

**INTEGRATING VIRTUAL REFERENCE SERVICES INTO DISPERSED
DIGITAL RESOURCES: THE EVERGLADES INFORMATION
NETWORK/ASK AN EVERGLADES LIBRARIAN EXPERIENCE**

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ABSTRACT: This paper discusses the integration of the Ask An Everglades Librarian digital reference service into the Everglades Information Network web site--a complex array of digital library collections, research guides, and search systems from a variety of Everglades information providers. The eight-year history of the Everglades Information Network & Digital Library is explored as well as challenges in implementing new service-oriented technologies such as real-time, chat digital reference into an already non-traditional and specialized digital library setting.

KEYWORDS: Everglades; Florida; wetland ecology; digital libraries; electronic information sources; virtual reference; chat reference; information-seeking behavior; fugitive information; online communities

Introduction

Developed by reference librarians at Florida International University (FIU) in 1996, the Everglades Information Network & Digital Library (EIN & EDL) began as a partnership with Everglades National Park to digitize and make publicly available vital information on south Florida ecology to scientists, educators, and students via the World Wide Web. At first, the network primarily served FIU professors and students working on Everglades restoration issues, and the EDL collection development reflected these particular audience needs. The political importance of Everglades restoration during the late 1990's as well as south Florida's popularity as a major U.S. tourist destination, however, added a significant amount of national and international interest in the web site. Soon the information needs of school children, tourists, historians, government officials, and environmental activists were also considered during collection development, web site design, and grant funding decision-making.

As audiences and collections grew, so did the EIN's mission to be not only a simple data provider but to also act as a central, communal Internet space where a diversity of stakeholders could go at any time, search an inter-disciplinary array of content, view the vast number of government and non-profit organizations involved in Everglades restoration issues, and secure publications that were otherwise uncataloged and geographically dispersed. Missing from the EIN equation of traditional library services—collections of use to people, an online public access catalog, data download or digital “check-out,” and inter-library loan request information—was a virtual reference desk where patrons could interact directly with librarians.

Before a complete virtual reference desk component was implemented across EIN collections, EIN librarians addressed web site usability issues primarily through the construction of online research guides and plentiful electronic mail feedback form links. We assumed that patrons contacted us over difficulties locating Everglades information because this content is typically cryptic, complex, and poorly indexed. We also made a variety of assumptions at the time over the complexity of Internet searching and the technological abilities of users depending on their ages and information needs. Much of the feedback we received, however, indicated that many patrons simply wanted to talk to us, know who we were, and share their personal interest in the Everglades with us. Thus, more at their urging than our own, we sought funding in Spring 2001 for a virtual reference desk where patrons could solicit our advice in a real-time, chat environment.

The Ask An Everglades Librarian Project

From Fall 2001 to Fall 2003, the EIN was awarded approximately \$100k in Library Services & Technology Act funding to “help the people of Florida use technology to discover, access, and use information critical to their daily lives”—in our case, information on an \$8 billion comprehensive ecosystem restoration plan that surrounds everyone who lives and works in south Florida. The funds were used to purchase virtual reference software, hire a Science Librarian, and develop a “help desk” web site. Additional wireless computer presentation equipment and web design services were purchased in the second year of the project to reach out to Florida teachers and students in the classroom.

Once the chat reference software and the Ask An Everglades Librarian help desk web site were implemented in Winter 2002, we trained 15 professional librarians at FIU Libraries to use the service. Reference librarians' reactions to chat reference were among the most challenging aspects of the project. A lack of clear, consistent links that were appealing to users was also problematic. In the first 6 months, we answered approximately 252 total e-mail and chat reference questions and logged in 620 hours at the virtual desk. Low initial turn-out among EIN patrons was daunting to the EIN librarians at the time (only 118 chat reference requests were received from February-September 2002). Summer 2002 was particularly quiet and librarians staffing the virtual desk soon lost patience, interest, and practice using the new software.

To compensate, FIU Libraries joined an academic cooperative of virtual reference service providers in Fall 2002 who all use the California-based 24/7 Reference software (<http://www.247ref.org>). The cooperative spans geographical locations from Australia to New York and involves shared questions and answers for at least 12 hours per day. Librarians from any institution are able to forward questions to one another and review past transcripts in a shared database. Although the Ask An Everglades Librarian is too specialized to be part of the 24/7 reference cooperative at this time, librarians participating in the EIN project were able to practice their virtual reference skills at the general academic reference desk more often and share their expertise with professionals across the country.

Project publicity and launch of a large, graphical direct link to the Ask An Everglades Librarian chat service on the EIN homepage in Fall 2002 increased patron activity three-fold. Six months of web server logs and chat reference transcript data allowed the project team to pin-point where patrons enter the help desk and more importantly, why. The logs show, for example, that most patrons enter the chat service from the EIN homepage without browsing or searching any other aspect of the web site. This suggests that when given the opportunity, patrons will ask a librarian for help rather than search for resources in a complex digital library environment themselves. Other pathways to the help desk include:

- Partner agency cross-links
- Name notoriety and prominence in major Internet search engines like Google
- Prominent virtual reference links on every header and footer EIN site-wide (over 300 web pages)

Recent Statistics

Fall 2003 saw unexpected increases in target audience used by professionals and researchers rather than teachers and students. Increased evening virtual reference desk hours and project publicity at national, state, and local levels may be contributing factors. Of 578 total queries in chat and electronic mail format, 40% involved in-depth research questions from the academic governmental, scientific, new media, and literary art communities whereas 31% came from teachers and students looking for educational materials. K-12 students comprised 60% of all chat reference queries received, however, reinforcing staff suspicions about the popularity of chat software among children.

Challenges

Although EIN reference staff became increasingly comfortable with the ins and outs of physically using the virtual reference software chosen, their comfort level with Everglades scientific information did not increase during the project years. The immediacy of real-time virtual reference technology seemed to raise this anxiety. As one staff member put it in an evaluative interview:

Rare is the case that I can completely help the patron 'while they wait,' and often I need to look something up or test something out before responding.

Another librarian commented:

Well, chat is fun and especially useful when questions need clarification. E-mail reference gives you more time to think about the question, do preliminary research and investigate options.

On the other hand, transaction logs suggest that patrons are often looking for fast answers no matter which electronic reference format they choose. E-mail messages with chat links like the following are not unusual, for example:

Click here: AOL: Wolf-Whistle what kind of weather do the ever glades have?

Staff developed their own methods and conversation styles to deal with the complexities of question negotiation, available resources on Everglades topics, and virtual reference technologies. EIN librarians typically asked patrons to "hold on" or accept an answer by e-mail in the near future. Other devices to cope with information impatience included questioning where the patron had looked for resources prior to asking the Everglades librarian. When the answer is "nowhere," the librarians suggested broad starting points or the patron's local library where they could access high-quality resources more immediately.

Overall, however, the project staff felt more able to cope with in-depth questions when they had another specialist online to confer with. Budget cuts and staff constraints at FIU Libraries and beyond made double staffing for an online reference desk on the sciences next to impossible, however. Perhaps a larger research library could sustain a project like Ask An Everglades Librarian internally, but the EIN is unable to do so. The ongoing sustainability of the project will depend on partnerships with similar reference service providers in the future. Although, quality control, training, and coordination are major concerns in launching and maintaining a wider network of Everglades information specialists, the creation of such alliances is not unusual nor impossible among digital libraries as the EIN & EDL proved years ago regarding digital library content delivery.

Selected Everglades Digital Library (EDL) Collections

The following EDL collections were developed over time in response to the information needs and grant funding flows of three major EIN audience types: 1) scientists/researchers, 2) school children, and 3) K-12 teachers.

Reclaiming the Everglades: South Florida's Natural History, 1884 to 1934
<http://everglades.fiu.edu/reclaim/>

This collaborative effort among the libraries at the University of Miami, Florida International University, and the Historical Museum of Southern Florida documents turn-of-the-century Everglades conservation efforts and south Florida land use. The digitized items represent a rich diversity of unique or rare materials such as: personal correspondence, essays, typescripts, reports and memos; photographs, maps and postcards; and publications from individuals and the government. Reclaiming the Everglades is an LC/Ameritech award-winning collection. Its contents are also available via the Library of Congress's American Memory web site.

South Florida Natural Resources Center Collection, 1976-1997

<http://everglades.fiu.edu/sfnrc/>

These technical and management reports represent a great body of Everglades ecological research as carried out by the South Florida Natural Resources Center at Everglades National Park (formerly, the South Florida Research Center or SFRC). SFRC programs include hydrology, marine, vegetation, wildlife, nutrient enrichment, fisheries harvest, seagrass die-off, and Florida Bay Wildlife Population trends, among others.

South Florida Ecosystem Restoration Task Force Collection

<http://everglades.fiu.edu/taskforce/index.htm>

The interagency "Taskforce" directs and coordinates government-sponsored restoration activities in south Florida, and comprises representatives from Federal, State of Florida, and Tribal agencies. Their collection offers both detailed and summary reports on the status and progress of restoration and resource management initiatives, focusing on both administrative/legal and scientific issues

Southeast Environmental Research Center Reports

<http://everglades.fiu.edu/serp/index.htm>

Selected technical and research reports from the staff of the Southeast Environmental Research Center (formerly the Southeast Environmental Research Program or SERP), a leading center for research and monitoring in south Florida.

Other Everglades-Related Web sites on the Internet

<http://everglades.fiu.edu/other/index.htm>

An annotated bibliography of often-used web sites arranged by subject.

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