

Booth Wayfinder Concept Note

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Executive Summary

This project was developed at Prism Technologies for use at Expos around the country. Their initial versions were all done inside Flash with motion tweens, button reactions, and other outdated methods of Flash development. The newer versions of the project needed to be data driven and more easily updated. To achieve this end I created a new application that utilized Actionscript and XML. The only thing that was left from the previous design was the interface.

Design Approach

As mentioned previously, the interface was designed by someone else at Prism. Once the interface was finished it was up to me to create the functionality from scratch. This was a long and painstaking process. The first step was to make the list boxes on the stage receive data from XML and to react to the user's selection in the list box. To accomplish this I created event listeners for the list boxes that listen for a "change" inside the box. Depending on the position of the clicked item, the next list box is filled with the appropriate information from the XML document. The XML document is broken up into two large sections. The first is a category called Name. The second is a category called Booth Number. These two categories are displayed in the first list box. When one of them is selected the second tier of information relating to that category is displayed in the next list box. This is continued down to third box.

Once a selection is made in the third box a line is drawn that connects the starting position with the destination point. Both positions are in an xml document. The points on the line are also determined by position in xml. There is an xml document that has the beginning and ending x and y points for every row and column of the layout. In the Actionscript I have a series of calculations that are made, stored in arrays and then sorted to determine the shortest

distance between two points. The final points are then stored in an array that draws the line. This is generally how the line is drawn.

The last piece of functionality that was built was the ability to touch a booth to find out its information. If a user touches the center of an occupied booth then the information is displayed in the text fields. This is achieved by storing the point where the user clicks inside a variable. Ten pixels are then added and subtracted to the x and y of this point to create an imaginary twenty pixel perimeter around the center point. Once this has been done a for loops scrolls through an xml document to see if any booth has a center point that fits inside this twenty pixel perimeter. If there is a match then the information in that node is displayed in the text fields.

Target Audience

The audience for this particular application is someone at one of these expos who wants to find a particular company's booth. It can also be applied to many other situations; a mall, a school, a parking lot, anywhere a person wants to get from point A to point B.

Design Comp

The visual design was not done by me so it isn't included in this document. Instead I'll display a section of the main XML document to show how the information was organized.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<searchList>
  <category categoryName="Name">
    <firstOption optionname="A - D">
      <secondOption secondname="AT-T">
```

```
<boothNumber xpos="156" ypos="1091">101</boothNumber>
<website>www.att.com</website>
<blurb>This is a sample description of ATT. </blurb>
</secondOption>

<secondOption secondname="Brown">
  <boothNumber xpos="231" ypos="1091">102</boothNumber>
  <website>www.ups.com</website>
  <blurb>This is a sample description of Brown. </blurb>
</secondOption>
```

The final application was made up of three XML files totaling over one thousand lines of code. The Actionscript to control the application is around 700 lines of code.