

# THE CREATION OF AVATAR HEADS FOR VZONES

Graham Baines June 2001  
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## **EQUIPMENT REQUIRED:**

For the creation of a head the kind of equipment that an artist needs are the following:

1. Computer (sounds silly, but this has to be completed digitally, raw art can be created in anyway)
2. Scanner (if you are not comfortable drawing directly with the computer, scan your art in then trace)
3. Drawing tablet (if all the creation work is done on the computer then the mouse is not suitable)
4. Adobe illustrator / Macromedia Freehand (a vector art package is generally used for outline work)
5. Adobe Photoshop (used generally for the coloring work, and all the palette manipulation)
6. Email account (to send the art to us, zipped, with a word pad / simple text note of explanation)

## **2 RAW IMAGES**

Creating art work for the vzones technology is fundamentally a creative process where by an illustrator uses their skill to render a character through a variety of facial expressions. Within the process comes a range of technical requirements, this has traditionally been left to 'image processors' who take the raw drawn images and process these through a multi stage process to create a proprietary file for use in the zone.

The two stages (creation and processing) benefit from interaction as the artist can be shown to illustrate in a beneficial way for processing.

We recommend that the illustrator creates final art in a particular way (explained below) as this reduces the time that the processor has to spend in preparation.

### **Art Creation**

There is no defined way in which an artist first creates a character, some use pencil on paper, others inks, some straight into photoshop or illustrator.

1. We recommend that the character is fully realised in all facial expressions in the artists chosen medium of creation, this maybe directly onto the computer through a tablet.
2. The artwork is scanned and re-drawn into adobe illustrator as outline art and scaled accordingly.
3. The outline shapes are then imported into adobe photoshop using **no** anti-alias.
4. The images are rendered using the appropriate indexed colour palette (see later) while keeping the outline in a seperate layer.
4. Finally the images are flattened and saved as a pict files or pcx (pc) with the index color palette intact.

The important thing to remember is that the coloring and detail work within photoshop has to be drawn by the pixel. There are of course variations on the above process, one of particular note is importing the color palette into adobe illustrator and doing some of the coloring and shading of facial featus via vector, then importing in (no anti-alias). But all work needs a careful eye to check for errant pixels when it arrives in photoshop.

Artwork for heads can be created in three formats, color replaceable, non color replaceable and a mixture of the first two. When artwork is created in the non-color replaceable format the artwork can be finished as non digital and simply scanned, scalled and the correct color palette applied. Although this form of artwork is not as well received in the zones as you cannot alter it through the use of sprays. It also require additional pixel work to make sure that the outline is correct (see later).

### 3 OVERVIEW OF CONSTRUCTION

Creating a head that works in the zones requires a number of facial expressions and different view points. The view points used in the zones are full 90 degree rotations. There is the opportunity to create asymmetrical heads but they must adhere to the rotational boundaries of the avatar itself. Any asymmetry is usually created cosmetically through hair, facial shadow (see later) although any object can make a head, as long as the artist can engender some personification of the object through the mood choices.

non color replaceable

normal



happy



sad



angry



color replaceable

normal



happy



sad

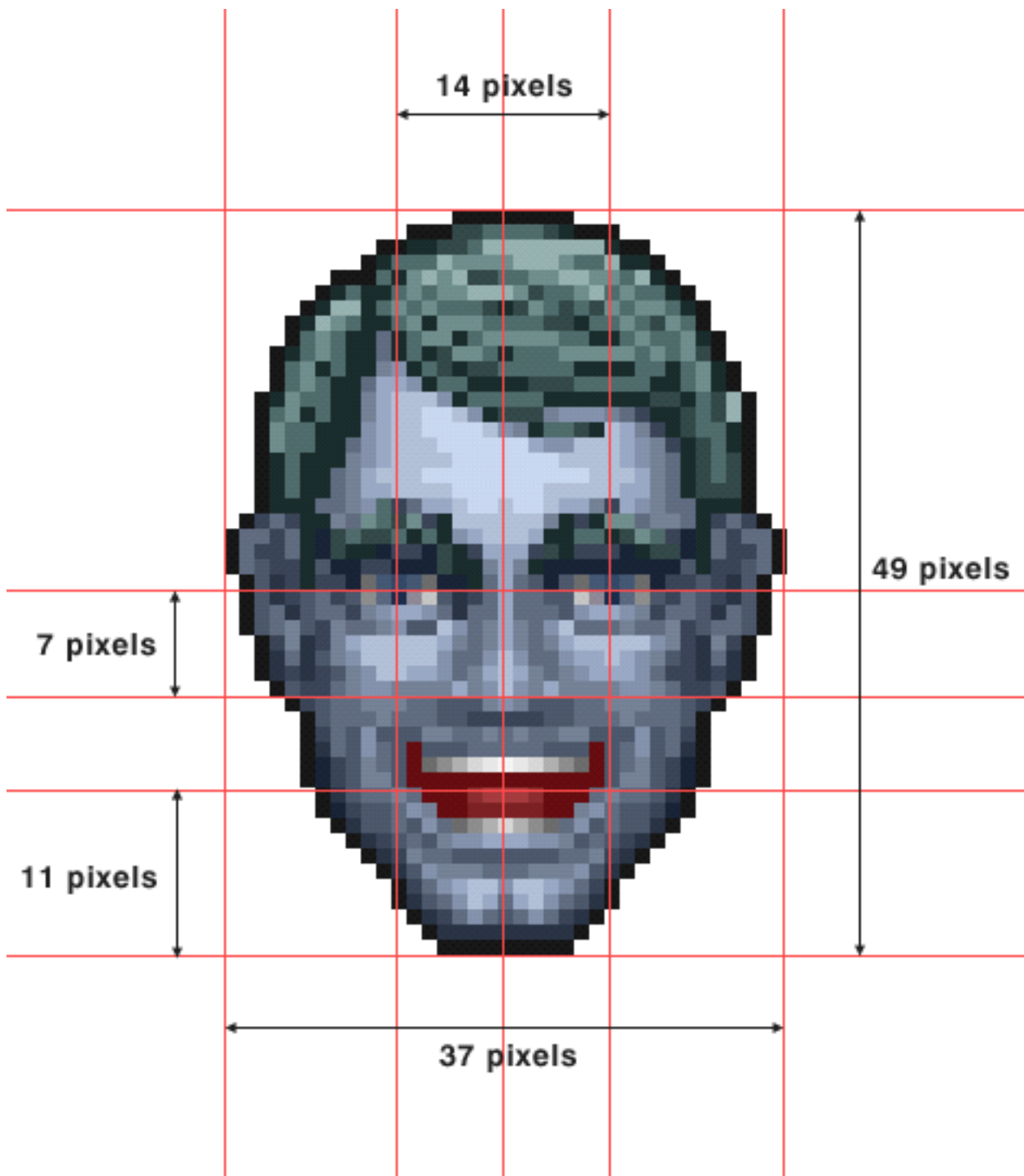


angry



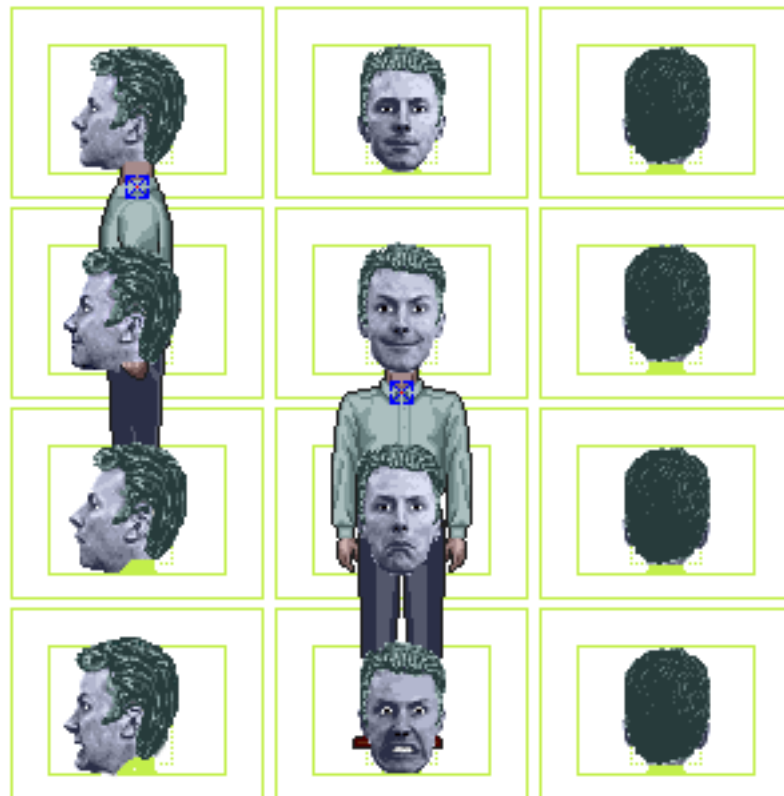
## 4 OVERVIEW OF CONSTRUCTION

The head can be human, animal, alien or inanimate, but one thing should always remain the same - the proportions for eye, nose and mouth placement. This is to make sure that the accessories that exist in the zones (glasses, pipes, hair) will work with the face when used. Of course there are exceptions and the processor has the opportunity to re-arrange special markers on the head so that object can be placed higher or lower, but assuming that you are creating humanoids then this basic grid should be adhered to.



## 5 OVERVIEW OF CONSTRUCTION

Once the head is created, the various components are layed down onto a grid (see below) this allows the artist to gage how the head will look on the various bodies (slim male shown). This process also allows the artist to indicate where the head should join the neck and body of the avatar (see bottom). This is an important part, and the final piece before they are handed over to the processor.



The head and neck alignment are very important, please see the example below to see what the issues are/ As you can see the top layer shows the head design that looks fine as a seperate piece of work but which obviously will not work with the body of the avatar.



The bottom layer shows the same heads with a modification to enable them to sit on the neck without undue jarring between the standard body and the head. The artist must always keep in mind the final destination of the head.

# 6 COLOR PALETTES

There is one 256 color palette available for the art created in the zones. This palette runs the full spectral range and offers some good blends. The palette is then broken down into special palettes based on the original one to be used for color replaceable art. All color replaceable heads use a palette of 16 colors. This is split up into 10 for skin, 5 for hair and 1 for eyes. The sprays that can be used in the zones have been matched to use this palette and some surprisingly detailed work can be created using this 16 color range.

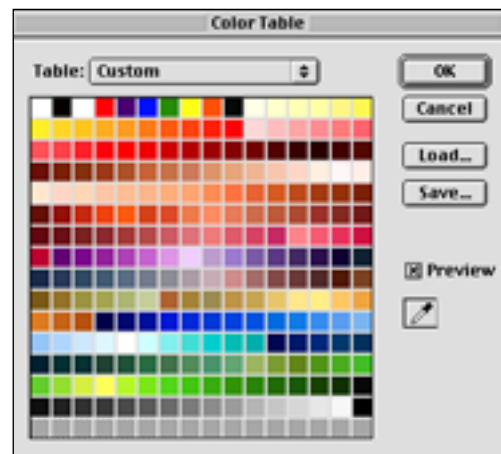
The use of color here is not unlike computer games from the 1980's as seen on the Commodore 64 (where this all began), ZX Spectrum, Atari and Tandy. Pixel design (sprites) can be very powerful if used correctly and the artist has the opportunity to break out of the 16 color palette for details that they do not wish to be changed by the user.(see later)

Below shows the 16 color palette range.

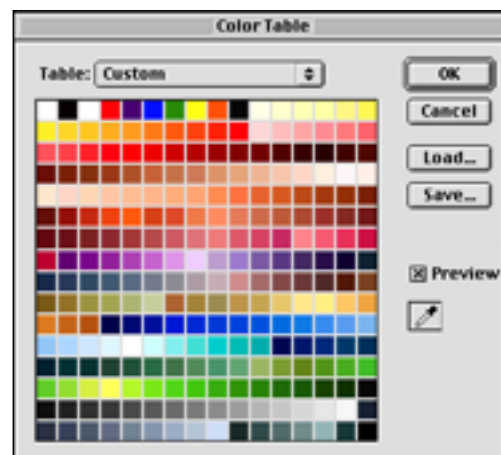
This starts from the far right block on the top layer and runs as shown along the bottom.

The top left block is the color that is used for outline work. This has a RGB value (for photoshop users) of 31 31 31, this color is not a true black and has the effect of not making the outline too heavy, but is considered effective in distinguishing the avatar from its background position in the zone.

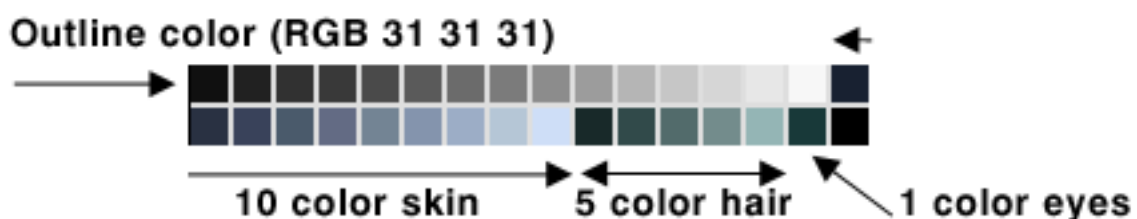
Color block three on the top line (left) is used mainly as a detail white for the heads. Do not use the color block one on the top left (white) as this is the color of the background and is made transparent when processing. This is also true for the last color block 256 which is black.



full 255 color palette



16 color replaceable

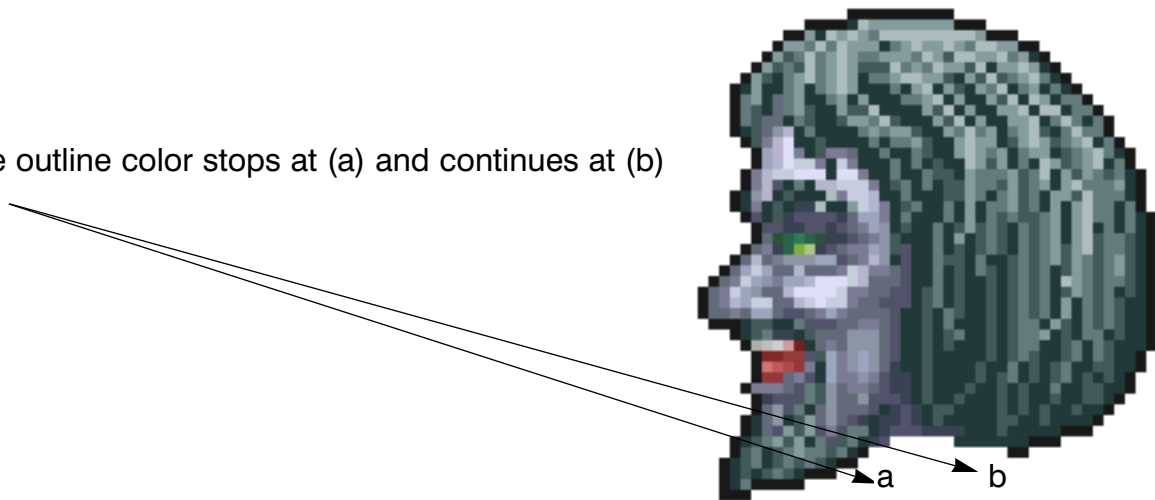


## 7 COLOR REPLACEABLES

The artist has the opportunity to break out of the color palette should they wish to create pieces of the art that cannot be modified by the user. This should also extend to the outline of the eyes, lips and the head.

When creating the head, the outline from the joining point of the jaw to the neck through to the join of the back of the neck should not be outlined. This helps when the head is connected to the neck (shown below).

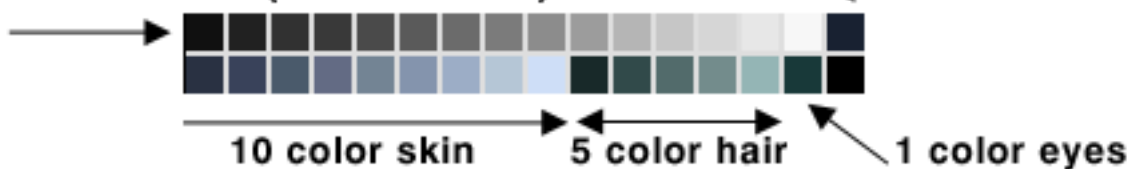
The outline color stops at (a) and continues at (b)



Additional colors have been used by the artist that will remain constant whatever the user does with the head.



Outline color (RGB 31 31 31)





## 8 THE FLEXIBLE HEAD



# 9 PROCESSING

Although the artist will not process the head, it is useful to know about the basic principles with which the head is transferred from their image to a fully functional head in the zones. The processing is done in two steps, once the file has been created as a pict file (.pct) it is then loaded into a program called MacroMedia Director. This program then lets us set out the individual cells of the heads expressions as a 'cast' from which the final file is created. The processor then creates 'tags' which are markers that let the zones' program know where to hang objects such as glasses, hair, pipes, hats etc.

Tags are also put on to let the zones' program know where to put the head on the neck of the avatar.

Once this process is complete, the file is given an object identity (h.) for head and is run through a proprietary piece of software called the 'dirt' tool. This tool converts all the tags and images into a file that the zones program can use.

End.

