



Dynamic Representation
A new research framework for representing view scenes

Horizontal Aperture
Aspect Ratio (H : W): 0.40
Window-to-Wall Ratio: 48%

Wall Materials Assembly

- White wallpaper
- Polycarbonate panel
- Light-blocking tape

Canon RF 5.2m F2.8L Dual Fisheye lens
+
Canon EOS R5
+
Adobe Premiere Pro

Equirectangular Projection
+
Pico Neo 3 Pro Eye VR HMD

Selected View on EPFL Campus
Recognizable central passageway

With a scale model Without a scale model

Dynamic Perception
Does the perception of view-out get influenced by the presence of dynamic changes in one's field of view?

Eye-Tracking Measurements

Heart Rate Variability

Electrodermal Activity

Subjective Questionnaire

PRELIMINARY RESULTS:
PERCEPTUAL ACCURACY OF VIRTUAL WINDOW VIEWS
Real Window View vs. Virtual Window View : Perceptual Impressions (N=34)

(1) How interesting is this view?

(2) How satisfied are you with this view?

(3) How much would you enjoy working in front of this view?

individual responses in real env.

individual responses in VR

Dynamic Evaluation
A new methodology for conducting research on view-out by incorporating its inherent dynamic qualities with a dedicated focus on changes related to daylighting

VALIDATING THE USE OF REAL-TIME VIDEOS IN VR FOR STUDYING DYNAMIC VIEWS-OUT
Through Tone-Mapping Comparisons (automatic tone-mapping procedures vs. normative operators)

(A) Fisheye Image - Original (B) Contrast Amplification and Loss
e.g., Video Tone Mapping vs. HDR

(C) Masked

Amplified Preserved Lost

Wall_Mask
View_Mask
Desk_Mask
Floor_Mask

Scene 1 Scene 2 Scene 3 Scene 4 Scene 5

Scene 6 Scene 7 Scene 8 Scene 9 Scene 10