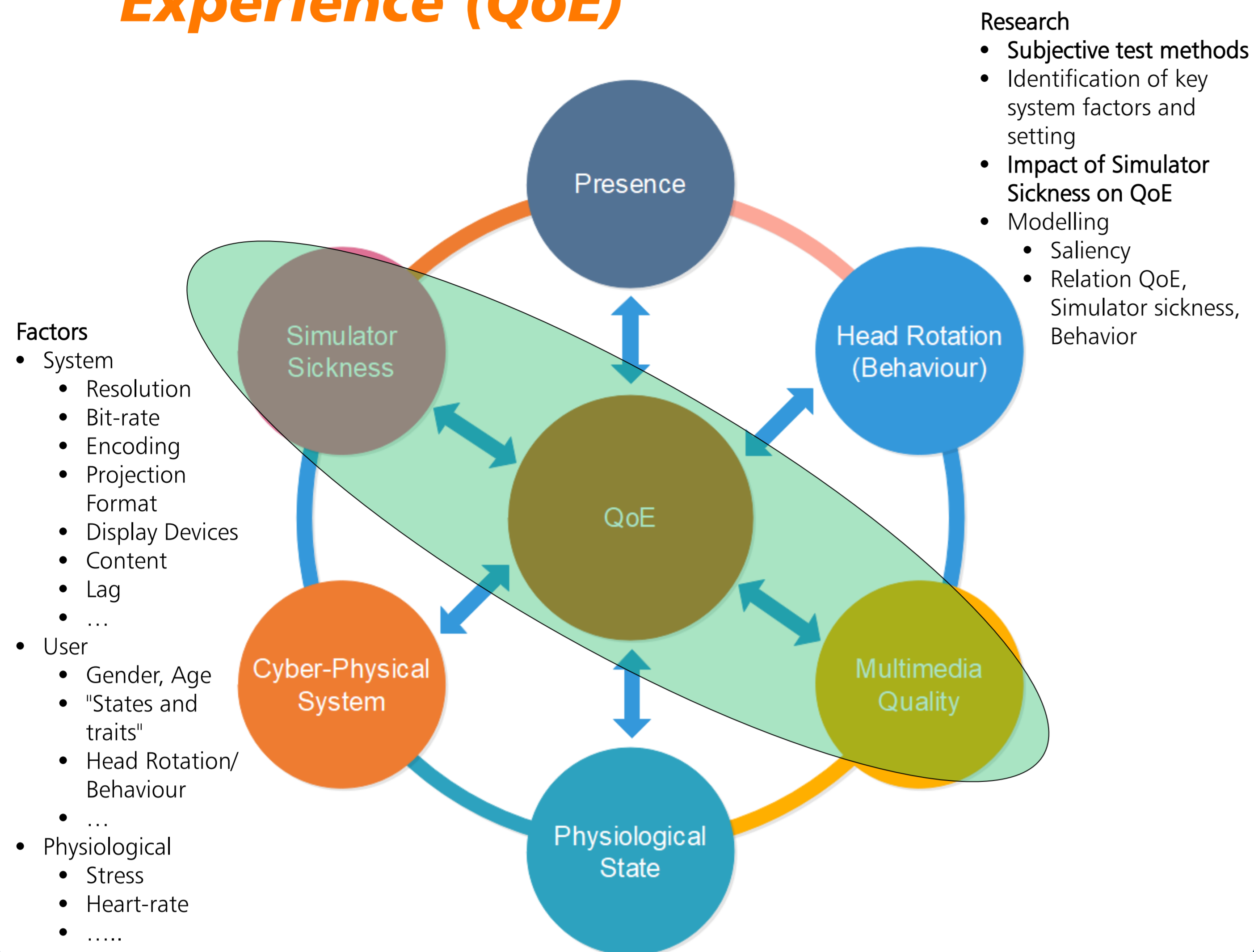


Holistic Assessment of 360° Video QoE

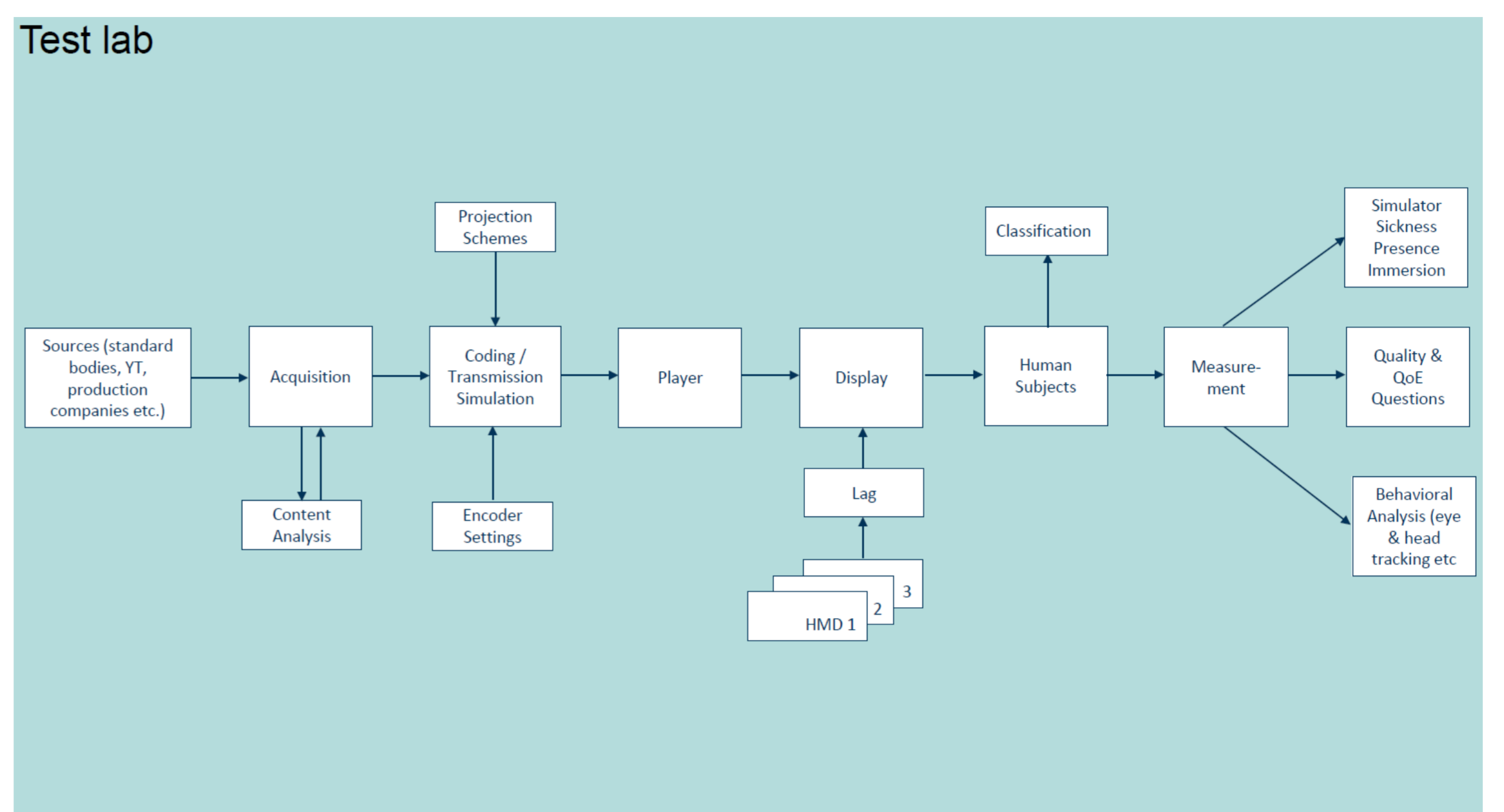
Ashutosh Singla and Alexander Raake

TU Ilmenau Germany

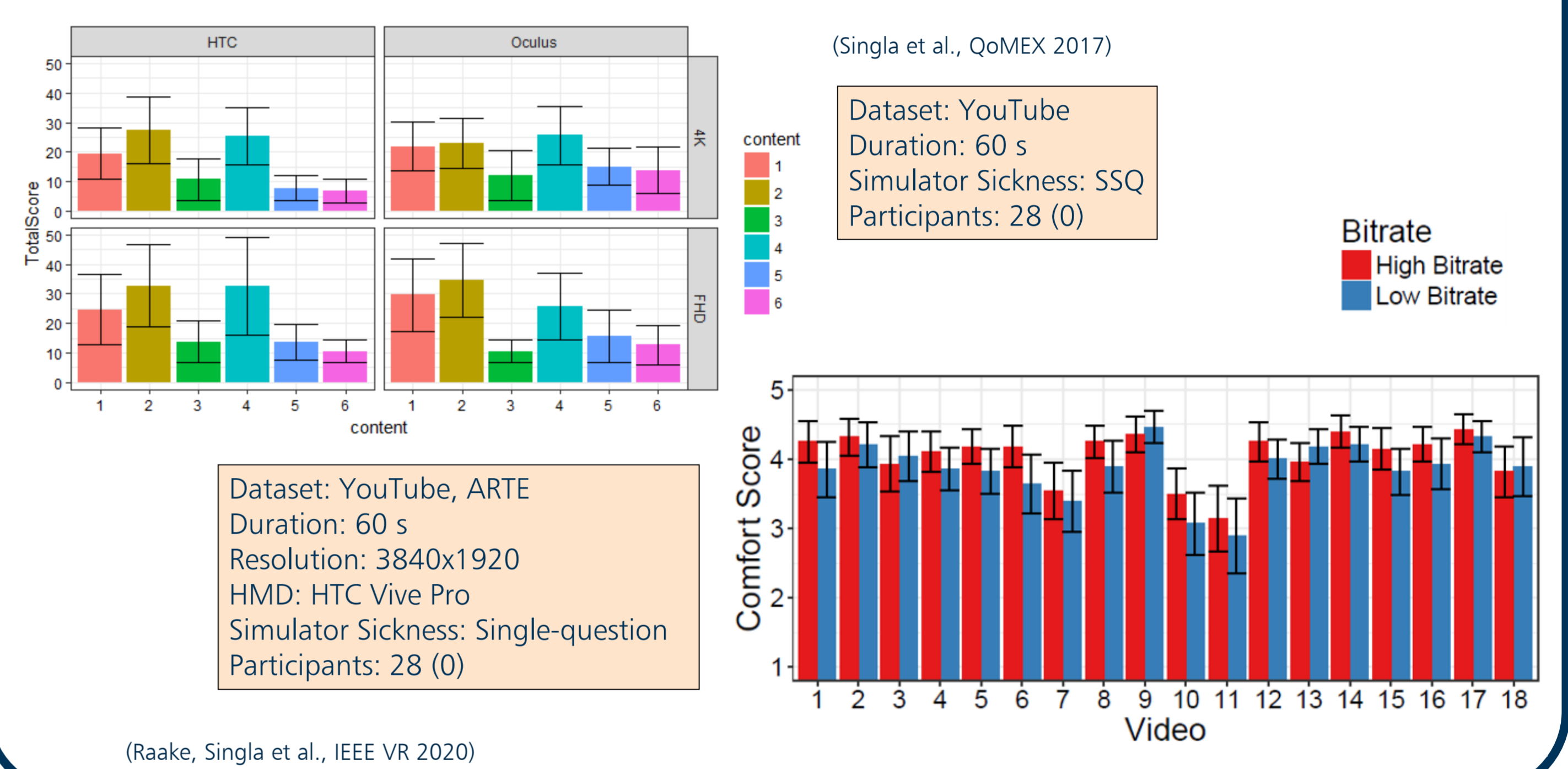
Components of 360° Videos Quality of Experience (QoE)



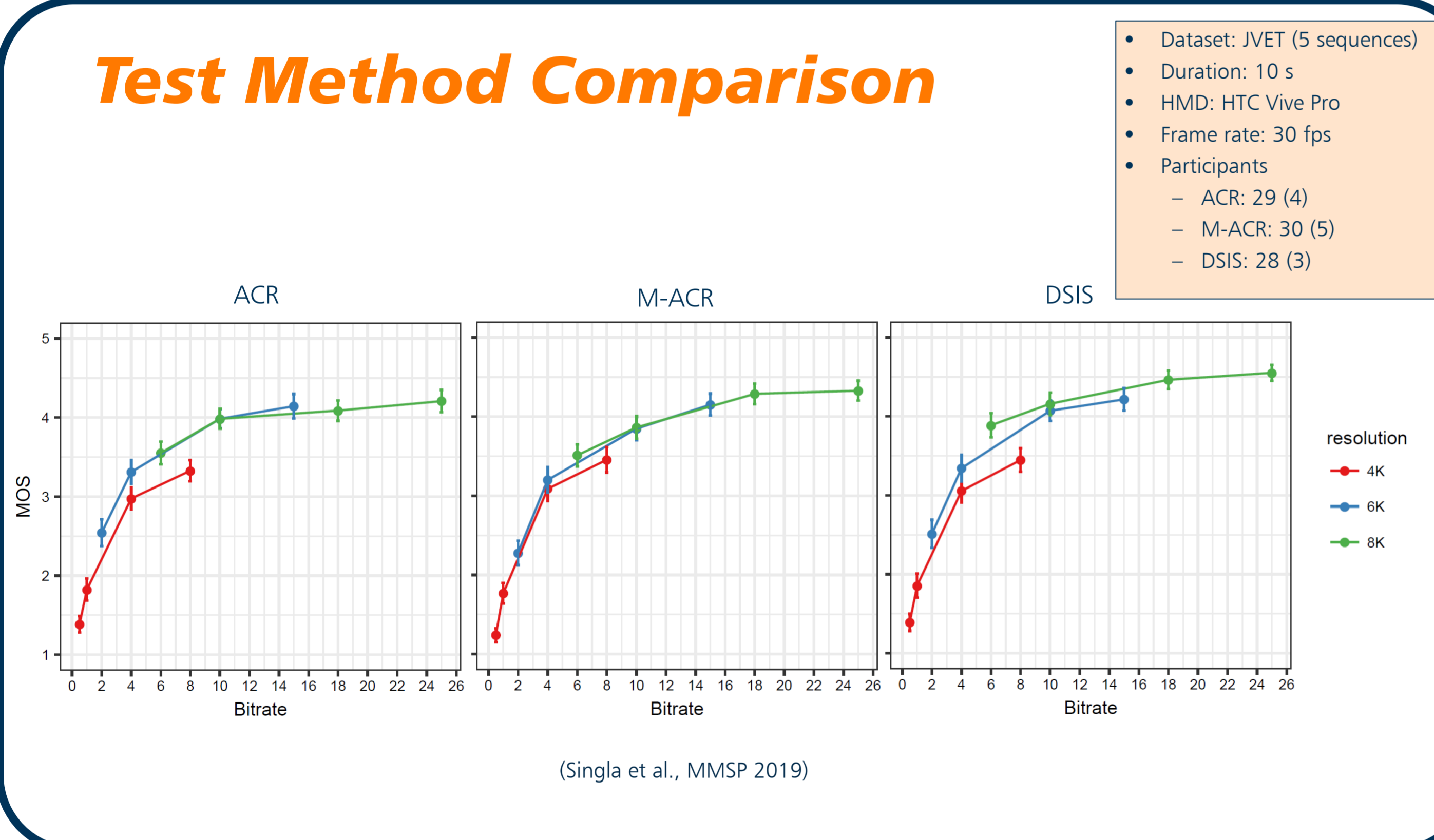
Overview of 360° end-to-end Chain



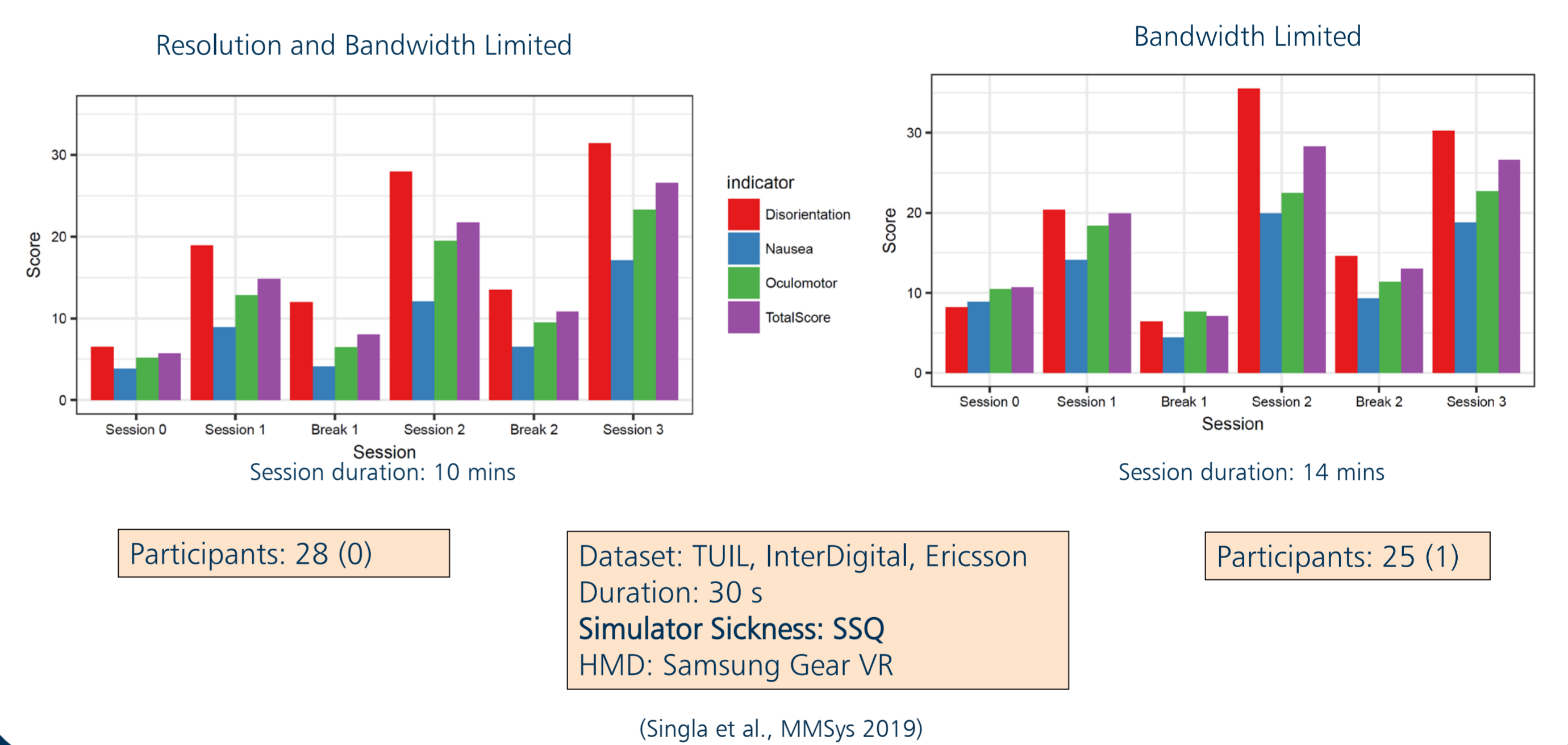
Simulator Sickness – Content & Technology



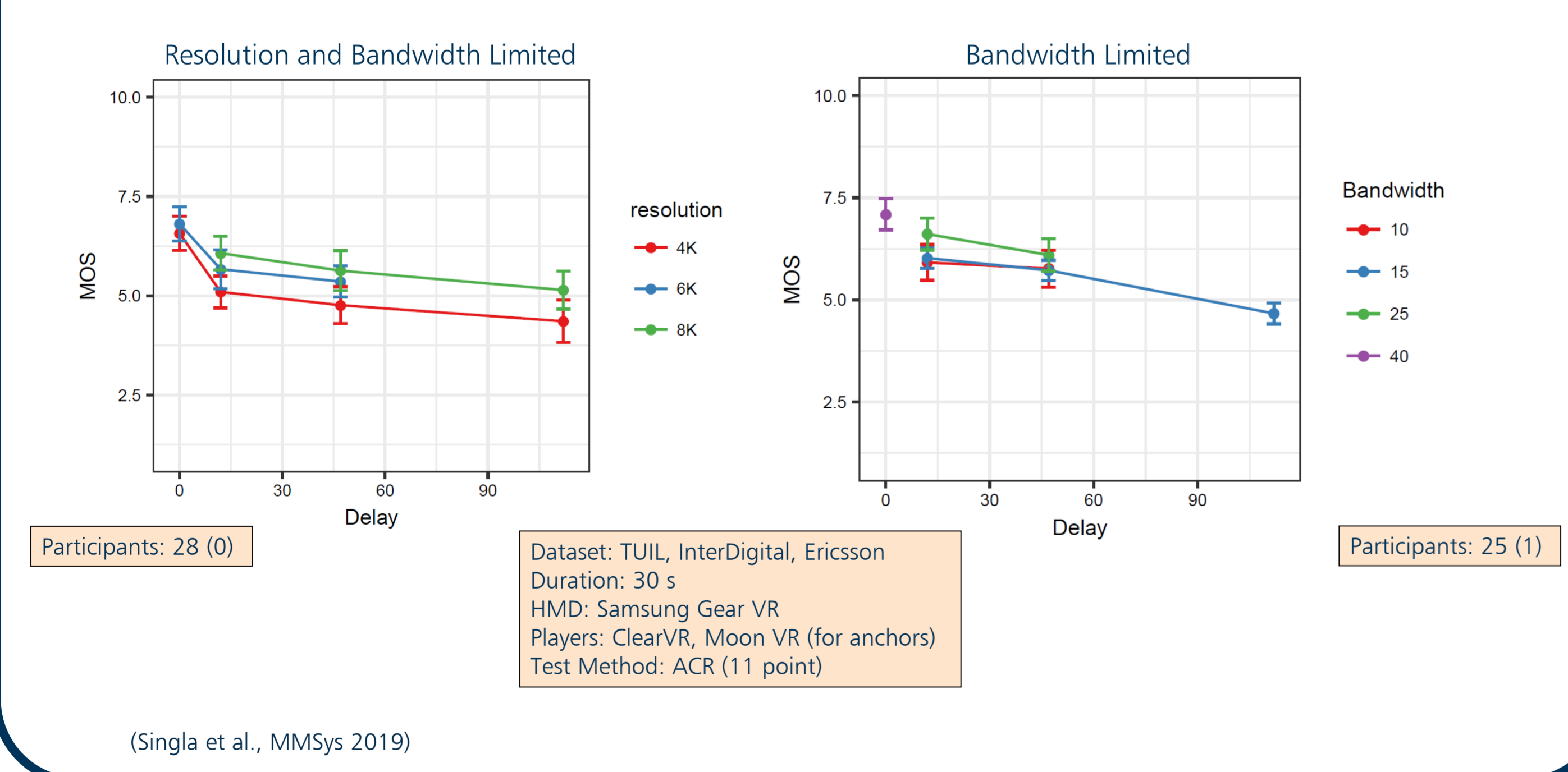
Test Method Comparison



Simulator Sickness – Tile-based Streaming



Tile-based vs Full Frame Streaming



Dataset (QoMEX 2022)

- Content of 12 scenes
- 60 fps, 8K Resolution, 4th order Ambisonics or Raw 32 channel audio
- <https://qoevave.github.io/database/docs/Dataset>

Video Quality

- DSIS is statically more reliable than ACR and M-ACR
- Lower delay (Motion-to-High-Resolution Latency) values up to 47 ms have minimal effect on quality ratings

Conclusion

- Simulator Sickness
- More pleasant experience in HMDs can be achieved by making improvements in technical factors
- Impact of test duration can be seen, breaks help in reducing the simulator sickness