

AN INTERACTIVE INFORMATION KIOSK FOR THE ADIRONDACK PARK VISITOR INTERPRETIVE CENTER, NEWCOMB, NY

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Abstract: Kiosks have traditionally been non-electronic, but today kiosks are being developed as interactive, electronic information centers to transmit information about government services, commercial products and recreational experiences. This project's objective was to develop and evaluate the usefulness of a user-friendly information interface for kiosks in the Adirondack Park Visitor Interpretive Center in Newcomb, NY.

Introduction:

Kiosks "provide users with access to community and local information in an easily understandable format. Kiosks are defined to be used by the average user who has little or no experience with computer or information systems" (comp.infosystems.kiosks newsgroup, 1996). Kiosks have become a popular venue for delivering information to non-technical users such as tourists, campers, hikers, cross-country skiers, etc. Kiosks started out as bulletin boards, but in the past decade have moved into the electronic realm, by utilizing software such as Rocky Mountain Multimedia's *Kiosk-in-a-Box*. This project will develop a user-friendly information kiosk to enhance the recreational experience of visitors to the Adirondack Park Visitor Interpretive Center in Newcomb, NY.

Recreational experiences consist of five phases:

1. *Anticipation:* The period of foreseeing and awaiting a trip or occasion involves imagination and develops enthusiasm. This includes the planning, or actual preparation for the event as well as gathering equipment and supplies, packing and preparing other logistics.
2. *Travel to:* Travel to the activity site is important, regardless of whether travel time is short or extended. Although anticipation is a separate phase, travel to the activity site includes anticipation of the activity.
3. *Participation:* The activity and the events surrounding it extend from departure to return. It is the core of the experience, the time of encounter with the resource and activity opportunities.

4. *Travel back:* Travel from the site may be different from the travel to the activity site; actual routes traveled may be different. The memories that are different from the anticipation of the activity, which influence the travel back home.
5. *Recollection:* After participation, an experience is not usually over. Participation is relived through pictures, stories, and memories. (Clawson & Knetsch, 1966).

The temporal definition of a recreational experience suggests that information, maps, and pictures are an important element of a recreational experience (Knudson, 1984).

People seek information for two reasons: 1) as an end in itself to increase their knowledge about some particular subject of interest (i.e., learning about Mt. Marcy through images and written information) and 2) as a means to an end (i.e., planning the hiking route through the High Peaks in the Adirondacks) (Jubenville & Twight, 1993). One group of non-technical users, such as those who are unfamiliar with computer or information systems, is the non-local recreationists who wish to find information relating to their interests. Non-local and local recreationists seek different types of information through different channels; local recreationists don't need formal information programs because they are probably informed about the area in which they live (Jubenville & Twight, 1993).

Regional information systems are designed to enhance macro-level decision making by providing base data on available recreational opportunities (Jubenville & Twight, 1993). People who are interested in a region and its available activities would use a regional information system. This information would be generalized so as not to overwhelm people with too much information. Conversely, area information systems are designed for micro-level decision making. Area information systems allow finer detail so participants can make informed choices (Jubenville & Twight, 1993). Local recreationists who are familiar with the area would probably find an informal area information system more useful, whereas non-local recreationists could use an area information system/kiosk to find trails that offer beautiful overlooks or to find a 'hot' fishing spot.

This kiosk application is a type of area information system that can be used to satisfy both types of information needs mentioned above. It would allow non-local recreationists to query for information such as put-in points, trail-heads, or picnic areas, as well as provide information to local recreationists about different trees and mammals in the area. Kiosks can be used to select opportunities as well as view images and information as a form of participation. Selecting opportunities is distinctly different from planning an outdoor recreation experience because the visitor is already at the destination and is participating in the recreation experience. The user interface of the kiosk could be an interactive map allowing users to select an outdoor recreation opportunity to find out detailed textual information about trails, swimming areas, etc. The query

structure would be based upon available spatial data and its attribute information. Customizing a GIS to perform the necessary queries could be accomplished through the use of an HTML hypertext browser (e.g., Netscape Navigator or Microsoft Internet Explorer).

Background:

Information signs can help apportion use evenly between similar facilities if users are informed about opportunities, liabilities, and/or limitations. Information signing has been shown to be an instrument by which managers can control visitor use and movement (Brown and Hunt, 1969). In Michigan, Travel Information Centers along the interstate highways have been shown to have an impact on the travel and spending decisions of those who receive information there (Beckon, et al. 1981).

Recreational opportunity guides or other printed materials are useful for areas that receive more non-local users than local users (see above). Placing these recreation opportunity guides in public areas help users make decisions and increase access to other informational programs (Jubenville and Twilight, 1993). Jubenville and Twilight recommend that the following types of communication should be provided by agencies:

1. Information to users on available recreational opportunities and feedback from users on the quality of the experience;
2. Information to users on existing activity patterns and feedback;
3. Information and feedback on major problems or proposed plans being considered by agencies; and
4. Information from continuous interchange through open channels.

In 1993, one of the recommendations from the National Performance Review (NPR) was to create an electronic infrastructure that would meld services from all levels of government for one-stop access by citizens. As a result the Government Information Technology Services Customer Service Improvement Team was established. Furthermore, an Interagency Kiosk Committee was instituted to create a kiosk plan for national implementation (Interagency Kiosk Committee, 1995). The resulting report, *The Kiosk Network Solution: An Electronic Gateway to Government Service*, describes a model for implementing the NPR's recommendations, development costs, and current examples in the US.

Plan:

The kiosk developed from a desire to work on a thesis or project that used GIS as a tool to deliver outdoor recreation information. Originally, the idea centered around an Internet HTML query structure that would allow users to obtain existing digital maps and spatial data, and connect to other sites that have similar types of data and maps. After a meeting with John Banta and John Barge (APA¹), Sandy

Bureau (VIC²), and Dr. Herrington, it was decided that the project would concentrate on a more interactive kiosk for one of the VICs rather than a website.

The plan was driven by the APA's request for such a kiosk application. In addition to the APA and the VIC, the Town of Newcomb, one of the few local government's using GIS in the North Country, wanted to be involved. These parties were all convinced that such a kiosk will stimulate recreational use of nearby facilities. Upon meeting with the interested parties, the VIC in Newcomb, NY was chosen as the prototype location for the development of the kiosk; primarily because of the amount of data available and the interest of Newcomb town officials and the AEC in providing available digital data.

The kiosk was designed primarily to provide information about outdoor recreation activities, forest types and bird species at the request of the VIC. The information provided was selected on the basis of the spatial data available as well as the needs of the VIC and the APA. The kiosk was designed to encourage outdoor recreation use and nature interpretation. Ideally, these two types of information (outdoor recreation information and nature interpretation) would be developed as separate kiosks. However, the monetary constraints do not allow for this. A sample of information is provided in what would ideally be provided in a the final version of the kiosk. Examples of outdoor recreation activities, trees, wildlife, and forest management practices have been selected that illustrate the type of information that could be provided. Copyright permission from the Adirondack Mountain Club was obtained for trail information, as well as permission from several organizations for use of their images. Based on user's comments concerning the useability of the kiosk, the system was modified.

Several types of information provided were:

Outdoor recreation information --

- Trail systems in and around the VIC, AEC, and Newcomb;
- Campgrounds and lean-tos in Newcomb;
- Cross-country (Nordic) ski trails
- Picnic areas and other day use areas; and

Interpretive information --

- A forest management practice called the shelterwood method on Huntington Forest will be illustrated through pictures of representative forest types and management schemes with text.
- Fauna and flora identification information such as pictures and text will be accessed similarly to the forest management & forest management information.

General information --

- Text on the history of the Adirondack Park, Newcomb, NY, VICs, and the AEC will be included.

Four outdoor recreation activities were selected and illustrated through map images and text. The maps were developed using ArcView; the map images were exported

¹Adirondack Park Agency

²Visitor Interpretive Center

as bitmaps and then imported into Canvas 5.0 (graphics package) as gifs or jpeg files. Trail information was used with copyright permission by the Adirondack Mountain Club. This information was accessible by clicking on certain parts of the map images.

The trees and wildlife were illustrated through images and text as well. Much of the information came from *Adirondack Mammals* by D. Andrew Saunders and *Adirondack Ecology: Common Trees, Shrubs and Herbaceous Plants of Central Adirondack Forests* by Michele Deisch and Richard Sage, Jr. The images were borrowed with permission from their respective owners, primarily from webpages found through Netscape Navigator.

The shelterwood method section was developed with the help of Dr. Ralph Nyland. He helped develop the short summary of forest management practices, as well as the bulleted statements that will accompany each image. The images were scanned slides provided by Dr. Nyland.

The last section of general information was copied directly from websites of the organizations if one existed. However, if the organization did not have a website, information and brochures were used to develop a webpage for the kiosk.

The users see a screen that is divided in two parts; the left part of the screen shows the table of contents. If users click on one of the words in the table of contents, the right part of the screen reflect that change. The table of contents remains visible at all times; this was done to orient the user and to make sure that the user always has an 'escape route' from any section of the kiosk to another section. The

opening screen gives options as to what part of the kiosk users can access, as well as a section for acknowledgments and a section requesting users to fill out a questionnaire when they're done using the kiosk.

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