JEG-Hybrid
Joint Effort Group on the development/research of
generally applicable hybrid video quality assessment algorithms

STATUS UPDATE

VQEG SPRING 2021 MEETING
To develop a generally applicable no reference Hybrid Perceptual/Bit-Stream model

With a small set of subjective experiments
  - Limited training possibilities
  - Limited validation

Currently
  - Large scale DB with 60,000+ PVS (no losses) and 500,000+ PVS with distortion due to packet losses, many full-reference objective quality measures
  - Machine Learning models derived from trying to model individual observers
CURRENT ACTIVITIES: AI-BASED OBSERVERS

- Working on designing NN-based virtual observers (AI Observers) starting from existing subjectively-annotated image and video datasets;

- Key point: modeling SINGLE observers, which should allow to consider also their expectation;

- Previous work used shallow NN on video content and DNN on still images;

- Next steps:
  - Designing DNN-based AI Observers for video and comparing them to actual ones in terms of bias, inconsistency and MOS prediction;
  - Designing subjective tests tailored for the training of AI Observers.
CURRENT ACTIVITIES: HODOR PROJECT WITH THE SKY GROUP AND AFFILIATES

- Key outcome: A measure that could allow to automatically identify PVSs for which VQMs are likely to deliver inaccurate MOS estimation

- Currently we are summarizing the activities in a scientific publication
L. Fotio Tiotsop, T. Mizdos, M. Barkowsky, P. Pocta, A. Servetti, E. Masala, "Mimicking individual media quality perception with neural network based artificial observers", accepted for publication in ACM Transactions on Multimedia Computing, Communications, and Applications


WHERE CAN I GET MORE INFORMATION?

- Biweekly meetings (next: Jun 17, 2021)
  https://conf.dfn.de/webapp/conference/97980178

  (notably section resources, constantly updated, volunteers welcome!)

How may I get involved?

- Subscribe to the VQEG-JEG mailing list: jeg@vqeg.org

- Join our biweekly conference call