| **Parameters** | **Suggestions/Comments** |
| --- | --- |
| Model, brand & screen size of display | To be defined at a later stage |
| Content format | 3D |
| Display technology | passive screen with 4K resolutions. |
| Container | 1080p/50 |
| Encoding/decoding | HM version? Versions above HM10 are considered stable. |
| Duration per test sequence | 12 seconds  \*It is suggested that the duration for 3D video quality evaluation should be slightly longer than 2D because more information is contained in the 3D space. 12 seconds seem appropriate because of the nature of the suggested voting methods. |
| Bit rates | 10, 8, 6 Mbit/s. (high, rep., low)  \*A representative bit rate for a 3D AVC service is 15Mbit/s. For HEVC, there is approximately a 50% reduction by subjective measurements |
| **Parameters** | **Suggestions/Comments** |
| Number of source sequences | Six is a reasonable amount. Process to choose suitable sequences  Although a robust 3D subjective test will require 10 to 14 sequences because of the extra elements of 3D when compared to 2D. Pointers when selecting 3D source sequences should include:  +Different amounts of planar motion (e.g., slow to fast)  +Sequences with slow motion in depth  +A variety of depth budgets and focal objects at differing disparities  +Graphical overlays  +Difficult to code  + Easy to code  +High spatial details  +High motion clip |
| Number of assessors | Minimum of 24 |
| Voting method | **DSIS:** The assessor is presented with a pair of test sequences. The first in the pair is always the explicit reference, followed by the impaired test sequence. An evaluation is then made based on the explicit reference. The results are averaged across all the assessors to produce the MOS.  *Comments*  **+**Test sequences are assessed with greater sensitivity.  **-**May contain a slight bias because assessors know that the reference is always presented first  **DSCQS**: The assessor is presented with a pair of test sequences, one of which is the reference while the other is the impaired test sequence. The test sequences are presented in random order and the assessor is not told which is the reference but asked to evaluate the quality of both. The difference in quality in each pair is calculated and then averaged across all the assessors to produce the DSCQS score.  *Comments*  **+**Fine-tuned for assessing small differences in impairment  **-**Scores obtained are dependent on the criticality of the test sequences |
| Viewing distance | Depends on the display technology: 3H for active or 4H/5H for passive 2K. |
| Screening methods | -Snellen Chart for far and near vision or equivalent  -Ishihara Plates for color vision or equivalent  -Randot stereo test for depth acuity or equivalent  -Porta test for eye dominance eye or equivalent |
| Environment | Controlled |
| Order of test sequence presentation | Randomized per assessors |
| Order of session presentation | Randomized per assessors |
| **Parameters** | **Suggestions/Comments** |
| Assessors | Non-expert |
| Voting interface | Paper-based or separate device? |
| Total duration of the subjective tests per assessor | 30 minutes  \* Split the subjective tests into sessions so that the subjective test is within 30 minutes. |
| Training | Training of assessors using new test sequences |

A pre-test of the chosen method and parameters should be trialed because it will allow for minor adjustments, if any, before the actual subjective test.