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Documenting Usage Patterns of Networked Electronic Services

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A new initiative now being considered by the ARL Statistics & Measurement Committee is a Web-based survey that a library could administer to collect reliable data on the usage of networked electronic services from both within the library and remotely through the Web. The idea is to build on the experience of studies conducted at five academic health science libraries and two main libraries between 1999 and 2003. In those studies, more than 15,000 library users were surveyed as they accessed their libraries' networked electronic services. The survey documented *why* patrons were using electronic resources in those libraries and tracked the differences between in-house and Web usage, comparing the *location* of the user and their *status* (graduate student, faculty, undergraduate, etc.) with the *purpose of the use*.

The methodology measured both in-house and remote usage in a way that allowed the costs of providing networked electronic services to be distributed among the university's primary functions. In this study, those functions were defined in four categories: sponsored (funded) research, instruction/education/departmental research, patient care, and all other activities. The survey is a [pop-up screen](#) administered randomly to users of networked electronic services throughout the year using a statistically valid sampling plan.

The study, now called "Measuring the Impact of Networked Electronic Services" (or MINES), was designed and undertaken by the authors. The researchers concluded that although the computing environments and survey implementations in each library were different, the methodology and overall approach was workable at each library. As a result, they are confident that the data collected are somewhat comparable, recognizing that there will always be distinguishing characteristics driven by the local user population and institutional characteristics.

Experience also led the researchers to conclude that the most effective means to meet the Web survey criteria was to run all access for networked electronic resources through a gateway that authenticated access and passed on the request. Such an arrangement prevents lost data due to

bookmarks, non-library Web pages, and other non-library routes to access library networked electronic services.

Initial use of the methodology produced a number of findings useful for guiding decisions on how to manage networked electronic resources. For example, results from the first four academic health science libraries showed that:

- There were approximately four remote networked electronic users for every in-house user.
- Remote users were demographically different from in-library users; the 4-1 ratio was even higher for the category of users who identified themselves as faculty/staff/research fellows.
- The purpose of use reported for remote usage of networked electronic resources was significantly different from in-house usage. For example, those using networked electronic resources to conduct sponsored research do so most intensively from on-campus but not from in the library. Those using these services for instruction/education/non-sponsored research were more likely to be in the library than people using the resources for other purposes.
- Patrons using electronic services for sponsored research represented 34% of the usage in the health science libraries, as compared to 16% in the two main libraries.

The study also found that, despite proxy servers, modem pools, and similar remote enabling services, the patrons being surveyed went to the university to use their library's networked services. That is, when they used these services they were either on campus or in the library many more times than off-campus. However, the users' purposes for using electronic resources ranged significantly among the four libraries, underscoring the need to consider local conditions as libraries have different characteristics and user populations.

The authors concluded that MINES's Web-based survey methodology employed at the seven libraries could serve as a model for similar user studies at other libraries. The discussions now underway within the ARL Statistics and Measurement Committee focus on how to take a next step to apply this methodology to the networked electronic services offered by a more complete complement of research libraries.

A full description of the research project and its findings was first delivered at the Northumbria Lite conference, part of IFLA in Glasgow in 2002. See Brinley Franklin and Terry Plum, "Networked Electronic Services Usage Patterns at Four Academic Health Sciences Libraries," *Performance Measurement and Metrics* 3, no. 3 (2002): 123-133, <http://www.arl.org/stats/newmeas/emetrics/Franklin_081102.pdf>. Subsequent findings were recently presented by the authors in September 2003 at the Conference on Users in the Electronic Information Environment in Espoo, Finland.

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