

The Rangers: an accessibility training application

Motive

In order to address accessibility in a public park, one must be familiar with long and detailed recommendations. The Final Report of the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas¹ is a great resource, but internalizing such a technical document could prohibit a full consideration of accessibility issues. Explicitly visualized examples of accessible park features could eliminate the need to read and imagine the implementation of a recommendation. Interaction with these accessible park features in an immersive three-dimensional environment would turn the process of internalizing recommendations into an opportunity to repeatedly practice their construction.

Description

The Rangers is a training module presented as an engaging strategy game. Trainees must increase the accessibility of their park while balancing the budget and desirability of the park for all guests. The recommendations of the Regulatory Negotiation Committee on Accessibility are represented by iconic examples of accessible park elements such as accessible trails, camping grounds and comfort stations. The trainee can start from a blank piece of land or improve an existing park in the game. Model parks are provided within the game so that the trainee can consider examples for his or her park. Smaller tutorial scenarios also exist if the ranger need only experiment with a particular portion of the park.

Key Accessibility Features

- Deaf: All instances of alerts are both auditory and visual e.g. when the ranger gets mail. Nothing in the game relies solely on sound.
- Blind: Works with adaptive technologies such as screen readers, adaptive input devices (braille keyboards) and keyboard shortcuts. We propose an auditory mental map building tool, which allows a blind user to mouse over portions of the map and hear the different elements: trails sound like someone's boots crunching on gravel, campsites sound like fire crackling, etc.
- Physical: Established tab order and the ability to tab to major areas of the screen by means of hot keys to reduce the need for major physical mouse movement. Works with adaptive technologies.
- Cognitive: The presence of example (model) trails with tutorial style hints; help in the form of inspections; mouseovers to map with all icons; varying levels of difficulty ranging from pre-established parks to uploading your own park meet many cognitive levels.

Implementation

Our solution to the project results in an application that would involve existing technologies. We need to make sure that our idea of a Park Ranger Accessibility game

¹ <http://www.access-board.gov/outdoor/outdoor-rec-rpt.htm>

plus collaborative working environment is portrayed in the final product. Since the Sims franchise has produced related gaming applications as well as virtual collaborative environments in the past we hope that The Rangers would attract enough attention so they develop and market the game. The single player mode of our application could be developed so that consumers would have the ability to play it on a PC without the need of an internet connection. However, for park rangers wanting to collaborate and interact with others in distributed locations the need for an internet connection is a must. We do not see any trouble with this since the Sims franchise is well aware of developing games that have the capability of an online component.