# VQEG Meeting in Rennes, Thursday

**3D Session**

**Thanks to Margaret Pinson for taking notes**

**Presentation** (see Rennes 2012 meeting files directory)

VQEG\_3DTV\_2012\_010\_VQEG\_OrangeLabs\_ImportanceOfShootingSceneAndVisualizationParametersForSubjectiveTestPurpose\_v01.pdf

“Importance of shooting, scene and visualization parameters for subjective tests purpose,” by Wei Chen, Jérôme Fournier, and Jean-Charles Gicquel; Orange Labs (Chen also IRCCyN)

**Presentation** (see Rennes 2012 meeting files directory)

VQEG\_3DTV\_2012\_011\_VQEG\_OrangeLabs\_New3DVideoSubjectiveTestMethod\_v01.pdf

“New S-3D video subjective test method: a multidimensional approach,” by Wei Chen, Jérôme Fournier, and Jean-Charles Gicquel; Orange Labs (Chen also IRCCyN)

**Discussion**

What do we want to test with the coding and spatial degradations dataset that was distributed during the meeting?

Parameters identified:

* Main difference (from for example BT.500)
* Illumination
* Display (type and size)
* Viewing distance
* Viewing angle (number of observers)
* Observed screening methods used
* Display measurement /calibration methods

Influence of the environment:

* Viewer position (several viewers, distance, height)
* Room setup (illumination, colors)
* Display settings (polarized/shutter, color calibration)
* Amount of training of observer
* Polarized display viewing distance (3H, 6H)
* Influence of observer population (same observers, different observers)
* Observer information (accommodation time of observers, vergence facility)

Recommendations on data to collect:

* Observer information:
  + Age
  + Snellen (distance vision test)
  + Randot (stereoscopic vision test)
  + Ishihara (color vision test)

**Note:** IRCCyN has test control software available and is willing to share it. SSD drives are needed. If hard drives are fast enough to read video in real time, then a Windows PC can display the 3D videos in real time. If hard drive read access speed is insufficient, an error message appears. Ask 3D Co-Chair Marcus for more information.

**3D experiment on how to conduct 3D subjective tests**

**Acreo**: Active consumer grade vs. passive consumer grade TV 55” displays

**AGH**: 42” polarized 2D, autosteroscopic 4” display, pristine and outdoor environment, poor quality shutter glasses (cross talk) available for comparison

**Deutsche Telekom**: Home environment, standardized environment, 52” display versus smaller 23” display (both shutter glasses). Passive display eventually.

**IRCCyN:** (experiment already conducted)

**NTIA**: Open to suggestions on focus. Simulated living room versus BT.500 compliant; laptop with 3D display versus (approximately) 50” television.

**NTT**: Undecided. Perhaps clarify assessment method (use different methods), impact of display (different displays, such as broadcast quality polarized monitor versus 40” consumer quality shutter monitor).

**Orange Labs**: Have a lot of varied equipment. Characterize video sequences themselves. Viewing distance impact; display technology; environment (e.g., illumination).

Technicolor: Viewing distance, viewing angle, or observer screening methods.

**Yonsei**: 46” polarized screen; also 26” polarized monitor, 1 versus 2 viewers per test

**Presentation** (see Rennes 2012 meeting files directory)

VQEG\_3DTV\_2012\_014\_Proposal for project to develop objective metric for 3D(NTT).ppt

“Proposal for a project to develop full reference media-layer objective metric for stereoscopic three-dimension video” by Taichi Kawano, Jun Okamoto; NTT Service Integration Laboratories, NTT Corporation.

**Potential Proponents:** NTT, Yonsei, SwissQual, Opticom, Deutsche Telekom, Orange FT, NTIA, IRCCyN

**Potential ILG:** AGH, Acreo, IRCCyN, NTIA

(note: IRCCyN and NTIA may either be proponents or ILG)

**Agreement was reached:** to adopt this proposal. VQEG will decide later how to structure this effort.

**Presentation** (see Rennes 2012 meeting files directory)

VQEG\_3DTV\_2012\_012\_VQEG\_OrangeLabs\_TechnicalRecommendationsToEnsureVisualComfort\_v01.pdf

“Influence of views asymmetries and depth rendering on visual comfort: towards 3D video technical recommendations,” by Wei Chen, Jérôme Fournier, and Jean-Charles Gicquel; Orange Labs (Chen also IRCCyN)

Document includes quantitative thresholds for left/right view comparisons to ensure the end-user’s visual discomfort (e.g., allowed difference on black level, allowed vertical shift). These thresholds may be used as a starting point for a complete set of such metrics.

**Presentation** by Marcus (continued)

**Agreement was reached** to add the following impairments to the database:

* Asymmetric coding conditions—low quality (strong coding) in one view and high quality in the other view
* Error concealment

Two other conditions must be removed for this to be possible.

**Agreement was reached** to use 10 SRC for this 3D investigation.

Issues for later consideration: temporal offsets between views (e.g., from packet loss in one view only)

**3D experiment on 3D visual experience using paired comparison**

**Acreo**: unsure of time line, likely October 2012 at the earliest

**AGH**: cannot until October 2012, perhaps October or November

**Deutsche Telekom**: perhaps August 2012

**IRCCyN**: perhaps July 2012

**NTIA**: cannot currently decided

**NTT**: cannot currently decide

**Orange**: cannot currently decide

**Technicolor**: cannot currently decide

**Yonsei**: perhaps August 2012

**Timeline:** IRCCyN will try to have the impaired sequences available by August, 2012.

**3D experiments to compare methodologies (e.g., ACR, SAMVIQ, Paired Comparison)**

**Interest in performing experiment and data analysis:** Kjell, Lucjan, Piere, Quan, Marcus, maybe Emmanual

A Decision was made to keep the 3 3DTV projects within the 3DTV Group for the time being. They are:

* Investigate the influence of viewing environment, test set-up and display equipment on subjective quality
* Methodologies for subjective quality assessment of stereoscopic 3D video
* Objective video quality metrics for stereoscopic 3D

Chulhee Lee and Taichi Kawano are editors of 3DTV OBJECTIVE test plan.

Discussion on the next , meeting resulted in Singapore and 3 possible dates:

Weeks beginning:5nov; 10dec: 7jan