, such as when the transactions occur (time of day, day of week, month, season, semester, etc.), the publication date, publisher, and subject matter of the items borrowed, the flow of titles in certain subjects between different institutions, and the degree to which different patron groups are using the service, and for what kinds of materials.
Since we have data at the level of individual transactions, we do have the ability to cross-tabulate different elements.

However, we are missing some key pieces of data. We don't have information on what prompts a user to request a book via BD. Is it because the host institution doesn't own the item, or because all of its copies are in use, or the item doesn't circulation from the local collection, etc. This makes it impossible to determine what collection characteristics are driving the use. We lack any detailed demographic data on users, so we can't correlate demand by field or study or departmental affiliation. We also don't know how many unique users are taking advantage of BD. Is it a small group of heavy users, a large group of light users, or something in-between?

An alternative means of tracking use is to aggregate data already in the ILS of each member institution. We will shortly be changing how we track our BD loans in Voyager to see if such an approach has merit.

**Satisfaction Indicators**

To some extent, the very act of using BorrowDirect can be thought of as a letdown for the user. It means that something they wanted either wasn't in our collection, or wasn't available for use at the time. At the very least, it will take longer for them to get access to the desired item than if it have been readily available. On the other hand, we can't afford to buy everything, and Borrow Direct expands significantly the universe of titles that are available through a fairly rapid interlibrary delivery system. So it would be difficult to infer levels of user satisfaction or dissatisfaction strictly on the basis of how much use Borrow Direct is receiving.

BD records requests that could not be fulfilled. This kind of failure event is a potential source of user frustration or dissatisfaction, though it doesn't measure it directly. Certain inferences can potentially be made by tracking changes in use over time (is use of BD steady, increasing, or decreasing), and by comparing those trends to alternative sources, such as the local collection, traditional ILL, PDA activity (where applicable), and purchase requests to selectors.

**Work Practice**

In order to stretch materials funds, BD members are intentionally lessening duplication and consciously dividing collection responsibilities. The intention is to do this for materials expected to be in low demand, with consequently small impacts on users in terms of convenience and access. By examining trends over time, we may be able to discern shifts in usage patterns that are indicative of behavioral changes driven by attitude changes. Users could, for example, express dissatisfaction in BD by using other access services more heavily. If large numbers of titles are borrowed multiple times via BD, it could indicate that the judgments about what titles will be low use are incorrect.

**Services/Resources Covered**

Borrow Direct supports the efficient movement of (mostly) print monographs among the nine member institutions of the consortium. Not all collections at all libraries are included in the service (e.g., Columbia's Avery Art & Architecture collection is not available for loan via BD). Borrow Direct transactions tend to be faster and lower cost than traditional interlibrary loan transactions because the
relatively high volume of transactions within the member institutions cuts shipping costs and allows the use of carriers like UPS.

Notes
Staff source: Rich Entlich
Basic Counts
The kind of use recorded in COUNTER reports varies depending on the type of resource. For ejournals, the most commonly reported measure of use is requests or downloads of full-text articles, counted at the journal title level, and reported monthly with an annual total (JR1 report). For ebooks, the most commonly reported measure of use is requests/downloads of book sections (usually thought of as chapters), counted at the book title level, and reported monthly with an annual total (BR2 report). For databases, the most commonly reported measure of use is searches or queries counted at the database level, and reported monthly with an annual total (DB1 report).

There are other use measures, but they are in reports that are less commonly provided. For ejournals, the JR3 report, provided by fewer than 60% of COUNTER-compliant publishers, tallies use by page type, such as tables of contents, abstracts, references, supplementary data sets, and various multimedia formats. Not all of these are necessarily tracked or even exist for every journal or platform. The JR5 report, provided by only about one eighth of COUNTER-compliant publishers, breaks full-text article downloads by the year of publication, generally giving totals for the five years prior to the present and then lumping everything more than five years old into a single category. The JR1a report, a subset of the JR1, covers article downloads from separately purchased archives of journals. The date range covered will vary according to publisher or platform.

For ebooks, instead of the section request totals found in the BR2 report, some publishers provide the BR1 report, which tallies title level ebook requests. According to the standard, the BR1 should only be provided when the content is not available to users in identifiable subsections. A small percentage of publishers produce the BR5, which details searches and sessions within an ebook package at the title level, by month. More common is the BR6, which summarizes searches and sessions by month for the entire ebook package.

For databases, reports produced under the current COUNTER standard report both searches and sessions, with the DB3 report tallying use for an entire service, rather than at the individual database level, as in the DB1.

The version 4 COUNTER standard will introduce some changes in the metrics, the range of reports produced, and the names of the reports.

Behavioral Context
COUNTER reports don’t directly address who the users are, or from where or how the user found or obtained access to the resource. They don’t record individual transactions, so cross-tabulation of different parameters isn’t possible. However, the reports do reveal certain behavioral preferences. The monthly tallies reflect seasonal changes in use. Use can also be tracked over a period of several years to reveal long-term trends. Reports that separately tally use by format or medium (e.g., the JR1 and JR1a, which tally PDF and HTML requests separately) may reflect user preferences, but they may also reflect format availability (not all full-text articles are produced in HTML) or the design of the portal, which may present one format or another first, or more prominently.
Some publishers are starting to produce separate reports (not defined in the COUNTER standard) showing use by IP address. This kind of data has the potential to provide insight into who the users of our subscribed e-resources are, and to permit analysis and interpretation of the COUNTER reports from a different perspective.

Satisfaction Indicators
Although not a direct measure of user satisfaction, each class of COUNTER reports includes at least one that tallies turnaways. Under the current standard, turnaways are defined as content that a user was denied access to as a result of simultaneous usage limits. In the forthcoming standard, turnaway reports will separately tally usage limit turnaways from unsubscribed content turnaways. We can presume (though not quantify) that users are dissatisfied or frustrated when they’re unsuccessful in accessing desired content.

Work Practice
For content that’s available on multiple platforms, comparing use between platforms may tell us something about users’ preferences for how the content is presented, the functionality of the site, or their familiarity with the platform (which may reflect on our discovery systems as well). Analysis of long-term use trends for multiple platforms may reflect changes in popularity of titles or platforms based on user frustration or perceptions of quality or ease of use.

Services/Resources Covered
COUNTER reports are produced by electronic resource publishers, vendors, and aggregators, and address the level and type of use made by Cornell authorized users, usually on a monthly basis. There are separate classes of reports for ejournals, ebooks, and databases, and multiple report types within each class. Not all publishers produce the reports, and some produce only a subset reports within the relevant class of reports. We have little control over which reports are available, or how they’re produced. Nevertheless, in many cases the COUNTER reports are our only comprehensive source of how much use our subscriptions to e-resources are getting. At the moment, there are five ejournal reports, six ebook reports, and three database reports. This will change slightly at the end of 2013 when the new version 4 standard becomes mandatory. Most COUNTER reports deal with amount of use and do not tell us anything about who the users are.

Notes
Staff source: Rich Entlich
Count-It

**Basic Counts**
Quantifies the use of our information and instruction services

**Behavioral Context**
Shows reference transactions by breakdowns such as: location, mode of communication, length of transaction, etc.

Shows presentations by breakdowns such as: location, type (e.g. credit bearing, course related, workshops, etc.)

**Satisfaction Indicators**
Problems with connections, use, and interpretation of online resources might show up as questions that reached the reference staff. Some locations and librarians write down the question they are asked, so through textual analysis this data could be used to find difficulties patrons have with our information systems. Type of patron is one category that is sometimes used by the librarian.

**Work Practice**
See above - in a very few cases the records might refer to how the user is trying to connect to our resources

**Services/Resources Covered**
Information transactions and presentations to groups (includes traditional library categories such as reference questions, directional questions, technical questions, instruction sessions, tours, workshops, orientation sessions, consultations, and outreach.)

**Notes**
Staff source:
EZProxy

Basic Counts
Limited to platform, not the individual title-level

Gives data about 1.) licensed (paid) resources accessed from off campus, and 2.) resources used on campus, if the patron is accessing the resource using a URL with a checkIP string (which, oddly, could also bring in data about free resources, since our summon links all have a checkIP string)

Behavioral Context
Able to glean IP address, netid (primarily for off-campus users), geographic location, on campus computers - can get info about department and sometimes the specific person to whom the computer is registered

Inconsistently pulls out data about how long a user remained on a platform, and how many hits/bytes

Satisfaction Indicators
N/A

Work Practice
For the most part, we aren't able to get any attitudinal/behavioral data from ezproxy, unless you use evidence of excessive downloading behavior to indicate that the patron (or person masquerading as a legit patron) has the attitude that they can access all the info they want from licensed library resources

Services/Resources Covered
Licensed library resources used from off-campus, and resources used from on-campus if the url has a checkIP string

Notes
Staff source:
Google Analytics

**Basic Counts**
Tracks visitors to site or the number of page views, it can be used to see which content gets the most visits, time on site per visit,

**Behavioral Context**
N/A

**Satisfaction Indicators**
N/A

**Work Practice**
N/A

**Services/Resources Covered**
[http://www.library.cornell.edu/](http://www.library.cornell.edu/)
[http://olinuris.library.cornell.edu](http://olinuris.library.cornell.edu)
[http://physicalsciences.library.cornell.edu](http://physicalsciences.library.cornell.edu)
[http://engineering.library.cornell.edu](http://engineering.library.cornell.edu)
[http://music.library.cornell.edu](http://music.library.cornell.edu)
[http://management.library.cornell.edu](http://management.library.cornell.edu)
[http://africana.library.cornell.edu](http://africana.library.cornell.edu)
[http://alumni.library.cornell.edu](http://alumni.library.cornell.edu)
[http://staffweb.library.cornell.edu](http://staffweb.library.cornell.edu)
[http://entrepreneurship.cornell.edu](http://entrepreneurship.cornell.edu)
[http://wordsworth.library.cornell.edu](http://wordsworth.library.cornell.edu)
[http://cuneiform.library.cornell.edu](http://cuneiform.library.cornell.edu)
[http://aerial-ny.library.cornell.edu](http://aerial-ny.library.cornell.edu)
[http://library.cornell.edu/compact](http://library.cornell.edu/compact)
[http://dynkincollection.library.cornell.edu](http://dynkincollection.library.cornell.edu)
[http://annex.library.cornell.edu](http://annex.library.cornell.edu)
[http://cuneiform.library.cornell.edu](http://cuneiform.library.cornell.edu)
[http://www.mannlib.cornell.edu](http://www.mannlib.cornell.edu)

**Notes**
Staff source: Adam Smith/Matt Connolly
Interlibrary Loan

Basic Counts

Behavioral Context

Borrowing
- illiad number
- illiad user name = netid (and via user table you additionally get name, department if populated, email, patron type (cooperative ext, grad, undergrad, faculty, Mann distance).
- dates (in tracking table by illiad transaction #)
- cited in (OpenURL requests include the sid)
- title and other bibliographic info
- request result
- status

Loans
- lender addresses
- OCLC code for lending and borrowing (related info in OCLC resource share system, OCLC resource sharing transaction #, btw)
- should not contain personal info about patron who is making the request
- OCLC resource sharing transaction #
- statuses

Satisfaction Indicators

Request result

Work Practice

N/A

Services/Resources Covered

N/A

Notes

Staff source: Jesse Koennecke
LibGuides

Basic Counts

Behavioral Context
N/A

Satisfaction Indicators
N/A

Work Practice
N/A

Services/Resources Covered
N/A

Notes
Staff source: Adam Chandler

It is worth noting that Wendy Wilcox, Gaby Gessner, and Adam Chandler are working on a study of LibGuides usage that is based a snapshot of the data that was located into the location-centric logs.library.cornell.edu system. Their results will be shared at the 2013 ACRL conference. See the attached report from the study for an illustration of what can be learned when location data is added to LibGuides usage reports.
Lyris List Archive

Basic Counts
Gives some indication of usage, but cannot be used as a consistent measure of usage. High use titles which don't work all of a sudden, will have many complaints on LIBIT, LIBGATEWAY, or ERLM. Conversely, we may find that no one is using a specific title very much, if it takes (for example) two years for any patrons to complain about lack of access due to a lapsed subscription.

Behavioral Context
Some of the usage/behavioral info found in LIBIT, LIBGATEWAY, and ERLM, is automatically populated, but much of the data is accumulated by staff once the email has been received. So, the data is not consistent, as it usually requires follow up to get additional info.

Satisfaction Indicators
We hear all kinds of complaints! We also hear some nice comments. One of the better ways to find out if people like a service or resource. However, has the problem of consistency, as not all patrons are going to complain or reward us.

Work Practice
The lists are all valuable to highlight patron problems with access, and their resulting behaviors. Of course, the patrons may disagree, as they are running into problems with access at crucial moments. Example of a U/A/B report - students try to use one ebook at the same time, and then we discover that the book has limited simultaneous access or similar issue.

Services/Resources Covered
Patron and staff use of e-resources; use of the library homepage; use of various discovery services.

Notes
Staff source:

Personal archives of email lists is most effective as the list archives for ERLM and LIBIT are relatively short (30 and 15 days). LIBGATEWAY has a permanent archive, but it is hard to get the archive easily; one must use a "get" command, and then one is limited to 1 mb of information each time the get command is invoked. A large amount of "garbage" is returned with the "get" command, and this would need to be filtered out.

Problems with this type of data harvest: patron confidentiality. Do we need consider how long to keep an archive? Or to clean up netids, etc, so that resources/patrons can't be tied together in the future. Useful up to a certain extent to have netid/patron type data, as it does allow us to track some demographic info, so need to balance this with patron confidentiality.
Logs.library.cornell.edu

Basic Counts
Reports:

Totals by all URLs: This option reports back all user hits within a web asset's host url and a total hits number for the entire time period according to the web asset/service selected.

Totals by URL Path Depth: This option reports back all user destinations based on the selected URL path depth element (options are: /X/.../.../..., /.../X/.../.../..., /.../.../X/.../...) and a total hits number for the session/entire time period according to the web asset/service selected. The example below shows all user hits with one URL path element to http://rmc.library.cornell.edu (Rare & Manuscript Collection web site).

Totals by URL Argument Values: This option reports back all user hits with a certain URL argument value. An URL argument specifies the location of a resource to be used. If you select this option, you must specify a URL argument keyword (keyword=bee when selecting the Hives and Honeybee Collection) in the next step. There is also a total session number reported for the entire time period according to the web asset selected.

Behavioral Context

Session Totals by Date: This option reports back all user sessions by individual day and a total session number for the entire time period and web asset/service selected.

Session Totals by Hour of Day: This option reports back all user sessions by military time and a total session number for the entire time period and web asset/service selected.

Session Totals by Month: This option reports back all user sessions by month and a total session number for the entire time period according to the web asset/service selected.

Session Totals by Calendar: This option reports back all user sessions by academic calendar period (Registration/Orientation YYYY, Late Summer Break YYYY, Winter Session YYYY, Regular Classes Post FB YYYY, Regular Classes Pre FB YYYY, Regular Classes Post SB YYYY, Regular Classes Pre SB YYYY, Summer Session YYYY, Final Exams YYYY, Spring Break YYYY, Regular Classes Post TB YYYY, Thanksgiving Break YYYY, Study Period YYYY, Fall Break YYYY, Winter Break YYYY) and a total session number for the entire time period according to the web asset/service selected.

Session Totals by Domain: This option reports back all user sessions by domain (e.g. verizon.net, aol.com, uc.edu, k12.oh.us) and a total session number for the entire time period according to the web asset/service selected.

Session Totals by Browser: This option reports back all user sessions by browser type (Google, Mozilla Firefox, etc) and a total session number for the entire time period and web asset/service selected.
Session Totals by Referral: This option reports back all user hits by Referral URL (URL the user came immediately from like http://web.search.cornell.edu) and a total hits number for the session/entire time period according to the web asset/service selected.

Session Totals by Domain: This option reports back all user sessions by domain (e.g. verizon.net, aol.com, uc.edu, k12.oh.us) and a total session number for the entire time period according to the web asset/service selected.

Session Totals by Referral: This option reports back all user hits by Referral URL (URL the user came immediately from like http://web.search.cornell.edu) and a total hits number for the session/entire time period according to the web asset/service selected.

Session Totals by Location: This option reports back all user sessions by location (e.g. Houston, TX (USA not NY); Sturgeon Bay, WI 54235 (USA not NY)) and a total session number for the entire time period according to the web asset/service selected.

Session Totals by Loc-TYPE: This option reports back all user sessions by location type (USA not NY, Overseas, Unknown, NY not Ithaca, CU Ithaca, (summary) All Other USA, (summary) Ithaca Campus, (summary) Overseas) and a total session number for the entire time period according to the web asset/service selected.

Library usage by public/staff: This option reports back all user sessions by Cornell Library location type, the type of user (public or staff), and a total session number for the entire time period according to the web asset/service selected.

Totals by CHECKIP Routing: This option is not available for all web assets and web services. The following are short definitions of the various categories within this report.

- Forced EzProxy: package level non-standard authentication needed: example, Books24x7
- Unknown|World: World (open) access
- Weill no-med: location = Weil campus + gateway_nommed resource, redirects to a page where the user can use an Ithaca netid if they have one
- NoAuth EzProxy: handful of IPs (at Weil) that require bypass
- On Campus IP: request made on campus
- WebAuth EzProxy: remote access
- DEBUG: library systems testing
- VPN EzProxy: user starts session with Ithaca VPN session, but it they try to go to a licensed resource the VPN session with not proxy the session, so we give the user a chance to log in
- Alumni All: alumni authorization
Satisfaction Indicators
Reports

http://logs.library.cornell.edu/server/errors_rc.cgi

Work Practice
Reports

Services/Resources Covered
Alumni Affairs and Development
Beyond the Taj
CheckIP (Routing)
Core Historical Literature of Agriculture
Cornell & Columbia Library Partnership
Cornell Daily Sun
Cornell Library Communications
Cornell Library Research & Assessment Unit
Cornell University Engineering Library
Cornell University Library Staff Web
Cornell University Library's photostream
Ctheory Multimedia
Digital Consulting & Production
DLXS Windows on the Past
Dspace - eCommons@Cornell
Edna McConnell Clark Library
Eugene B. Dynkin Mathematics Interviews
Fine Arts Library
Friend of Man
General Diagnostic Logs for Library4
Get it! Cornell link resolver service
Global Performing Arts Database
Hive and the Honeybee Collection
Home Economics Archive
Human Ecology Historical Photographs
Images from Rare and Manuscript
John Henrik Clarke Africana Library
Kinematic Models for Design
Library Guides
LIBRARY OPAC
Library Technical Services
Locale Collection
Mann Library Home Page
Mathematics Library
Muller::Kluge Conversations
Mysteries at Eleusis
NEW Olin & Uris Libraries Site
New York State Aerial Collection
Newspaper Archives
PURL Resolver
Rare & Manuscript Collection
Research and Expertise Across Cornell
Sidney Cox Library of Music and Dance
Teeal Agricultural Digital Library
The Asia Collections
The Billie Jean Isbell Andean Collection
The Fantastic in Art and Fiction
The Johnson School of Management Library
The William Wordsworth Collection
WWW.LIBRARY Gateway

Notes
Staff source: Adam Chandler
**Misc Qualitatives**

**Basic Counts**
These include reports of focus groups, interviews, observations, or surveys done over the years at CUL. These studies tend to answer more specific research questions, often dealing with only one or a few segment of our audience. They are usually conducted to inform specific projects or decision points and their longer term and broader applicability can be limited, therefor we concluded that they should not be inventoried for this project. However, qualitative projects should be considered to fill in specific gaps left by quantitative, system-generated data as they related to our group's charge.

**Behavioral Context**
Yes, qualitative methods can be applied here.

**Satisfaction Indicators**
Yes, qualitative methods can be applied here.

**Work Practice**
Yes, qualitative methods can be applied here.

**Services/Resources Covered**
Could be any.

**Notes**
Staff source: Zsuzsa Koltay
Purchase on demand or demand driven Acquisitions (myiLibrary)

Basic Counts
We have several different reports.

- MyiLibrary offers three COUNTER reports, BR2, BR3, BR6. However, some analysis done by Rich Entlich in 2012 showed that these reports are not accurate. We reported the problem to Coutts.
- MyiLibrary offers raw data downloads at the session level.
- For purchases, we can also query Voyager MARC records by 899 code to find number of MyiLibrary records in Voyager and how many MyiLibrary ebooks were purchased.

These counts come from Voyager 899s.

- Print
- Not yet purchased (Couttspdappr) = 707
- Purchased (CouttspdCUL) = 22
- Electronic (first purchase in October 2009)
- Not yet purchased (MyiLibraryeappr) = 1856
- Purchased (MyiLibraryCUL = 556

Behavioral Context
Our approval profile more or less determines the demographics of the user, because the content is narrowly focused.
MyiLibrary offers raw data downloads at the session level.

Satisfaction Indicators
N/A

Work Practice
N/A

Services/Resources Covered
MyiLibrary ebooks.

Notes
Staff source: Adam Chandler
Summon Logs

Basic Counts

Behavioral Context
1. Visitor profile: a. referring source (ex. library.cornell.edu, cornell.summon.serialssolutions.com, another library webpage), b. geographic location, c. network location (ex. - cornell, weill med, road runner), d. domains (ex. - cornell.edu, rr.com)

2. User technical profiles: a. browser versions, b. platform versions, c. browser & platform combos, d. connection speed - this is not especially useful, as seems to be incorrect

3. IT reports: a. domains (this repeats some of the info from the visitor profile), b. domain drilldown - aggregates the domains in a slightly way, c. IP addresses (data is # of hits over time by IP address; most of the activity is linked to the ezproxy IP), d. IP drilldown - can look up use of summon by top level of IP range (ex. 132.), or drill down octet by octet, e. unresolved IPs - seem to be mostly on campus IPs

The IT reports may be the most useful for our report, as we can determine which departments are using Summon most. One drawback - about half of the use comes from off-campus, so determining dept is not useful just from the IPs.

NOTE: all of the user technical profiles offer us a too much information!!!! - we can view individual users (each user is identified by a unique alpha-numeric code), their geographic location, their IP address, their browsers, and what the specific search terms used.

Satisfaction Indicators
N/A

Work Practice
The report, Top Queries, records actual query details, time spent on each search, and the % of people who "exit via the page" - possibly indicates some behavioral characteristics

Services/Resources Covered
The library's article search system, Summon. NOTE: doesn't tell us which resources the patron linked to after doing a search.

Notes
Staff source: Liisa Mobley
Vendor Custom Reports

By definition, being custom reports, there is no standard for either the format or contents of these reports. Therefore, care needs to be taken in terms of the scope of applicability. In many cases, the data will be relevant solely for the specific resource it's associated with and will not be suitable for comparison with other resources, or for understanding general trends for other resources of the same type. However, certain types of reports, such as use by IP address, are available from enough vendors and are sufficiently standardized that they may have comparison value. Others, such as reports on the use of mobile devices for access of library resources, can provide valuable insight into the behavior of the user community even if only a few vendors provide them.

A thorough inventory of vendor custom reports would be needed to give a full sense of what's available and their potential for informing our understanding of e-resource usage. This requires visiting each vendor's administrative or usage portal and/or making direct contact with a contact person at each e-resource vendor. That level of inventory is beyond the scope of the task force, so the descriptions below are based on a small survey of available reports.

Basic Counts

The straight use data available in custom vendor reports tends to be similar to that provided in COUNTER reports for the main classes of e-resources (journals, books, databases), but is often at higher level of detail. For example, COUNTER reports for e-journal article downloads are provided at the title level. Some vendors provide custom reports at the article level. Some do so for just the most popular articles within a period, others for all articles. For e-books, COUNTER specifies reporting at either the title or section level (usually interpreted as chapters). Some vendors provide custom reports at the page level, and include all types of use (downloads, views, and printouts) rather than just downloads. Page level counts are more accurate for comparison purposes, since sections are a highly non-standard unit of consumption. (Individual pages vary in content carriage, too, but not to as great an extent).

One popular custom report from e-journal vendors is the so-called JR1b. The COUNTER specification calls for a report on all e-journal downloads (the JR1), but also specifies a report on downloads from a journal archive, called the JR1a. The JR1b is not an official COUNTER report, but it is useful, and is easy for vendors to generate. It reports on downloads that are solely from the front file (i.e., the difference between the JR1 and the JR1a).

Behavioral Context

A variety of custom vendor reports address behavioral aspects of e-resource use. Many of the larger e-journal providers now provide reports on article downloads by IP address. Such reports are typically formatted similar to the COUNTER JR1 report, in that they tally the number of article downloads by month. The reports don't detail anything about the specific content being downloaded from each IP, just the number of downloads. Thus, the reports potentially provide insight into the physical location and unit or departmental affiliation of users of content from an entire platform or collection or resources. Since the ez-proxy IP address is included, these reports also allow a rough calculation of the ratio of downloads between on and off-campus users.
Some custom reports provide more detailed information about the timing of user actions. For example, most COUNTER reports segment use by the month, while some custom reports report day or week and/or time of day.

**Satisfaction Indicators**

Some of the custom reports deal with turnaways (denial of access to content) in ways that are not required or currently supported under COUNTER. In particular, some vendors provide turnaway reports that focus on attempts by our users to access non-subscribed content, a category of turnaway not covered in the currently implemented COUNTER standard (though it has been added to the new version, set for implementation at the end of calendar year 2013). We can presume that users are dissatisfied or frustrated when they’re unsuccessful in accessing desired content, particularly when that content resides on platforms that we direct them to for other content.

**Work Practice**

Because they’re unique to a particular resource or platform, custom vendor reports probably have less potential than standard reports for use in spotting broad or long-term trends, especially with regard to behavior changes that occur in response to users' experiences (for example, shifting preference from one platform to another for similar content due to differences in satisfaction with content, presentation, or functionality). Such trends will be most reliably indicated by data that is standardized across different platforms.

Custom vendor reports may have some value in understanding the source of changes in use patterns for particular resources. For example, if an ebook vendor raises the maximum number of pages that can be printed or downloaded in a session, and the policy change coincides with a dramatic increase in page-level downloading or printing from that platform, we might hypothesize that the two are related. (The custom report might show such a trend more reliably than the standard COUNTER report, since it’s more granular). Another example might be with respect to means of access. If a vendor that provides a custom report of means of access starts offering a mobile app, and use of that resource by mobile devices spikes, while use through other channels declines, this might tell us 1) that users like the mobile app and/or 2) that they prefer mobile device access to other means, if it's available.

**Services/Resources Covered**

Vendor custom reports consist of non-standard reports about e-resource usage produced either routinely (available for downloading or emailing) or on-demand by publishers and vendors. They cover types of use data and levels of granularity in reporting that are not part of the standard COUNTER regimen for e-resources. Examples include article level data for ejournals, page views for ebooks, information on the method of access (e.g. mobile device vs computer), and on the IP address of the user.

**Notes**

Staff source: Rich Entlich
Voyager Circulation

Basic Counts
Voyager monitors and records use-related events, including charge and discharge transactions, renewals, holds, and recalls. Since its installation in mid-2000, it has recorded detailed information on each transaction, most of which is retained in a permanent archive. At the item level, Voyager records a running total of charges, which includes data collected by Voyager's predecessor at Cornell, NOTIS. Therefore, for materials that have been in the collection long enough, the total number of circulations going back to about 1990 is available. The more detailed Voyager-era circulation data pinpoints precisely when each charge and discharge transaction takes place, as well as the collection to which the item belongs, and the exact location from which it was borrowed, and then returned.

Behavioral Context
We know when charges and discharges are taking place, which permits analysis of borrowing (and return) behavior by time of day, day of week, month, juxtaposition to exams, etc.

Voyager circulation records record the borrower's patron group (undergrad, grad, faculty, staff, etc.) as well as whether the transaction fell into a special category, such as non-user (e.g., new book shelf, conservation treatment, digitization), or a non-Cornell user (ILL, Borrow Direct, privilege card holder, etc.)

Voyager also maintains patron-level circulation counts for both current and historical charges, which enables us to determine which users are borrowing materials, and at what level of intensity, though not what items they're using. Finally, there is a facility within Voyager to track use of items based on broad demographic categories such as departments, majors, fields of study, etc. We have thus far not made much use of that capability, but it's being explored for enhanced use. Currently, only graduate fields are being tracked. Soon, we will also be able to track within Voyager the borrowing institution for Borrow Direct loan transactions.

Since Voyager records data on individual transactions, cross-tabulation and correlation analysis is possible. Patron group, subject, location, time of day, and other transaction parameters can be examined from the standpoint of multiple factors.

For the past three years, Rich Entlich has been taking snapshots of currently circulating print monographs and music scores in Voyager. The snapshots include detailed bibliographic data about the items in circulation as well as transaction-level data such as charge location, combined with demography and status information about the borrower, obtained from the university's PeopleSoft HR system. User identities are anonymized, but it is still possible to distinguish one user from another, which allows tallies such as the number of unique borrowers in each category, as well as the average number of items in use by each user. The additional data also supports more kinds of cross-tabulations, at least for some patron groups, such as the approximate location of a borrower's office against the collection or charge location from which they prefer to borrow.
Satisfaction Indicators
If a user searches for and discovers that an item in our collection that they want is already in use by someone else, they may be disappointed. The library offers many options for fulfilling that user’s need, including placing a hold or recall on the item, borrowing a different copy through ILL or Borrow Direct, or going outside the library to satisfy the need. Of these options, holds and recalls are recorded in Voyager, and can be seen as providing some insight into users’ frustrations with access to the print collection.

Work Practice
Long-term monitoring of circulation patterns especially in the context of the use of resources from other sources, and in other formats, may provide some insight into how users’ preferences are changing in response to their perceptions of quality, availability, convenience or speed of access, etc.

Services/Resources Covered
CUL’s Voyager ILS keeps track of use of tangible objects only (printed matter, physical media such as tapes and disks, and other circulating items like laptop computers and study rooms). Although Voyager catalogs and provides access to e-resources, it does not directly monitor or record their use. The nature and depth of the use data maintained in Voyager is governed by system design, conventional practice, local CUL practice, and in some cases, even state law.

Notes
Staff source: Rich Entlich
WorldCat Local Omniture

Basic Counts
- page views
- visits
- visitors by hour, daily, weekly, monthly, quarterly, yearly
- pages viewed (e.g., search result, detailed record, no record found, etc.)

Behavioral Context
- Time spent per visit
- searches
- forms completed
- refined search
- registrations
- saved list
- selected book
- libraries served
- library clickout
- # of services link shown
- # of services clicks
- # of format clicks
- formats shown
- browser
- device
- next page flow
- exit page
- search keywords
- referrers
- visitor return frequency (65% three or less days)
- refined searches

Satisfaction Indicators
- pages not found

Work Practice
- N/A

Services/Resources Covered
- http://cornell.worldcat.org/
Notes

- Staff Source: Adam Chandler
- Appears to not work with Firefox
LibPAS

Basic Counts

Our LibPAS instance contains a lot of data about use of resources and services - e.g. circulation of general collections, equipment, reserves, number of downloads from COUNTER-compliant publishers, number of physical and virtual library visits, etc.

Behavioral Context

Some of the data available on the unit library level, also breakdown of reference transactions by medium used, etc.

Satisfaction Indicators

None

Work Practice

None

Services/Resources Covered

Most standard library metrics

Notes

Staff Source: Zsuzsa Koltay