

Networked Resource Use Data for Collection Management

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Abstract

THE UNIVERSITY OF TENNESSEE LIBRARIES OFFERS OVER 200 networked databases. All, including CD-ROM databases available only through the library's internal network, are accessed through a web page. Use data from database providers varies. However, web access to databases offers a means to collect data for all networked titles, regardless of where they are located, in a consistent manner. Once a user selects a database, i.e., initiates a "session" with the database, a web log record is generated with the following information: date, time, user IP domain name, database identifier, database sub-file identifier, point of referral URL. The log data may be exported to a spreadsheet or a database format for analysis. Summary data on the number of "sessions" for the 1998-1999 database usage was used for a number of collection management decisions: non-renewal of some low use titles, reduction of simultaneous users for some titles without sacrificing service, more reliable estimate of the number of simultaneous users for new titles in a subject area. Some expensive titles were continued when their use was linked to the cost when the data revealed a relatively low cost per use when compared to other titles.

1

The Problem

(apples vs. oranges)

Use data is helpful in making decisions about electronic resources; however, the data from different vendors may be unavailable or not uniform:

- Different data elements
- Different formats
- Different types of information (detailed vs. summary)
- Print data must be transformed into electronic format

Univ. of Tennessee Knoxville
ABC-CLIO Serials Web Usage for March 2000

SESSION LOGON ANALYSIS

	AHL	HA	ABM	APS	AHLD	HAD	ALL DBs
Active Sessions:	156	168	0	0	0	0	224

Authenticated Connections by time of day (Pacific Time)

Midnight:		
Noon:	33	6PM: 1
1PM:	17	7PM: 9
2PM:	15	8PM: 3
3PM:	10	9PM: 3
4PM:	8	10PM: 2
5PM:	11	11PM: 3

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e selection.

/SIS

	AHLD	HAD	ALL DBs
	0	0	426
	0	0	0

YSIS

	AHLD	HAD	ALL DBs
	0	0	34
	0	0	17

VITY

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The Web of Science
Usage Reports
March 2000

Date	No. of Queries	No. of Sessions	Avg. Length HH:MM:SS	Contracted Maximum Users	Max. Actual Concurrent Users	Total no. of Turnaways
00-03-01	325	48	00:27:38	5	5	1
00-03-02	373	73	00:25:40	5	5	3
00-03-03	643	86	00:31:08	5	5	25
00-03-04	350	18	00:34:28	5	3	0
00-03-05	104	20	00:25:24	5	3	0
00-03-06	563	81	00:24:36	5	5	2
00-03-07	303	75	00:24:22	5	5	7
00-03-08	251	50	00:23:07	5	4	0
00-03-09	356	103	00:23:41	5	5	7
00-03-10	795	83	00:27:08	5	5	33
00-03-11	2613	50	00:28:01	5	5	4
00-03-12	714	82	00:30:38	5	5	9
00-03-14	416	56	00:26:13	5	5	4
00-03-15	393	67	00:27:58	5	5	5

ERL University of Tennessee at Knoxville

InfoTrac Custom University of Tennessee Libraries
(Location ID: tel_a_utl) Library Report

MONTHLY USAGE SUMMARY
Summarizes activity over the entire month for the month of April 2000

Total Sessions	1990
Total Connect Time (minutes)	21012
Average Session Time (minutes)	11
Total "Views"	6582
Total "Retrievals"	1236

MONTHLY DATABASE USAGE
Summarizes usage by database per month for the month of April 2000

	Sessions	"Views"	"Retrievals"
Business & Company ASAP and Backfile	171	732	86
Expanded Academic ASAP and Backfile	773	2784	478
General Reference Center Gold & Backfile	416	1316	249
General Reference Center Gold & Backfile	262	980	100
			0

2 Environment

- Users select the library's networked databases from a web-based menu
- Remote networked resources
 - Web browser for user interface
- Local networked resources (on a server in the library)
 - DEC Infoserver (CD-ROM network)
 - Available only within the library
 - Activated from “.bat” file executed from the web menu of databases
 - SilverPlatter ERL Servers
 - Available outside the library
 - Both web and Windows interfaces

3 Database Use Log Data

- Data recorded each time a database is selected from the web menu
- Uses data from files used to generate the web menu
- Consistent collection of data for all types of networked databases
- Use MySQL and Perl CGI scripts

```
Script to create use record:
sub primary {
    $user = "dbuser";
    $dbname = "resource_uris";
    $hostname = "localhost";
    &connect_to_database;
    $sth =
        $dbh->prepare( "
        SELECT
        1st_url.id, 1st_url.dbid, 1st_url.url
        FROM
        1st_url
        WHERE
        1st_url.dbid = $term
        " );
    if ( !defined $sth ) {
        die "Cannot prepare statement: $DBI::errstr\n";
    }
    $sth->execute;

    # Fetch the data back into separate variables this time
    while ( ( $urlID, $urlDBID, $urlURL ) = $sth->fetchrow() ) {
        $number = $number + 1;
        $statID = $urlID;
        $statDBID = $urlDBID;
        $realurl = $urlURL;
    }
    if ( $number > 1 ) {
        $stable = "1st";
    }
}
```

4 Data Elements

- DATE/TIME
- Truncated IP ADDRESS of user
- Database ID (number)
- Database VERSION (for databases with backfiles)
- URL ID (WebSPIRS vs. WinSPIRS)
- REFERRING URL (from catalog, database menu, etc.)
- BROWSER used

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| datetime | host | dbid | version | urlid | referer | useragent |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 0005011207 | lib.utk.edu | 113 | 1 | 12 | http://www.lib.utk.edu:90/cgi-perl/dbBroker.cgi?subheading=7 | Mozilla/4.08 [en]
```

5 Process

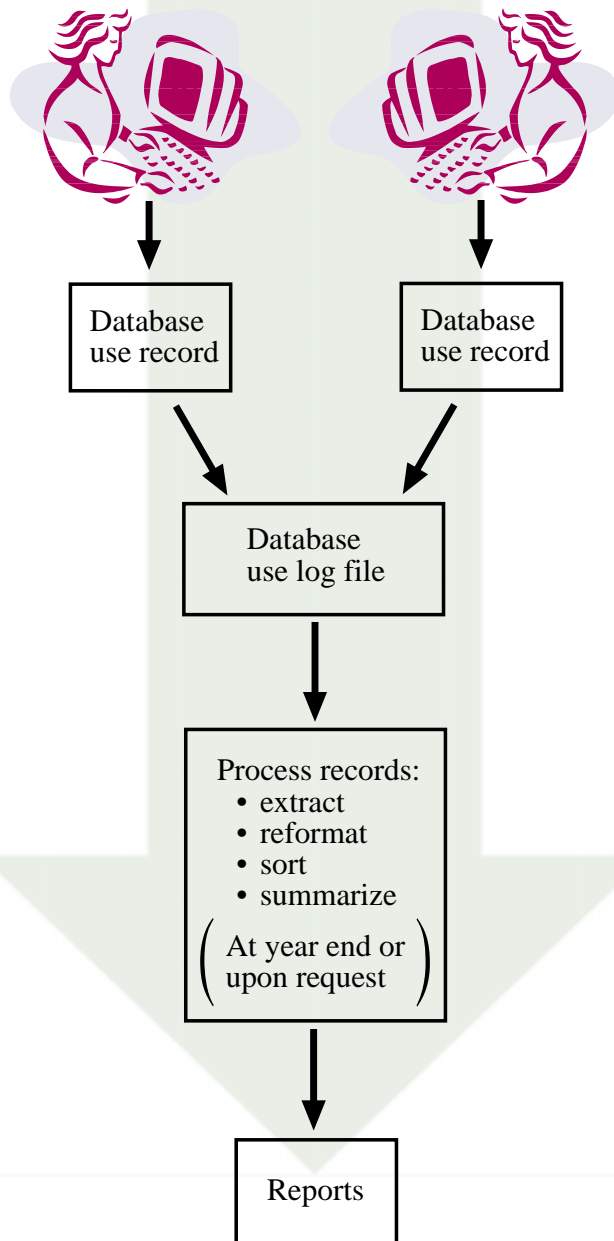
- Create log file at the end of each month
- At “year end”:
 - Sort detail log data by DATABASE and DATE/TIME
 - Process records for location information
 - Create summary record by DATABASE and DATE/TIME:
 - # sessions
 - # by IP ADDRESS group
 - Link to other DATABASE information (cost, # simultaneous users)
 - Use Excel 7.0 and dBase III+

Overview

Databases

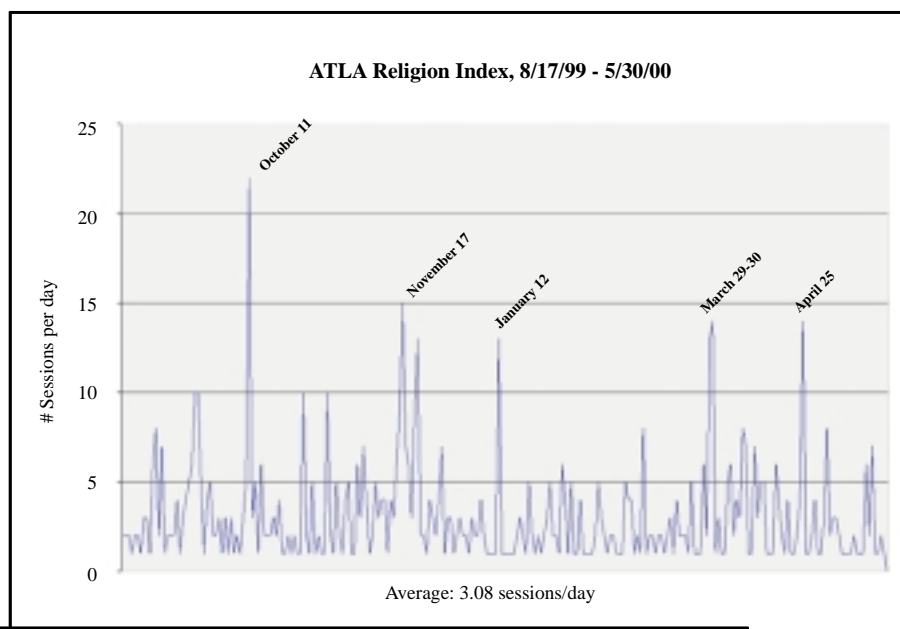
Full-Text	Com-Jones Interactive Leeds Health Academic Database ProQuest Research Library Tennessee Electronic Library (TEL) More ...
Multidisciplinary	General Topics Current Contents, etc. News Dissertations UNCover@UTM World of Science
Arts & Humanities	Art & Architecture History & Classics Literature & Language Music Philosophy & Religion
Sciences	Agriculture & Veterinary Medicine Biology Earth Sciences & the Environment Engineering Physical & Chemical Sciences Mathematics & Computer Science Health Sciences
Social Sciences	Anthropology Business & Economics Education Journalism & Mass Communications Political Science & Law Psychology Social Work & Sociology
Government Documents	General Topics Energy & Transportation Criminal Justice Health & Environment International Law & Legislation Roberts & Trovatiello Rules, Regulations, Treaties Statistics
Reference Resources	Almanacs & Statistics Biographies Books, Book Reviews & Periodical Directories Dictionaries & Encyclopedias Directories

Web access to *all* networked databases



6 Reports

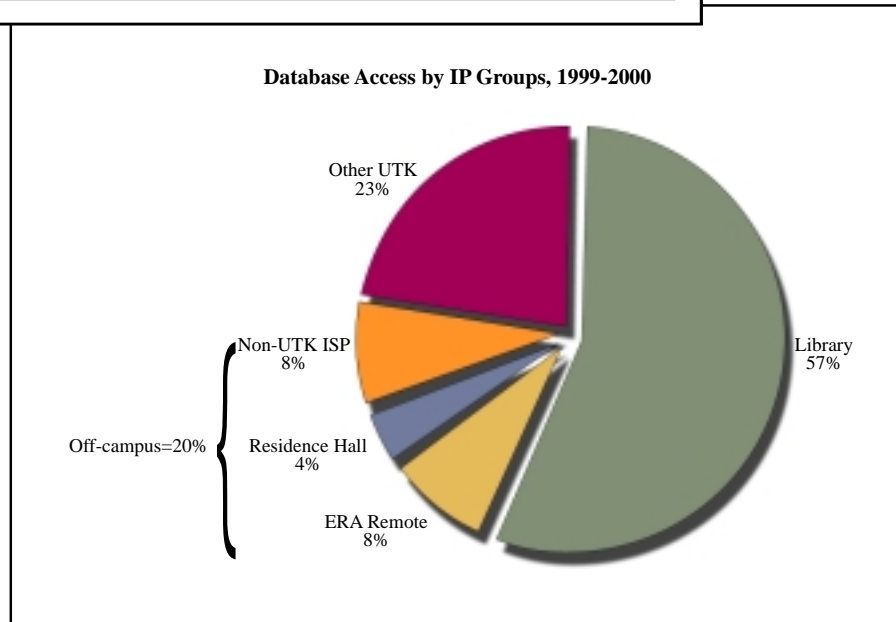
- Summary reports:
 - by DATABASE NAME
 - by USE (descending order)
 - by COST PER SESSION for the academic year
 - by TIME OF DAY
- Detail reports by specific database (upon request):
 - by DATE/TIME and IP ADDRESS group



Database Sessions
9/28/98 - 4/30/99

DB	#SU	AC	UTK	LIB	PH	ERA	RES	TOTAL
LEXIS-NEXIS	UL	IP	14708	8902	0	1752	646	14747
PROQUEST RESEARCH LIBRARY	UL	PH	9214	5962	1010	1036	504	10406
MEDLINE	8	PH	9133	3833	730	1251	173	9906
MLA	8	PH	8875	6903	313	442	661	9363
PSYCINFO	99	PH	8000	4450	1026	1561	105	9106
DOW JONES	3	IP	8804	5305	0	968	185	8863
ERIC	8	PH	6258	3819	748	946	52	7037
ABI INFORM	8	PH	4639	2958	276	473	97	4921
HUMANITIES ABSTRACTS	4	PH	4661	3821	161	202	299	4866
BIOLOGICAL ABSTRACTS	4	PH	4326	1879	375	315	155	4727
AGRICOLA	4	PH	4490	1914	181	272	77	4674
READERS GUIDE	8	PH	3617	2683	154	129	337	3774
CINAHL	8	PH	3138	1796	576	643	47	3768
ARTICLEFIRST	4SHR	IP-FSSUB	3380	2008	0	346	138	3390
CAB ABSTRACTS	4	PH	2766	1256	89	160	13	2860
SOCIAL SCIENCES ABSTRACTS	8	PH	2346	1591	286	278	56	2652
STAT-USA	UL	IP	2254	1276	0	195	136	2254
SOCIAL WORK ABSTRACTS				996	486	274	30	2231
SOCIOFILE				1352	194	176	61	2197
WORLDCAT				1527	0	210	13	2162
GENERAL SCIENCE INDEX				1172	199	169	83	2155
BOOKS IN PRINT				1437	92	144	13	1995
COMPENDEX	3	PH	1734	791	181	141	8	1927
EDUCATION INDEX	4	PH	1716	1188	190	184	34	1912
BUSINESS ABSTRACTS	8	PH	1728	1146	112	177	58	1848
SIMMONS			1691	1691	0	0	0	1696
CURRENT CONTENTS	UL	IP	1685	779	0	149	47	1687
DISSERTATION ABSTRACTS	BTS	IP-FSIND	1614	904	0	288	7	1618
DISCLOSURE	?	IL	1569	1569	0	0	0	1569
FIRSTSEARCH	BTS	IP-FSIND	1441	958	0	120	50	1444
PHILOSOPHERS INDEX	1	IL	1425	1425	0	0	0	1425

Decrease to 4 simultaneous users



7 Use as a Collection Management Tool

- Determine optimal number of simultaneous users for current subscriptions
- Determine optimal number of simultaneous users for a change in vendor or change in delivery mechanism, say from CD-ROM to web
- Determine whether or not to continue a subscription
- Determine demand for databases during hours that the library is closed

8 Procedure Shortcomings

- Does not provide all data suggested in ICOLC Web Statistics Guidelines:
 - Number of searches (inquiries)
 - “Turn-aways”
 - Detail counts of items examined

9 Future

- Create use records for standalone CD ROMS on networked workstations in the library
- Manually add summary “session” use statistics from the vendor for the databases using the special client software
- Differentiate between public and staff use within the library
- Investigate the need for other types of reports

10 Conclusion

- Information with which to compare the use of networked databases has aided in decision-making to maximize the library’s investment