Technical Design Aspects

Pixel Aspect Ratio

The ICAN is a 360 degree display system capable of displaying full colour video at a resolution of 640x480 pixels at 25 frames per second.

The unit utilises high brightness, high contrast L.E.D s which has an effective pixel aspect ratio of 1 to 1.25.

What this means in simple terms are the pixels are not square, like on a computer monitor. They are oblong, like on a television set, each pixel is one and a quarter times as wide as they are high.

This means you can either design your content at 800x480, and then rescale it to 640x480 when you convert for display on the ICAN.

Or you can set the pixel aspect ratio to 1.25 in you authoring application (for example Adobe After Effects or Sony Vegas), and output directly at 640x480 before encoding for use on the ICAN.

Converting content for playback

The preferred format for video playback is MPEG2

Dimensions : 640x480
Framerate : 25 frames per second progressive
Type : Elementary
Passes : 2 pass encoding
Bitrate : 2500 kilo bits per second

The recommended software for this is Mainconcept
Reference
www.mainconcept.com
Aesthetic Design Aspects

Colours and Contrast

Strong highly contrasting areas of flat colours tend to work best for text and logos. Video should be as clean as possible, as compression artifacts from poorly encoded sources (for example internet videos) can create noise which degrades the image. Bear in mind black areas will be transparent.

Layout

Content on the ICAN is automatically rotated clockwise at a rate of about one revolution every fourteen seconds, about 45 pixels a second. This means you do not need to include rotation in your content. It is useful to be aware of this in case you wish to counter rotate content, or indeed create static content.

As the display is cylindrical only half the area will be viewable at any one moment, therefore you may wish to repeat elements in your design.