HTML5 Canvas Element Rubber Banding

Finnbarr P. Murphy
(fpm@fpmurphy.com)

Some time ago I wanted to provide rubber banding functionality for a Firefox add-on which I was developing that used the HTML5 canvas element as a drawing surface. Not having previously implemented rubber banding on a HTML5 *canvas* element, but having done so in the X Window system and in Microsoft Windows, I thought that it would be something that would be relatively trivial to implement. Just find the appropriate routines, plug them into my application and and declare victory. Much to my surprise when I did an Internet search on the topic I found very little useful information on the subject.

As anybody who knows me well will attest, I like a challenge – the more difficult the better – and so just went ahead and developed my own version of rubber banding on the HTML5 *canvas* element. To simplify the usual develop/test/debug cycle (which is a more time consuming than usual when you are developing a Firefox add-on), I decided to write a small XULrunner application which would support rubber banding and demonstrate a number of operations on the area within the rubber banded box. I chose to implement image graying, embossing, flipping and inverting to see how expensive these operations would be to implement in JavaScript. There are many JavaScript implementations of these image manipulation operations available on the Internet but, again, none that I could easily find that support operations on parts of an image rather than the whole image.

Why XULrunner? Simply because it is tightly linked to Firefox and other Mozilla projects such as ThunderBird. If rubber banding worked within a XULrunner application, there was a very good chance that it would work within a Firefox add-on and other Mozilla applications with minor modifications. In fact, this proved to be the case.

You can try out the application

For personal use only

 Copyright 2004-2013 Finnbarr P. Murphy. All rights reserved.