Making Billboards

<table>
<thead>
<tr>
<th>Question 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>What application can be used to make a billboard in Alice?</td>
</tr>
<tr>
<td>a) Microsoft Word</td>
</tr>
<tr>
<td>b) Paint</td>
</tr>
<tr>
<td>c) Notepad</td>
</tr>
</tbody>
</table>

By Deborah Nelson  
Duke University  
Under the direction of Professor Susan Rodger  
July 14, 2008

### Setting Up a World

Open a new world, with any template and save it in a directory that you can easily find again.

**Note:** You cannot double-click the a2w file to open it; even if you select Alice from a list of programs, the loading will fail. You must start Alice and then open the file from within Alice.

It is always a good idea to drop a Dummy Camera in the original position. After you have opened the file, and set up your world, go into the "Layout" mode by clicking on the green button Add Objects.

Click more controls. Click drop a dummy at the camera. Rename the dummy 'originalPosition.' To leave the layout mode, click done

### Billboards

Billboards can be used to add text or pictures to your world. We will show you an example where a billboard is created and used to create an information and question "screen" that can be controlled in Alice.

Billboards can be made in
- Paint
- Power Point
- Or any other tool that can have text and graphics and saved as an image file (Photoshop, etc.)

### Billboards in Paint

Open up a paint document  
Click on the A to add text  
Type the following into your text box:

Your text might be really small. To increase the size:

- Click on View  
- Select view text toolbar  
- Change the size to 18 (or what ever size you think looks best)

**Note:** You can also use paint to edit/draw graphics and use them for Alice.
Now, save your document as an image type such as .png, .jpg, .bmp, etc.
In your Alice world, click on the file menu and select Make Billboard
Find your image file in the directory that you saved it in and click import

Now, the billboard has appeared in the world:
Click on the Add Objects button
Enlarge the billboard with the resize button
Use the left/right to make the billboard face the camera
And use the mouse to bring it forward until it fills the screen

Let’s write a method to make the instructions either visible or invisible:
Click on the world in the object tree
Select the method tab
Click create new method
Name it “instr”

Click on if/else and drag it into your method. In the drop down menu, select true

Click on your billboard in the object tree
Click on the properties tab
Drag isShowing into world.instr on top of true
Method – Writing

Then, drag `isShowing` into the method again, on top of the first `Do Nothing`, underneath the `If` statement. In the drop down menu, select `false`.

Drag `isShowing` into the method again, on top of the `Do Nothing` that is underneath `Else`. In the drop down menu, select `true`.

Event — Creation

Click on the `create new event`.
Select when a key is typed
Click on `any key`.
Select `letters`, and select `i`.
Click on `Nothing` and select `instr`.

Play your world. Press `i` to make the billboard disappear and reappear.

Invisible

Now let’s make the instruction `billboard invisible` so that we can add another billboard in.

Click on your paint billboard in the object tree.

Click on the properties tab and set `isShowing` to `false`.

Billboards in PowerPoint

First we have to create an image for the billboard. You can also use PowerPoint to make a billboard. Let’s try that.

Open up a Power Point document
Make one slide and type in text shown below.
I’ve added a border around the text
**PowerPoint to Alice**

When you save the Power Point, select the file type: **.JPG**
Click **save** (in a directory you can find again)
When a window pops up, Click on **current slide only**

![PowerPoint to Alice screenshot](image)

*Note: Files must be saved as an image to be imported into Alice.*

Now in your Alice world, go to the **file** menu and select **Make Billboard**.
Find your power point slide and import it into your world. **Position** it so that it fills the whole screen like you did before.

**Method – Creation/Writing**

*Let’s create and write a method similar to “*instr*” but for the new billboard.*
In the **world methods** tab click **create a new method** and name it **question**.
Drag in an **if/else** statement and drag in the **isShowing** instruction like before but for the new billboard.

![Method - Creation/Writing screenshot](image)

**Event — Creation**

*Now we have to call this method in an event. Like before, we want to create an event that will show/hide the billboard when a key is typed.*

Create new event, when a key is typed
Select the letter **q**; then select **question**
Your event should look like this:

![Event - Creation screenshot](image)

Now, **play** your world. Press **i** and **q** to alternate between the two billboards.

**Billboards Review**

*You can make a billboard to give the user instructions, ask multiple choice questions, etc. Billboards with pictures can even be used as backdrops to add a different setting to your scene. Use either paint or power point to make the billboards It is helpful to use an event to give the user the choice of making billboards appear or disappear. But, you can also just set **isShowing** to true or false in your method at the appropriate time.*

*Billboards are just like any other object! They have simple methods that can be called and properties like **isShowing** that describe their state.*