Project Proposal for Research

South Dakota Game, Fish and Parks Website

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History & Description

The South Dakota Game, Fish and Parks (SD GFP) Agency is a non-profit dedicated to the management, conservation, and protection of South Dakota's natural resources, wildlife, and state recreation areas. Since the 1970s, their primary goals have been to enhance the state's outdoor heritage for the benefit and enjoyment of its residents and visitors.

SD GFP consists of two major branches: the Division of Wildlife and the Division of Parks and Recreation. The Division of Wildlife manages the sustainable and equitable use of South Dakota's wildlife and fisheries resources. The Division of Parks and Recreation focuses on preserving the natural resources and recreational areas of South Dakota, through efficient communication with the public and environmentally-focused management.

The SD GFP's revenue is primarily generated from license fees (such as state campsite fees, fishing/hunting licenses), federal aid, as well as other revenue sources such as donations.

Objectives

Our team will conduct an in-depth analysis of the South Dakota Game, Fish and Parks Agency's website <http://gfp.sd.gov/>. Unbeknownst to the agency, we will be examining and analyzing their website for class purposes. We will conduct competitive analysis, user focus groups, and usability testing to determine how the user experience could be improved through redesign.

Research Methods

1. Competitive Analysis Report

A competitive analysis is a critical part of a company marketing plan. With this evaluation, one can establish what makes a product or service unique -- and therefore what attributes to play up in order to attract a target demographic.

The goal of our analysis will be to see how well other parks and recreation websites across the country are communicating with their users. How are they effectively generating positive interaction on the site and developing more awareness of the importance of their outdoor heritage? This will determine how the SD GFP can improve its web presence and thus become a more valuable tool for its current and future users.

2. Heuristic Evaluation Report

A heuristic evaluation is a usability inspection method for computer software (websites) that helps to identify usability problems in the user interface (UI) design. It specifically involves evaluators examining the interface and judging its compliance with recognized usability principles (the 'heuristics').

Our group will use Nielson's principles <https://en.wikipedia.org/wiki/Heuristic_evaluation#Nielsen.27s_heuristics> as they have been the top recognized set since initially developed and refined in 1994. Nielsen's Heuristics include:

Visibility of system status: The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

Match between system and the real world: The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

User control and freedom: Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Consistency and standards: Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

Error prevention: Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Recognition rather than recall: Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Flexibility and efficiency of use: Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

Aesthetic and minimalist design: Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Help users recognize, diagnose, and recover from errors: Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

Help and documentation: Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluators will be given tasks to perform under given scenarios, during which they will assess the usability of the current SD GFP website. They will also provide feedback as to the site's level of compliance to the heuristic principles listed above. Data from these evaluations will be recorded on a scale system, and our team will then use this data to make informed recommendations for improvement.

3. Card Sorting

Card sorting is a very simple and well tested technique which can help gain valuable insight into the way data is understood by users.

In a card sorting session, participants organize topics into categories that make sense to them and they may also help label these groups. To conduct a card sort, actual cards can be used, pieces of paper, or one of several online card-sorting software tools.

Information gleaned from this exercise can be utilized for the following:

- How best to build the structure of a website
- Decide what to put on the homepage
- What label categories and navigation should be used

The results of the card-sorting exercise will enable our group to build a meaningful backbone to the site that will enable users to move through it with logical ease.

4. Usability Testing

Usability testing is a method for ensuring that a website's intended users can perform their tasks in an efficient, and satisfactory, manner. In addition, it can also help determine:

- Learnability: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- Efficiency: Once users have learned the design, how quickly can they perform tasks?
- Memorability: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- Errors: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- Satisfaction: How pleasant is it to use the design?

This process involves having users test the website's functionality while being observed by experts in relevant fields. Participants are recorded, and encouraged to “think out loud” during this process.

The data collected in this manner will allow our team to identify possible areas of the site that may need to be restructured, such as the navigation and content on the site. This will allow the site to become more useful, and usable, for visitors.

User Profiles

User Type	Motivation	Artifacts
Avid Hunter / Fisher	The avid hunter is looking for ways to stay updated on what is happening in the community - everything from events that are happening at parks to when the new season is coming up for hunting particular game and fishing, and how/where to obtain licenses for the various seasons.	Email updates and/or news postings on the website regarding new events coming up. Email annual reports. Notifications when a new hunting season begins. Purchase licenses for the hunting/fishing season that is coming up.
Family with Children - resident / out of state	Taking a family vacation, looking for outdoor activities suitable for both children and adults. They need to plan where to stay, eat, and what they want to do.	View lists of available activities, sightseeing, campsites, and other housing options. Purchase camping permits, fishing/hunting licenses. Search for dining options. Learn about wildlife watching, check events calendar.
The Tourist - out of state / out of country	The tourist is visiting from outside the state, and is not familiar with the area. They are researching in order to plan the perfect vacation to South Dakota. They need to know what there is to see and do in the area.	Learn about recreational activities, and view events calendar. View campsites and housing options. Purchase camping permits, and fishing/hunting licenses. Research dining options and transportation information.
Preservationist / Conservationist	The conservationist/preservationist frequently visits natural outdoor recreation areas all over the country. He/she is planning a trip with a focus on wildlife watching and enjoying the natural sights of South Dakota.	View sightseeing opportunities, housing and campsite options. Purchase camping permits. Learn about wildlife watching.

Seasonal Camper	The summer camper is familiar with the area and spends many weekends each summer season camping in South Dakota's state parks. He/she needs to check the availability of favorite campsites, as well as check that favorite activities are open (such as archery, horse riding, etc.).	View campsites, availability, and buy permits. Check events calendar and opening/closing dates for favorite activities.

Recruitment

In addition to the core members of our team, we will be enlisting the aid of several additional participants to assist in information gathering and research. For the purpose of our project, classroom colleagues will serve as our users and testers.

To encourage cooperation among our test subjects and/or associates, we will act as users and test subjects for our colleague projects in return.

Proposed Schedule

Date	**Deliverables**
April 22nd, 2016	Proposal of Project & Research Activities
April 29th, 2016	Competitive Analysis Report
May 6th, 2016	Heuristic Evaluation of Website Report
May 20th, 2016	Card Sorting for Information Architecture Report
June 9th, 2016	Usability Testing Report
June 17th, 2016	Final Presentation