

Interactive application content guidelines

1. Content type

Interactive lighting control app requires content in a form of images (higher the quality, the better) - that could be either physically taken pictures, or computer generated (rendered). Each image represents each lighting source present in the scene - later also referred to as 'channels'.

2. Channels

Each scene has to have a channel with an image of:

- The room with ONLY daylight, under overcast sky conditions (no direct sunlight).
- The room with one lighting channel at full power, with no daylight interference (at night, or with blinds shut).
- A room with second light channel (and so on, for every light channel) at full power, with no daylight interference.

Important part is to have the camera at exactly same position (use tripod and remote for shooting pictures) and with unchanged scene in every picture – no additional items on the picture, no movement.

Photo for each lighting channel should be taken without any other lighting present in the scene. Therefore, electric lighting should be ideally shot at night with the blinds closed - but without the blinds visible in the shot, to avoid the unrealistic effect.

3. HDR Photos:

Below are guidelines for taking HDR photos for the channels:

- Set the image format to RAW / NEF (depending on camera manufacturer)
- ISO and F-stops: set the ISO between 100 and 400 - should work well for most cases. Try with 100 at first and shoot ONLY the electrical light channel image with aperture set to fit the desired depth of field. Should work well between values 2.8 (shallow depth of field) and 5.6 (bigger depth of field).
- Set the shutter speed to get an image that is not under- and not overexposed.
- For a good starting point try ISO:400, f-stops:5, shutter speed 1/50s and then try with different shutter speed settings.
- Next, do the same for the daylight scenario.
- Search for a good compromise of settings for daylight and electric lighting scene. In example scene presented at the last online meeting, 1/15s Shutter with 5.6f stops and 400ISO worked fine for both overcast daylight and electric lighting channels.
- Now for the HDR image itself:
 - Now for HDR image itself - make it using technique called bracketing. Most of modern DSLR cameras have it included so check the manual for it.

- Basically, it works by setting different exposure times with fixed ISO and f stops. On the camera you can choose how many shots to take. For good accuracy go for 5 shots with different shutter speeds (speed will be automatically adjusted by the camera based on the originally selected one)
- Start with the settings defined earlier in step 1 and make 5 images with different shutter speeds automatically set by the camera:
 - In the automatic bracketing option, camera will queue sequence of 5 images with changing shutter speed: original, 1/2 the original, 1/4 the original, 2x the original and 4x the original. For example:
 - Original image was with 1/40s shutter speed, f stops: 4, and 400ISO.
 - After selecting 5 image bracketing sequence, camera made 5 photos with following shutter speeds: 1/40, 1/20, 1/10, 1/80, 1/160.
- In the end, use image editing software (i.e.g. Photoshop) to merge the photos together into HDRI image.
- As a deliverable, please provide both RAW files and the HDR image.