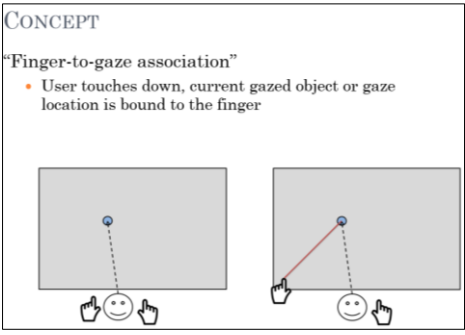
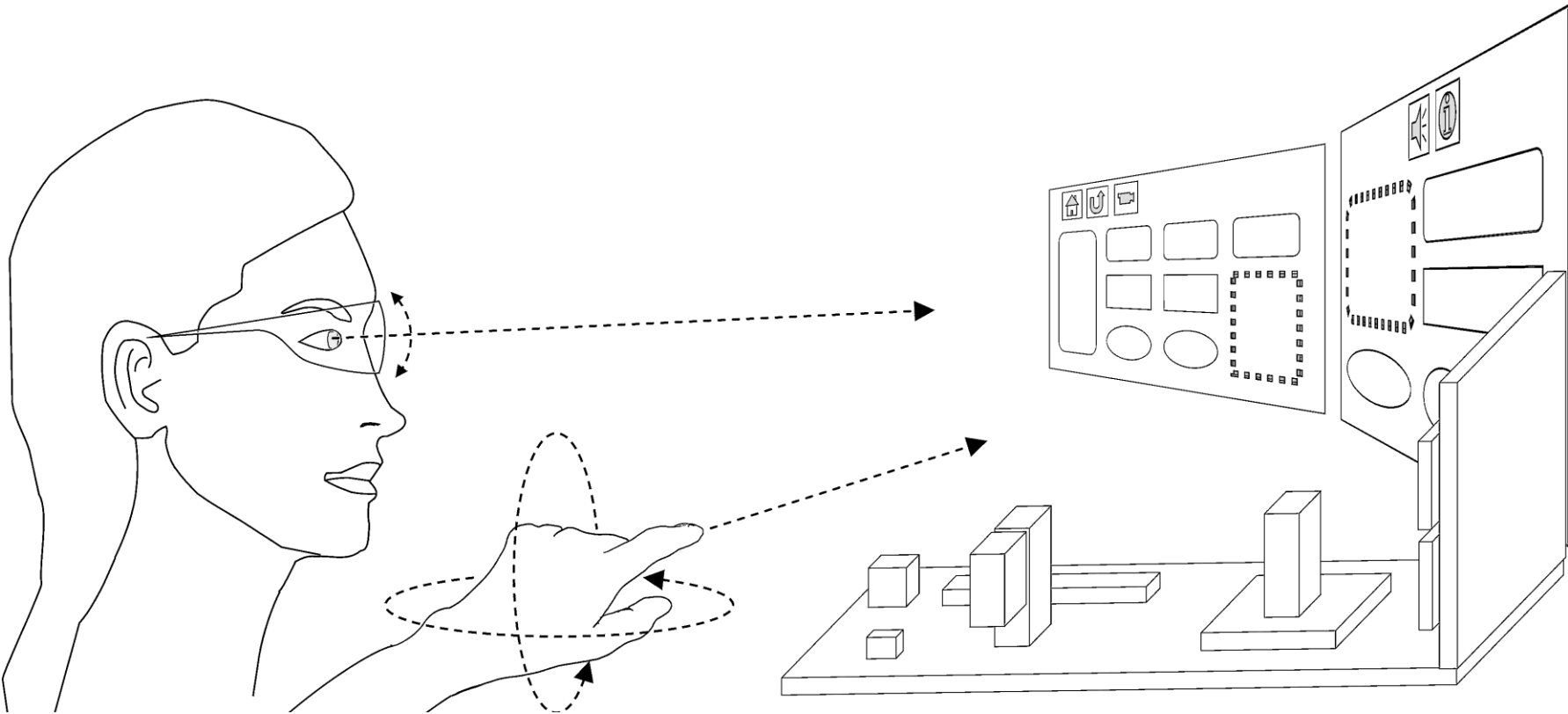
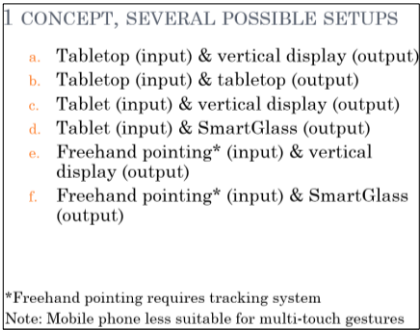


Eye-Hand Symbiosis

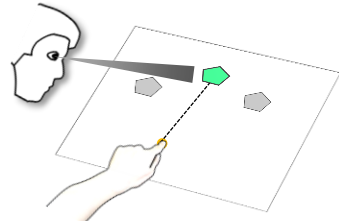
Human-Computer Interaction where user’s eye and hand information form a symbiotic relationship



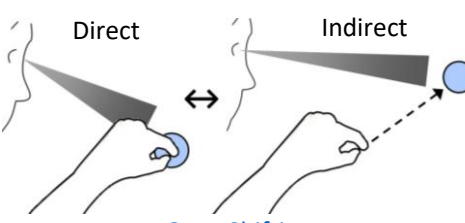
Origin (Slides, June 2013)



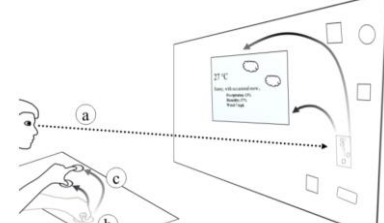
*Freehand pointing requires tracking system
Note: Mobile phone less suitable for multi-touch gestures



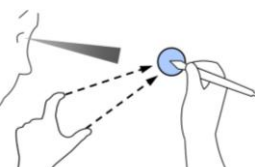
[Gaze-Touch: Combining Gaze with Multi-Touch](#) (Pfeuffer et al. UIST'14)



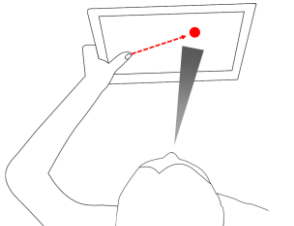
[Gaze-Shifting](#) (Pfeuffer et al. UIST'15)



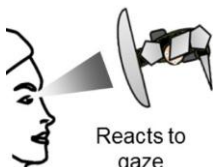
[Gaze+touch vs. touch](#) (Pfeuffer et al. INTERACT'15)



[Partial Indirect Bimanual Input](#) (Pfeuffer et al. CHI'16)



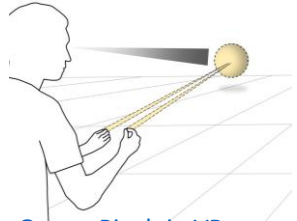
[Gaze & Touch on Tablet](#) (Pfeuffer et al. UIST'16)



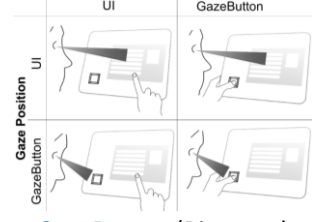
[GazeArchers](#) (Pfeuffer et al. MUM'16)



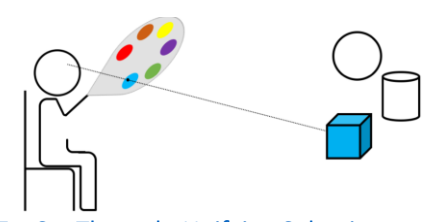
[Look Together](#) (Zhang et al. PuC'16)



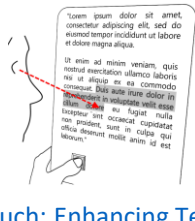
[Gaze + Pinch in VR](#) (Pfeuffer et al. SUI'17)



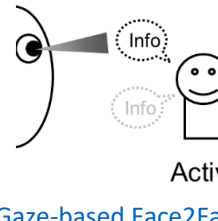
[GazeButton](#) (Rivu et al. COGAIN'19)



[EyeSeeThrough: Unifying Selection and Application](#) (Mardanbegi et al. VR'19)



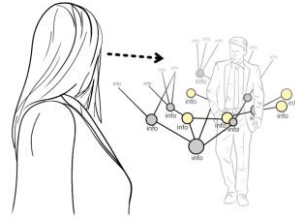
[Gaze'N'Touch: Enhancing Text Selection](#) (Rivu et al. CHI EA'20)



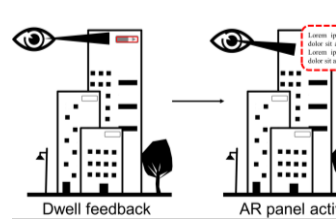
[StARe: Gaze-based Face2Face AR](#) (Rivu et al. ETRA Adj'20)



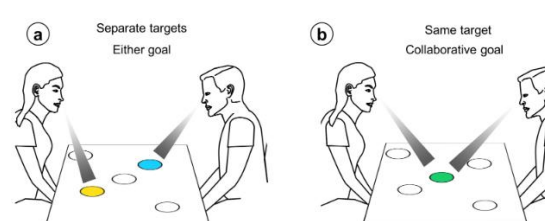
[Gaze-enhanced Menus](#) (Pfeuffer et al. VRST'20)



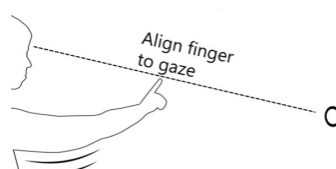
[Attention: Design Space for Gaze AR](#) (Pfeuffer et al. C&G'21)



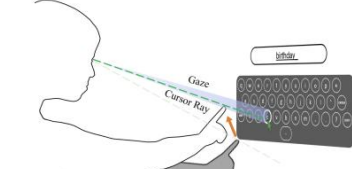
[Looking for Info](#) (Piening et al. INTERACT'21)



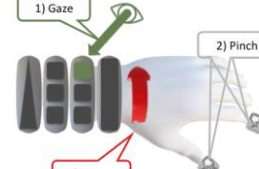
[Multi-user Gaze-based Interaction](#) (Pfeuffer et al. ETRA'21)



[Gaze-Hand Alignment](#) (Lystbæk et al. ETRA'22)



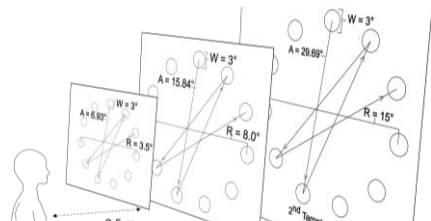
[Gaze-hand-assisted Text Entry](#) (Lystbæk et al. ETRA'22)



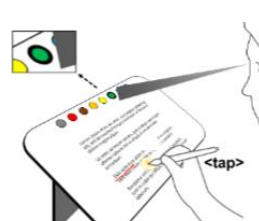
[Look & Turn Hand Menus](#) (Reiter et al. ETRA'22)



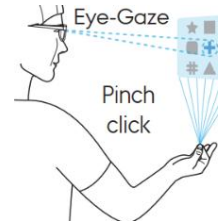
[Discrete Drawing Guides](#) (Turkmen et al. CHI EA'22)



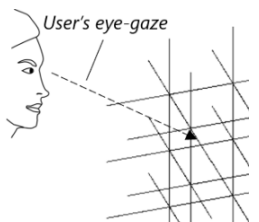
[Fitts-law Study on Gaze-Hand Alignment](#) (Wagner et al. CHI'23)



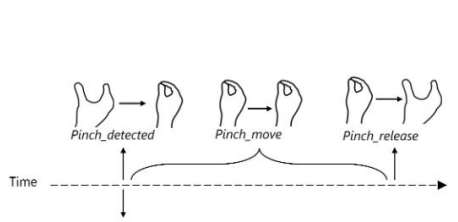
[Gaze-based Mode-Switching](#) (Fleischhauer et al., ETRA'23)



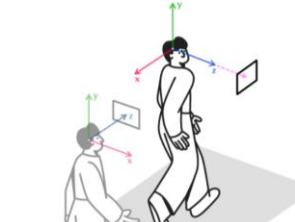
[PalmGazer: Eye-Hand Menus](#) (Pfeuffer et al. SUI'23)



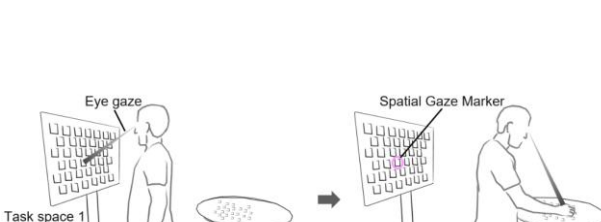
[EyeGuide & EyeConGuide](#) (Turkmen et al., CHI'24)



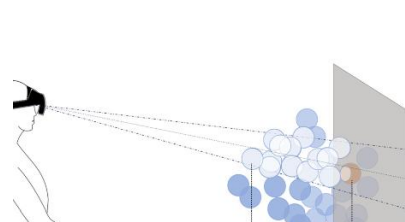
[Design Principles and Challenges for Gaze + Pinch](#) (Pfeuffer et al. CG&A'24)



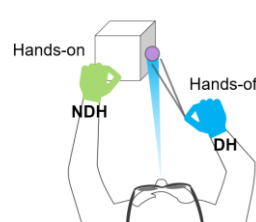
[Gaze on the Go](#) (Manakhov et al. CHI'24)



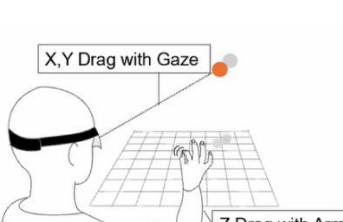
[Spatial Gaze Marker](#) (Lystbæk et al. CHI'24)



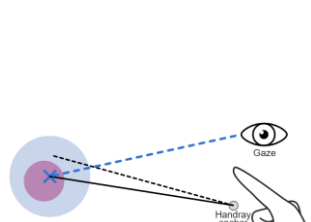
[Gaze, Wall, and Racket](#) (Wagner et al. ISS'24)



[Hands-on, Hands-off: Bimanual Gaze](#) (Lystbæk et al. UIST'24)



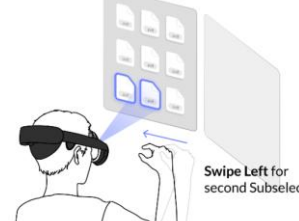
[Look&Drop: Eye-Hand Object Movement](#) (Wagner et al. UIST'24)



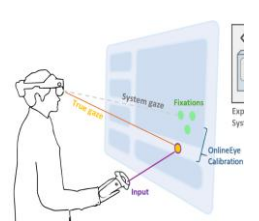
[Guiding Handrays in VR: Gaze & Object](#) (Gabel et al. SUI'24)



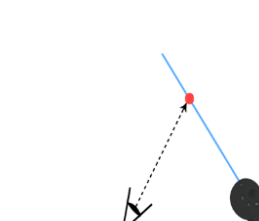
[H2E: Hand, Head, Eye](#) (Patel et al. VRW'25)



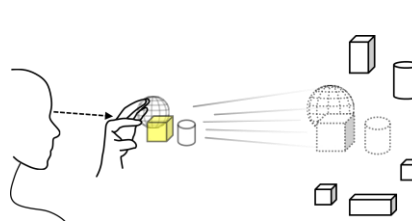
[PinchCatcher: Multiselection](#) (Kim et al. CHI'25)



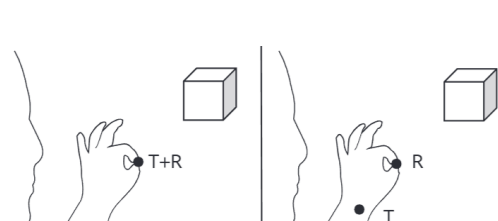
[Online-EYE: Multimodal Calibration](#) (Hou et al. CHI'25)



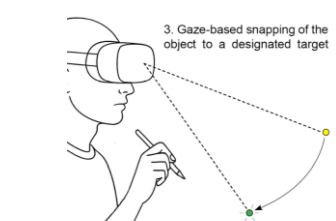
[Depth3DSketch](#) (Bashar et al. CHI EA'25)



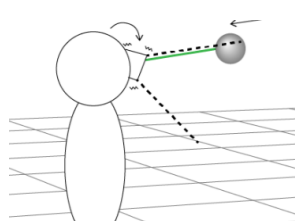
[SightWarp: At a Glance to Fingertip](#) (Liu et al UIST'25)



[DOF-Separation for 3D Manipulation in XR](#) (Mikkelsen et al ISMAR'25)



[GazeSnap: Pen + Gaze Translation](#) (Wagner et al UIST'25)



[HeadDepth: Gaze-Head Depth Control](#) (Wang et al ISMAR'25)



[SpatialPad Airtaps + Gaze](#) (Esquivel et al ISMAR'25)