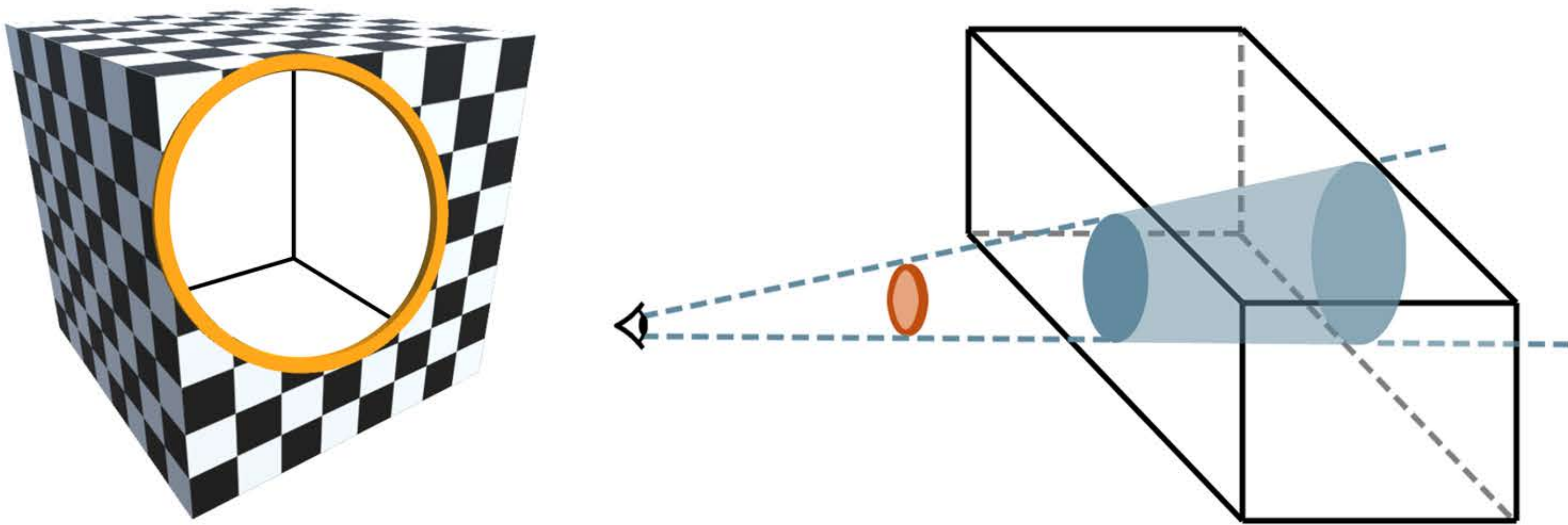


VIRTUAL LENSES FOR IMMERSIVE ANALYTICS

Sven Kluge¹, Stefan Gladisch¹, Uwe Freiherr von Lukas^{1,2}, Christian Tominski²

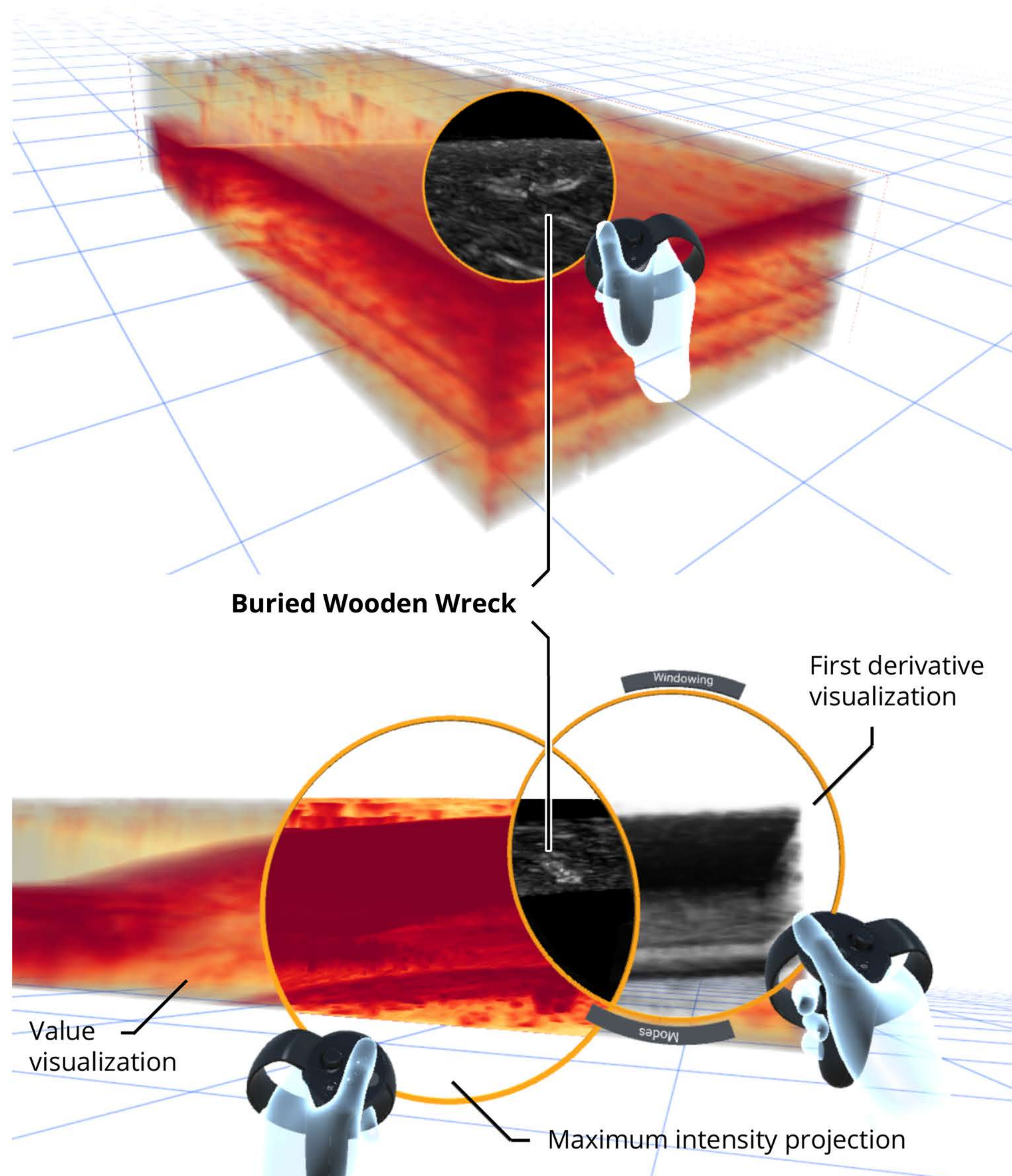
LENS DISPLAY

- Lens represented as virtual tool / 3D disc
- Lens interior shows alternative view



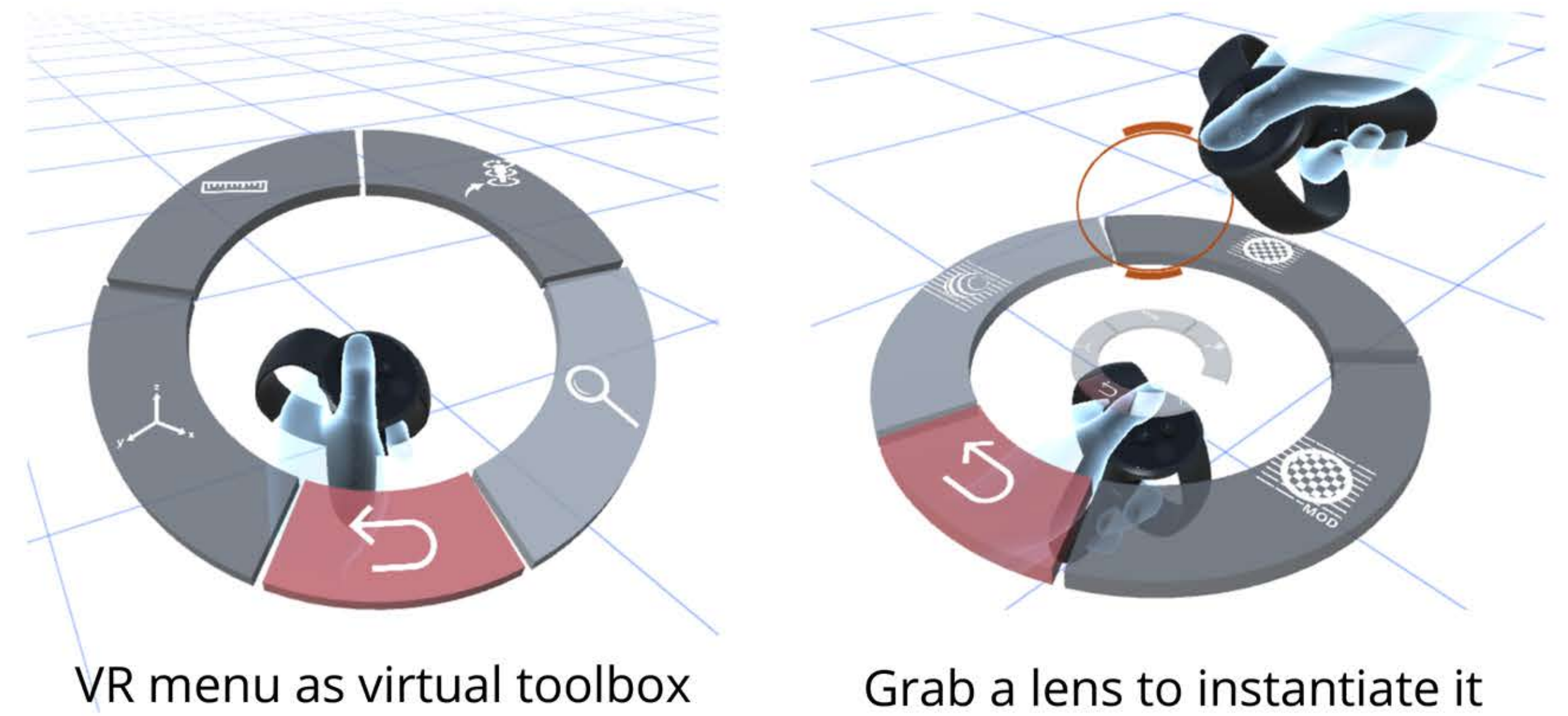
USE CASE

- Data: 3D measurements of a subbottom profiler sonar
- Task: Analyze local areas with high value change in context of the global value distribution
- Challenge: Requires several alternative representations
- Solution: VR volume visualization + virtual lenses

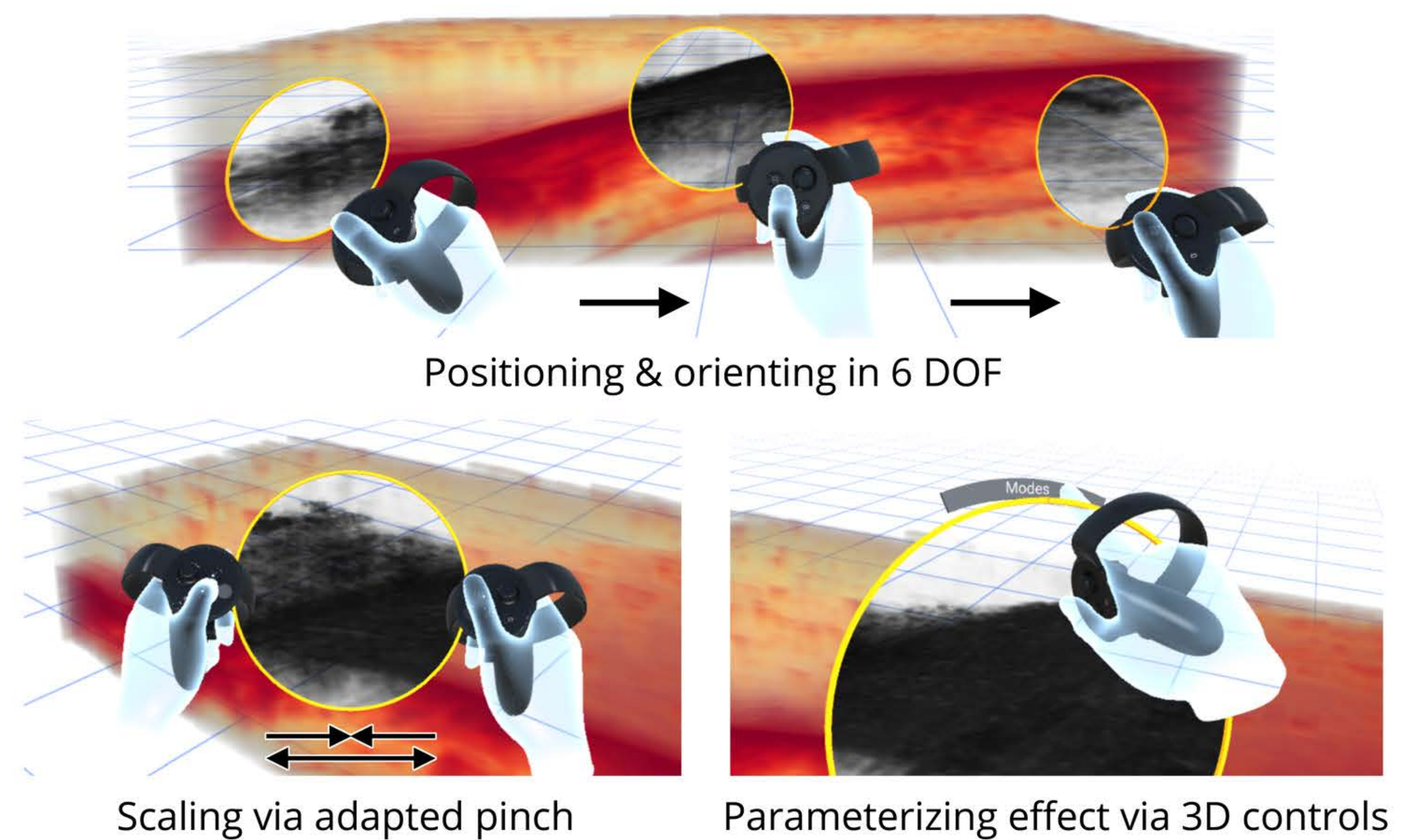


LENS INTERACTION

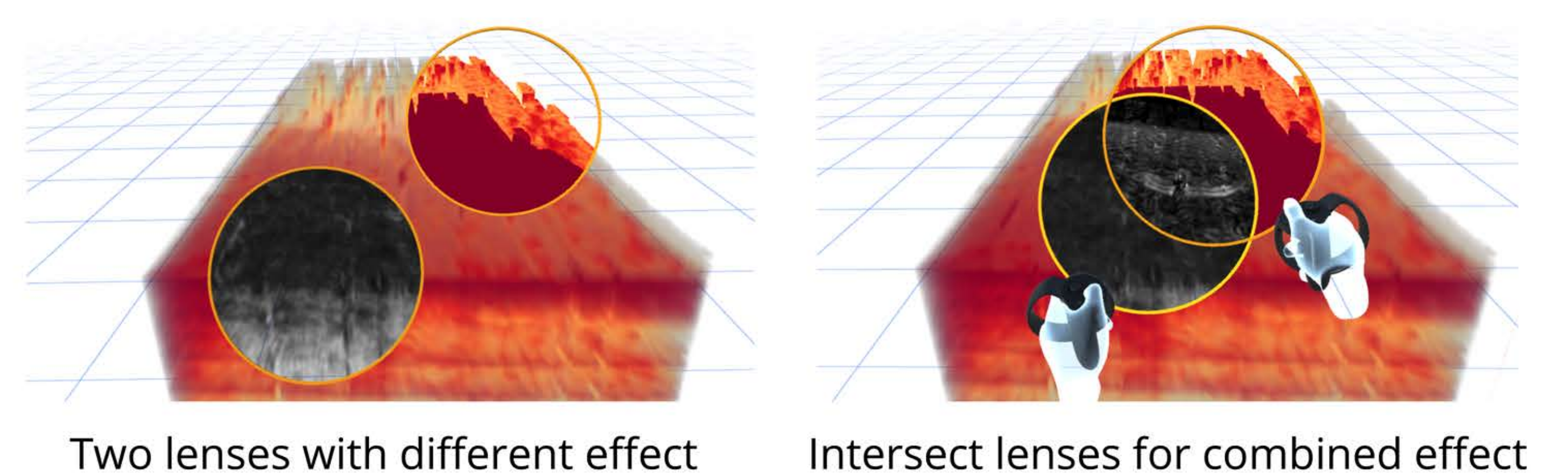
LENS CREATION & REMOVAL



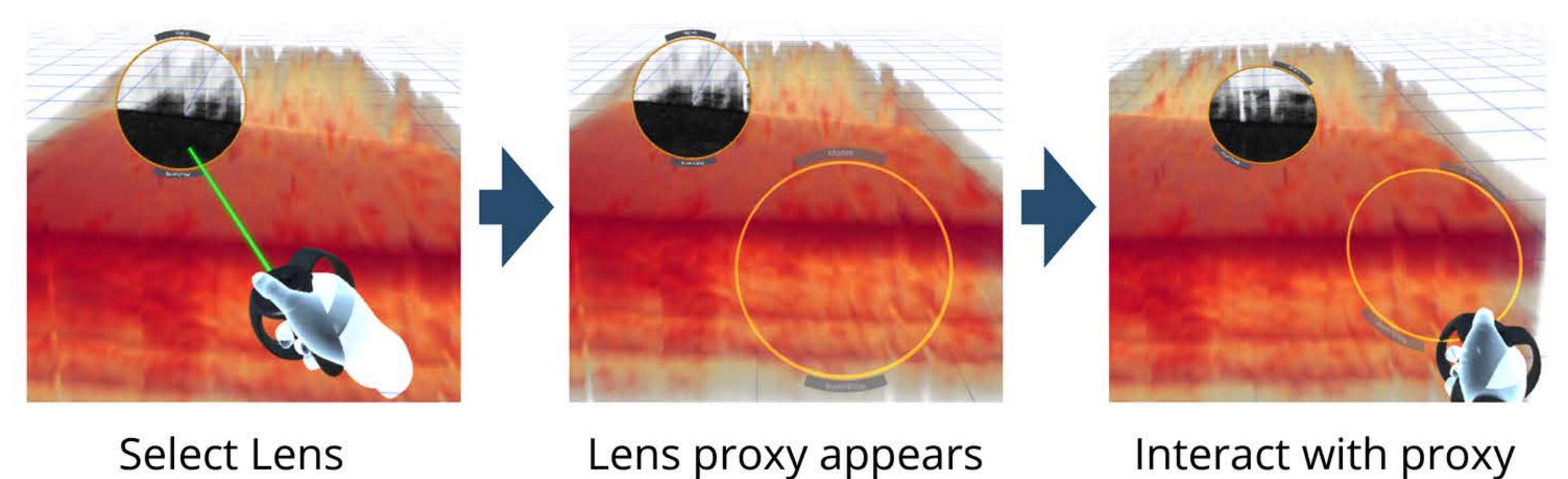
LENS MANIPULATION & PARAMETERIZATION



LENS COMBINATION



REMOTE LENS INTERACTION



INTERACTION FEEDBACK

- Multisensory feedback: visual + haptic + acoustic

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