

Description of the Topic

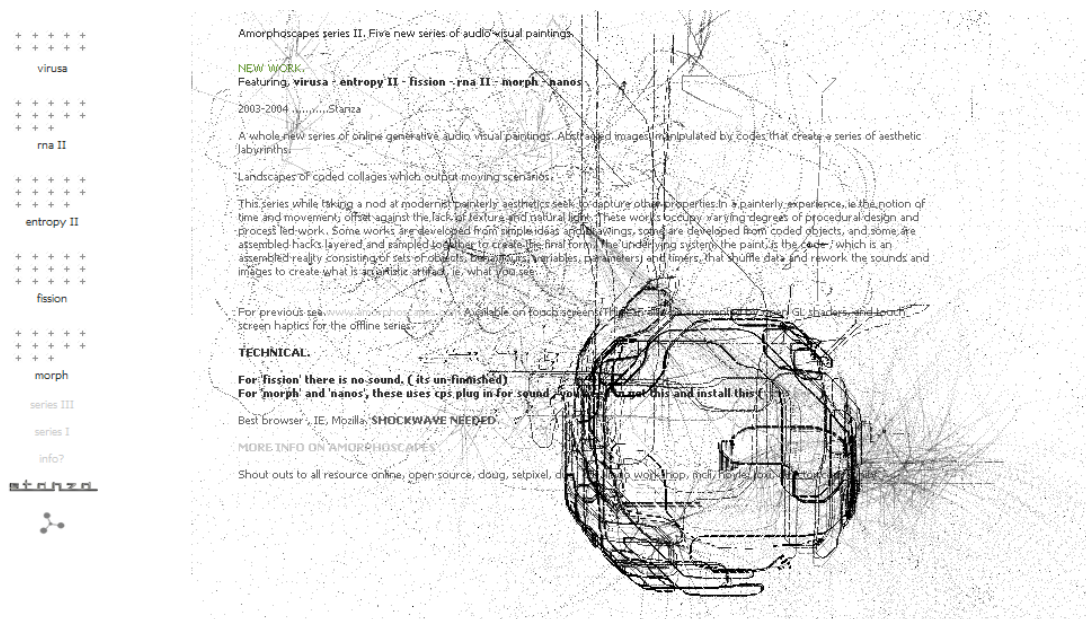
Introduction

I wish to create a piece of work that using scripted elements converts a user-submitted HTML webpage into digital art, by taking the HTML text content of the site, and giving this to a script that converts the information of the page into the motion of 'pixel creatures' that draw over the surface of the original page displayed beneath. These might consist only of single pixel or pixel group that draws itself leaving intricate patterns based on the attributes of the pixel beneath it (an example of this type of behaviour can be found in a Langston's Ant application) or alternatively, these could for example be whole HTML elements that are drawn in repetition based on similar rules such as an `` tag being replicated over and over across the page.

In this sense, all of the modifications/mutations will be formed as part of a script that makes decisions based on rules about how it interprets the original page. This can be compared to the generative web paintings created by the London based artist Stanza found at amorphoscapes.com, or his websites that have been 'infected' with DNA in order to radically change their contents. The artwork is in effect the rules used to produce the end piece and the actual process of this mutation.

I am considering extending this to creating a page that takes pages from which users have found popup advertisements and selecting and converting those into the art, thus people may get satisfaction from watching something that is ordinarily ignored and loathed transformed into something else, and ironically interesting.

Examples



'The underlying system, the paint, is the code, which is an assembled reality consisting of sets of objects, behaviours, variables, parameters and timers, that shuffle data and rework the sounds and images to create what is an artistic artefact, ie, what you see.'

The screenshot shows the BBCi website interface. At the top, there is a search bar with the text "CGTGTGNGACA TG TGAAC GTATAAT ATACTCAGN AAGAN ATGAAG" and a "Go" button. Below the search bar, the BBCi logo is displayed. The main content area is divided into several sections:

- Search Section:** A search bar with the text "GGCTGTGNGACAAA" and a "SEARCH" button. Below it are radio buttons for "the Web", "BBCi only", and "BBC News".
- Summer gardening:** A section with the heading "Summer gardening" and a sub-heading "As the 2003 RHS Flower Show in Tatton Park gets under way, find out how to get the most from gardens this summer." It includes links for "RHS Tatton Park information", "How to be a Gardener", "TV/radio gardening programmes", "Gardens around the UK", and "Gardening tips for children".
- Photos of Saddam's sons:** A section with the heading "Photos of Saddam's sons" and a sub-heading "reNACC paeTCAAATVictims". It includes a link for "News in 43 languages" and the text "فارسی|عربی".
- WetNGGCGAT:** A section with the heading "WetNGGCGAT" and a sub-heading "GGCGCax 22°C". It includes a weather icon and the text "5 dGGAAst".
- GNNNTTTT:** A section with the heading "GNNNTTTT" and a grid of letters: A B C D E F G H I J K L M, N O P Q R S T U V W X Y Z.

Research

Displaying web pages in Macromedia Flash or Director Shockwave

It is possible for Director, lingo and shockwave to call upon a number of useful features that can be used for the purpose of manipulating individual pixels in an image, collectively being called Imaging Lingo and a list of which can be found at http://www.adobe.com/devnet/director/articles/imaging_lingo.html.

Of particular interest are the 'Color' object, the 'GetPixel' and 'SetPixel' objects and CopyPixels object. Firstly, CopyPixels would allow me to copy a portion of the stage, which could contain the original page. The other objects will be very important for displaying the actual piece, discussed in the following section.

I have not been able to find a great deal of information on how I might be able to display the actual page within either Flash or Director, Flash textboxes have a single option to display text as HTML however this is either incredibly limited or non-existent. I believe however that the director stage can be made transparent and therefore perhaps placed over the top of a generated HTML page.

If however it isn't possible this isn't too much of a loss since the actual artwork is the program following the rules based on this original page, not being able to see the page.

Scripting and Behaviours

My script written in Actionscript, Lingo or JavaScript, (dependant on the final format of the piece) will be able to detect and identify certain parts of the page such as links to external CSS files, or embedded CSS in the page.

Langston's Ant style behaviour

```

public void moveAnt() {

    if (theWorld.getTheTerrainAtXY(antPosition.x, antPosition.y) ==
        AntWorld.COLOUR_ONE) {

        theWorld.setTheTerrainAtXY(antPosition.x, antPosition.y,
            AntWorld.COLOUR_THREE);

        turnRight();
    }
    else if (theWorld.getTheTerrainAtXY(antPosition.x, antPosition.y) ==
        AntWorld.COLOUR_TWO) {

        theWorld.setTheTerrainAtXY(antPosition.x, antPosition.y,
            AntWorld.COLOUR_THREE);

        turnLeft();
    }
    else if (theWorld.getTheTerrainAtXY(antPosition.x, antPosition.y) ==
        AntWorld.COLOUR_THREE) {

        theWorld.setTheTerrainAtXY(antPosition.x, antPosition.y,
            AntWorld.COLOUR_THREE);
    }
    else if (theWorld.getTheTerrainAtXY(antPosition.x, antPosition.y) ==
        AntWorld.COLOUR_FOUR) {

        theWorld.setTheTerrainAtXY(antPosition.x, antPosition.y,
            AntWorld.COLOUR_TWO);

        turnLeft();
        turnLeft();
    }
}
moveForward();

```

This is a very basic JavaScript that I have created myself that controls simple behaviour of a Langston's Ant, where the ant chooses its direction and what colour to create based on its position in a grid and the colour of that particular cell beneath it.

The shockwave 'GetPixel' and 'SetPixel' would be ideal for exactly the same type of task, only on a much more complicated basis as its possible to get the colour of a pixel of a very large and complex image.

Using the page image, it would draw according to a set of rules and based on the colour of the pixel beneath it.

These rules could be completely arbitrary, such as saying that if the number of the letter E found in the original page is odd, then the behaviour will be different to if the number is even.

Reading HTML websites

This project then requires a PHP script on the server that opens remote web pages and converts the entire document into a huge single string variable that can be read from either Macromedia Flash or Shockwave to be processed by the modifier scripts. I will be basing this on a PHP script used previously for an old i-dat project (102) that can be found on Dan Efergan's teaching website.

The following link will create the sample output shown below of the script after it is passed the URL of the subsubskills.co.uk website:

<http://www.subsubskills.co.uk/idat102/php/returnWebPage.php?pass=79556&url=http://www.subsubskills.co.uk>

```
&returnedSite=HTTP/1.1 200 OK
Date: Sun, 29 Oct 2006 09:17:56 GMT
Server: Apache/2.0.46 (Red Hat)
Last-Modified: Tue, 17 Oct 2006 10:20:54 GMT
ETag: "8fd96-87b-1c042d80"
Accept-Ranges: bytes
Content-Length: 2171
Connection: close
Content-Type: text/html

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<title>SubSub Skills</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<link href="/a/css/admin_subsubs.css" rel="stylesheet" type="text/css" />
<link href="/a/css/temp_subsub.css" rel="stylesheet" type="text/css" />
</head>
<body>
<div id="headerWrap">
  <div id="headerLeft"></div>
  <div id="headerMiddle"></div>
  <div id="headerRight"></div>
</div>
<div id="contentWrap">
```

Basically what is output by the PHP here is a string variable compatible with the inbuilt flash loadVariables() method that will pass the entire HTML contents of a given page as the variable &returnedSite. Ultimately any valid URL that links to a HTML page can be converted by the script into a string variable.

I will likely have to tailor this script for my own needs but fundamentally it provides the entire basis for this component of the piece. Regardless of which format and code language I finally decide to produce this piece in, I will need this method of converting a webpage into a single string. Only minor changes would be required to make it compatible with each. Also, I can see immediately that there are unnecessary parts of the string that I ought to remove, such as the server information created prior to the actual HTML of the file.

Timetable

Stage 1

Build PHP link for reading HTML web pages and make sure variable can be loaded into flash correctly for processing.

Stage 2

Create the modifying code in flash, director or JavaScript, basically the rules by which the new image of the website will be created.

Stage 3

Create the HTML and CSS design shell for the project. Propagate the URL and make sure its instructions are clear.

References

<http://www.stanza.co.uk/>

<http://www.stanza.co.uk/webpaintings/index.html>

<http://www.genomixer.com/cloned/beeb/index.html>

http://www.subsubskills.co.uk/idad102/php_file.htm

<http://www.generative.net/read/definitions>

http://www.adobe.com/devnet/director/articles/imaging_lingo_07.html