LE3D

Content Creation

1 Content usage and creation

ARTMOS GmbH offers a full service of creating inspiring and impressive content for your LE3D. If you use this service, ARTMOS will deliver complete scenes at buyer's option, optimized for LE3D due to our long experience in creating 3D content.

However, you are of course free to use and create your own content. In this chapter, we will describe the process of content usage and creation.

1.1 General remarks

LE3D can use various content, from 4:3 images to spherical map movies (see chapter 1.2). You can use many media out of the box. However, we have some recommendations for using media or creating new media, to achieve an optimal result for LE3D.

- o Use strikingly scenery
  LE3D works best with big, simple, single motives.

- o Use big fonts and short sentences
  Sentences with up to 15 chars and maximal 3 lines of text are best readable.

- o Use simple stories
  Telling long and complicated stories on the LE3D sphere can be very difficult. Keep in mind, that it is not a film screen but a discrete media.

- o Use LE3D!
  Scenes, which take advantage of the spherical sphere form work best.

- o Mix effect scenes and commercials

1.2 File formats

LE3D supports the following file formats:

- o Images:
  BMP, PNG, JPG
  up to 1280x720
  max. 1MB size per image

- o Movies:
  MP4 with H.264 codec
  up to 1024x576
  max. 1.5MB size per second

- o Image sequences for all looping sequences:
  BMP, PNG, JPG
  up to 1024x576
  fixed frame rate 25
  max. 150KB per image
  The sequence of the images is determined by an IFL-file:
  This is a simple text file. In each line, it contains an image
  file name without path. The images are sequencially
  displayed. The IFL file has to reside in the folder, which
  contains the images. File names with paths are not
  supported.

- o Sound:
  WAV or OGG
  Stereo 16bit

- o Playlists:
  playlists are an ARTMOS file format and have the extension
  ".ARTmosPlaylist". They can contain a sound and multiple
  visual media. How media is displayed on LE3D depends on
  its aspect ratio. The following aspect ratios are supported:

- o 2:1 (exactly)
  The media is interpreted as a spherical map. Best
  resolution for the 2m sphere is 800 * 400 pixels.Best
  resolution for the 3m sphere is 1,200 * 600 pixels.

- o For in depth description of the LE3D spherical map format,
  see chapter 1.5.

- o 3:2 (exactly)
  The media is interpreted as a cube map. Best resolution for

the 2m sphere is 750 * 500 pixels. Best resolution for the 3m sphere is 1,125 * 750 pixels.
For in depth description of the **LE**3D cube map format, see chapter 1.4.

- o 4:3
  The media is interpreted as a 4:3 2D-media.
  It is displayed 3 times around the sphere.
  Black stripes appear on the top and bottom of the sphere.

- o 16:9
  The media is interpreted as a 16:9 2D-media.
  It is displayed 3 times around the sphere.
  Black stripes appear on the top and bottom of the sphere.

Spherical and cube maps are only detected if they have an exact aspect ratio of 2:1 respectively 3:2.
Only spherical and cube maps fill the whole sphere surface without distortion, since these are formats which are intended to map a flat onto a sphere.

4:3 and 16:9 have best quality, when the aspect ratio is exact. But if there are minor variations, they will also be displayed - the nearest aspect ratio is used.

4:3 and 16:9 leave black stripes on the top and bottom of **LE**3D since these formats would distort to much when filling the whole sphere. These formats are useful to play movies and commercials instantly without change.

## 1.3 Images and movies in 4:3 or 16:9 aspect ratio

Images and movies in 4:3 or 16:9 aspect ratios are simple to use. You can use any of your media out of the box, as long as you regard the file formats described in chapter 1.2. We suggest to use media, which matches our recommendations from chapter 1.1.
However, keep in mind, that images and movies in 4:3 or 16:9 do not take full advantage of **LE**3D. There will be black stripes on the top and bottom.
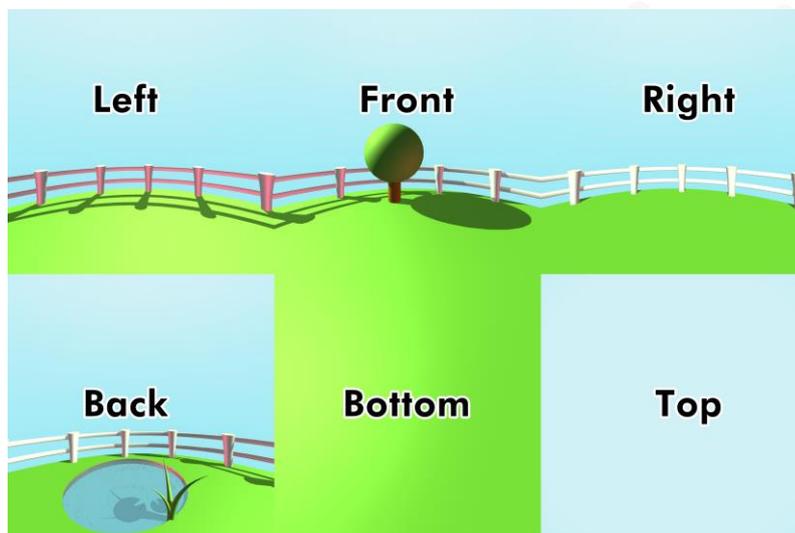
1.4 Cubemap media

Any media, which has the exact aspect ratio of 3:2, is interpreted as a cube map.

Cube mapping is a way to map six camera views to a cube.
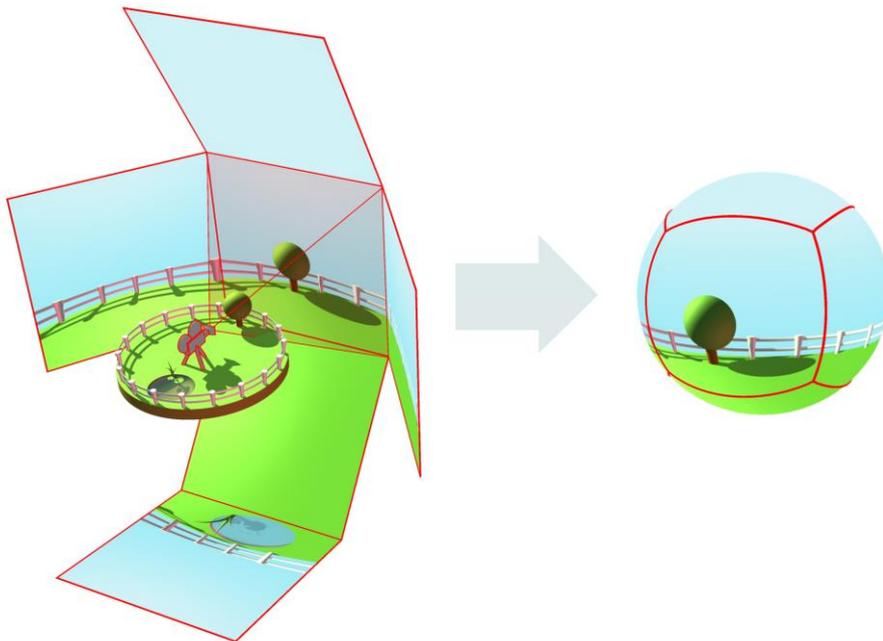
Six cameras in the centre of the scene create six images: top, bottom, left, right, back and front. These images are combined into one and mapped onto LE3D.

The ARTMOS cube map format is as follows:

The major advantage of this format is that its distortion is minimal. The major disadvantage is that the handling of six different images and combining them into one is time consuming.
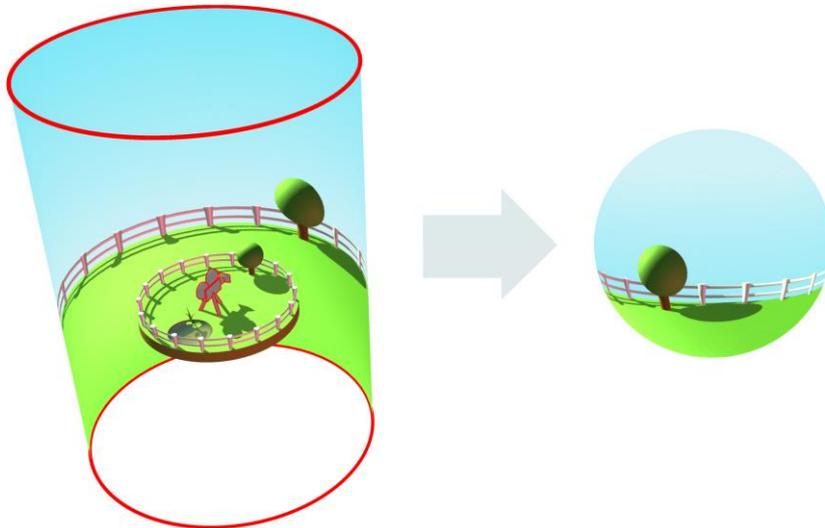
Best resolution for the 2 m LE3D sphere is 750 * 500 pixels.

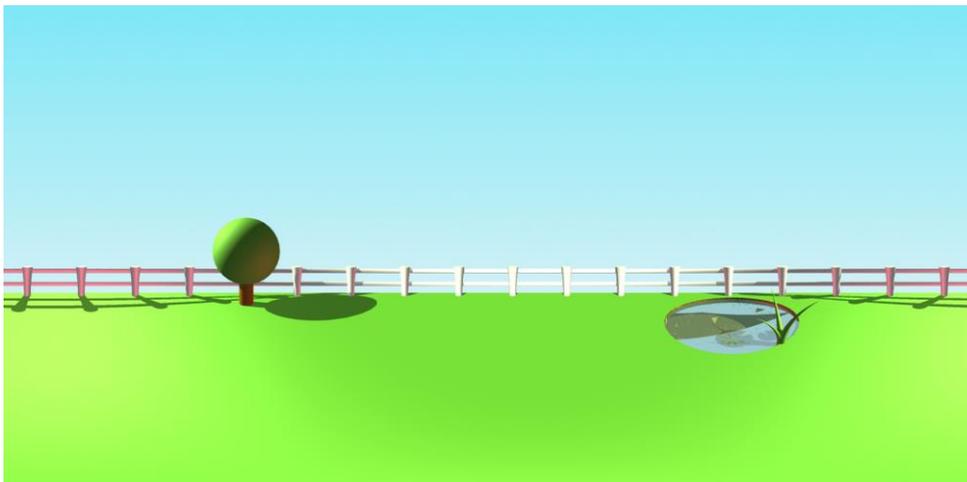Best resolution for the 3 m LE3D sphere is 1,125 * 750 pixels

1.5 Spherical map media

Any media, which has the exact aspect ratio of 2:1, is interpreted as a spherical map.

Spherical mapping is a way to map a 360° camera to a sphere.

A spherical map looks as follows.

The major advantage of spherical maps is that it only takes one image for the whole sphere.
The major disadvantage is that distortions may occur especially on the top and bottom regions of the sphere.

Best resolution for the 2 m LE3D sphere is 800 * 400 pixels.

Best resolution for the 3 m LE3D sphere is 1,200 * 600 pixels.

1.6 IFL files (Image File List)

IFL files determine the sequence of images. They are simple text files. In each line, they contain an image file name without path. The images will be displayed sequentially. The IFL file has to reside in the folder, which contains the images. File names with paths are not supported.

For all looping sequences we recommend this format to avoid stutters at the looping point.