

Assessment of image quality in digital cinema using the motion quality ruler method

This paper describes a subjective image quality assessment method called the motion quality ruler (MQR) that can be used to determine the perceived quality of motion sequences. This method is an extension of a similar method that has been used to assess still image quality in photography and was standardized as ISO 20462. The MQR method provides a calibrated numerical scale in units of just noticeable differences (JNDs), and the results of different experiments using the MQR can be compared and combined, even if they were done at different times or locations. It can be used to quantify overall image quality, as well as other image attributes, in a very efficient manner over a wide range of JNDs. Results are presented from an experiment that used the MQR method to evaluate the overall quality of JPEG 2000-compressed sequences in a digital cinema environment.