Image database download page

If you publish a paper using the images from this database, we ask you to cite the following paper "Tkacik et al: Natural images from the birthplace of the human eye", and include as part of your supplementary material the "index.txt" file (see below), so that other people can download the same subset of images and reproduce your analysis.

A note about the folder that is being prepared for you:

1. You will receive a FTP link to a special folder on our server, created as a result of this request. This folder will contain all requested image files.
2. In addition, it will contain a subfolder called "*README*". In it, you will find this note, our paper about the image database containing details about image preprocessing, several simple Matlab scripts that will help you parse the images, and a special file called "*index.txt*" with pointers to the subset of images / albums that you are downloading. **If you keep this file, anyone (including you) can later request exactly the same set of images from our database, by uploading the index file in the form below**.

A note about the directory structure:

1. The directory structure of the gallery will be preserved in the subset you have selected for download. That means that every "album" maps to a folder (or subfolder) with the album name, and within each album, the image filenames will follow the naming conventions described above. Note that image filenames (without the album) are not necessarily unique, e.g. "DSC_0001_LMS.mat" may appear in different albums.
2. Most of the images in each album / folder are similar, i.e. they are either images of the same object, of the same type of scenery, etc.
3. Some images may contain non-natural artefacts. As a rule, these are either: (i) images with the lowest sequence number in each folder, that *may* contain the color calibration chart; (ii) images in albums that contain closeups of fruits, plants, or the ground, and *may* contain a green ruler which can be used to determine the absolute size scale in the image.

A note about file formats:

- **NEF format** is the raw data extracted from the camera, without any processing. The corresponding filenames are of the form "*<name>.NEF*".
- **RGB format** is the output of the camera's CCD chip, stored as a Matlab [X x Y x RGB] uint 16 matrix, where RGB is one of the three color channels. These values are not dark subtracted or normalized to standard exposure, ISO and aperture, but are demosaiced. The corresponding filenames are of the form "*<name>_RGB.mat*".
- **LUM format** is the calibrated, dark-subracted Matlab [X x Y] matrix reporting the grayscale illumination in units of candela per square meter.
- **LMS format** is the color-calibrated, dark-current subtracted Matlab [X x Y x LMS] matrix reporting the activation (as the number of equivalent isomerisations of L(ong), M(edium) or S(hort) wavelength rhodopsin molecules per cell per second, for humans) at every X, Y position in the image. The corresponding filenames are of the form "*<name>_LMS.mat*".

- **JPG format** contains a compressed, easily viewable image. The corresponding filenames are of the form "*<name>JPG*".
- **Auxilliary data**, added to the download folder automatically for every image, contain a Matlab structure with the timestamp, filename and album name (which helps us to locate the image on the original CDs), annotations about the tripod settings, approximate distance to the object, camera metadata (aperture etc), and the fraction of all pixels that are saturated. The corresponding filenames are of the form "*<name>_AUX.mat*".

The following information will be used to prepare a folder containing all of the requested data files. An email with instructions for accessing the data using FTP will be sent to your address as soon as the processing is completed.

To override your current Cart selection and request a specific set of images from an earlier analysis, provide the *index.txt* file in the field below and press "Load existing list".

Index file (opional, overrides Cart selection):	Choose File no file selected

Load existing list

***** You can always bypass this form and access the full database directly using any FTP client at ftp://anonymous@tofu.pysics.upenn.edu/fulldb *****

Select the image formats that you wish to download and your email address:

Email:	
Include raw (NEF) files	☐
Include raw (RGB) files	☐
Include luminance (LUM) files	☐
Include retinal response (LMS) files	☐
Include JPG files	☐

Submit