

In real-life scenes, the light dynamic range is often larger than a digital camera is able to capture. This problem is addressed by exposure bracketing, i.e. the same scene is captured several times with different exposures. This work presents ImageLighter, a program designed for automatic blending of series of bracketed pictures in order to restore the original dynamic range. The algorithm is designed to use as much visual information as possible while blending. The resulting picture then reflects light levels of the original scene more accurately. The thesis describes algorithms and data structures used. A comparison to other known approaches is presented as well.