

## Challenge 4 - Solution

How to set up a simple game window that uses a very large scrollable game board with a huge image as the background, so that game pieces placed on that background would scroll in and out of view? You can get some nice maps on the web site <http://imgur.com/>. Use the following url to fetch them: <http://i.imgur.com/>. The following images <http://imgur.com/gallery/OssbQN3.jpeg> and <http://i.imgur.com/XXxgr7x.jpeg> are particularly nice map background. The solution may look like the figure below.

### Hints:

- You can create a morph from an image using `AlphaImageMorph withForm:`.
- You can obtain the size of an image (usefull to create a `PasteUpMorph` of the right size) with the following messages `width` and `height`.
- You can download a picture using `ZnEasy getJpeg: url`.
- Have a look at `PasteUpMorph` this is a morph to drop stuff in.
- To define the size of a `pasteUpMorph`, use the message `extent:`. To define the background morph of a `pasteUpMorph` use the message `backgroundMorph:`.
- You will need to add Scrollbars so use a `ScrollPane`: Use `aScrollPane scroller addMorph: aPasteUp` to put the scrollbar around the `pasteUp`.



**Figure 1.1** A nice map with an orange morph on it.

## Solution

```

| window pane board background |

background := AlphaImageMorph withForm: (ZnEasy getJpeg:
  'http://i.imgur.com/XXxgr7x.jpeg').
background lock.

board := PasteUpMorph new.
board
  color: Color gray;
  borderWidth: 3;
  borderColor: Color black;
  extent: background width@ background height;
  backgroundMorph: background;
  addMorph: (CircleMorph new color: Color cyan; position: 41@23;
    yourself);
  addMorph: (Morph new color: Color orange; position: 120@120;
    yourself).

pane := ScrollPane new.
pane scroller addMorph: board.

window := pane openInWindow.
window position: 20@20; extent: 420@420.

```