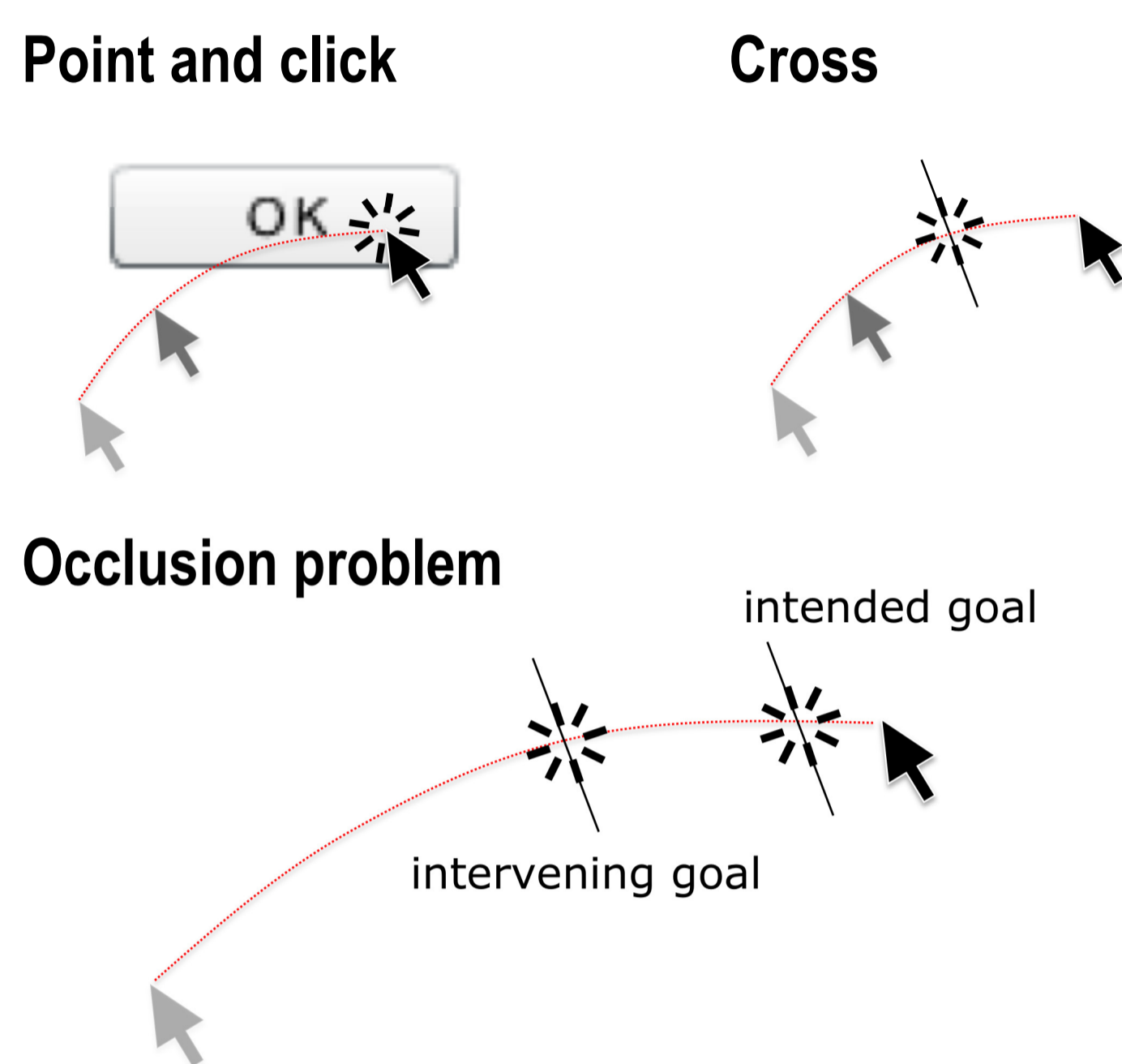


Exploring the Design of Accessible Goal Crossing Desktop Widgets

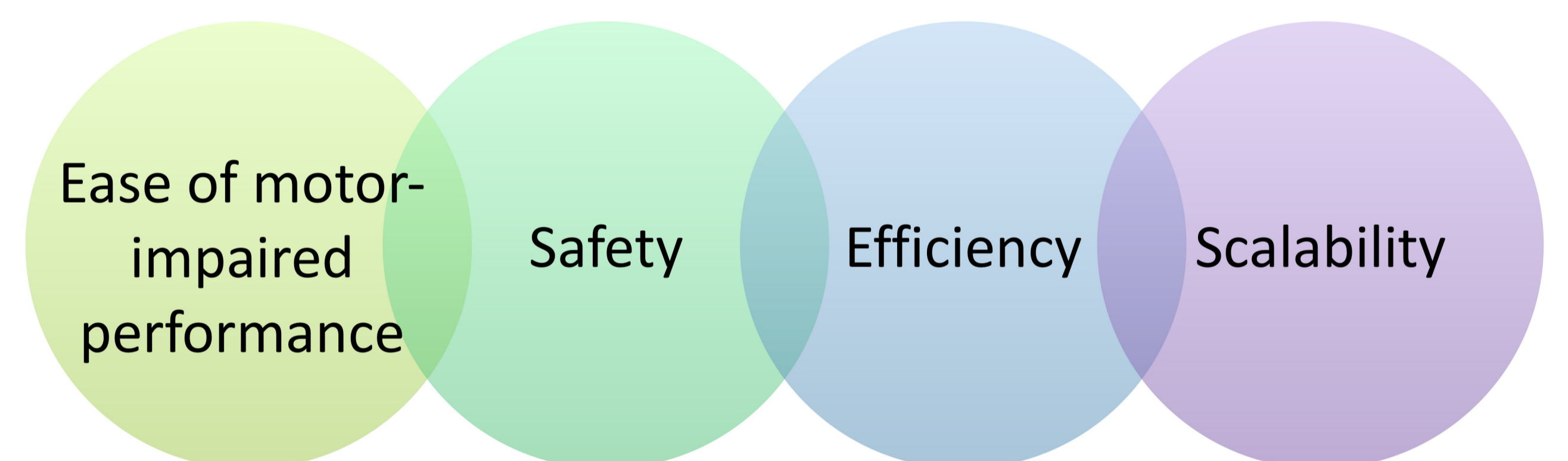
RESEARCH PROBLEM AND MOTIVATION



Prior work has shown that goal crossing may be a more accessible interaction technique than conventional pointing-and-clicking for motor-impaired users. Although goal crossing with pen-based input devices has been studied, pen-based designs have limited applicability on the desktop because the pen can “fly in,” cross, and “fly out,” whereas a persistent mouse cursor cannot. We therefore explore possible designs for accessible mouse-based goal crossing widgets that avoid triggering unwanted goals by using secondary goals, gestures, and corners and edges. We identify four design principles for accessible desktop goal crossing widgets: ease of use for motor-impaired users, safety from false selections, efficiency, and scalability.

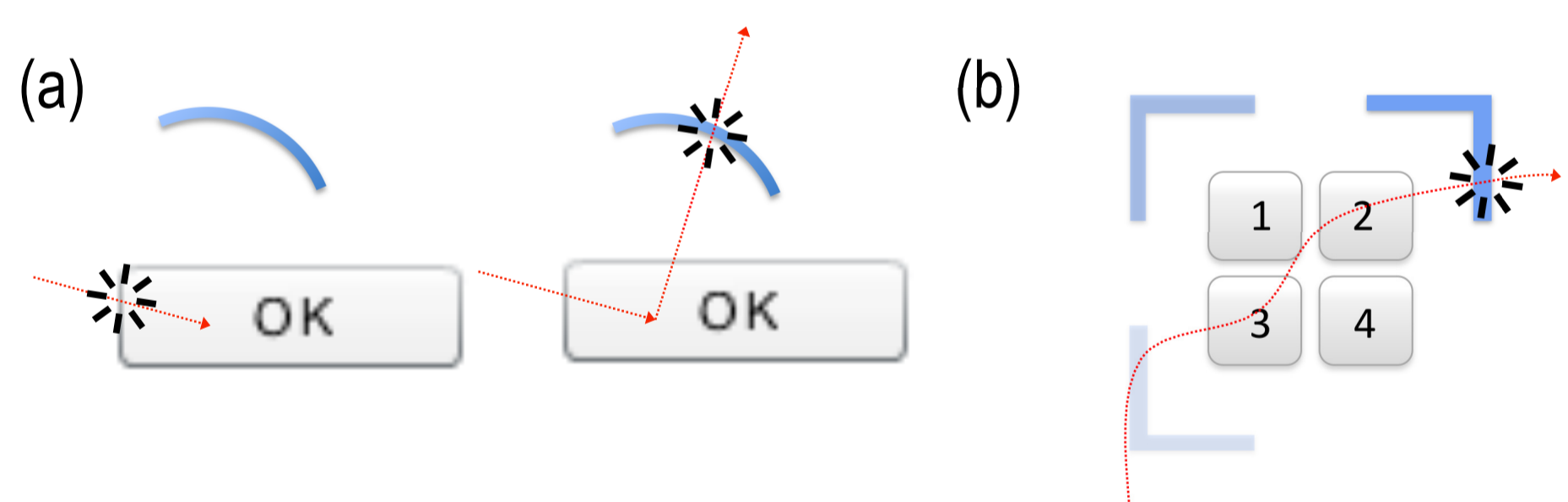
DESIGN PRINCIPLES

We highlight four principles that we have identified as essential to designing accessible goal crossing widgets for the desktop.

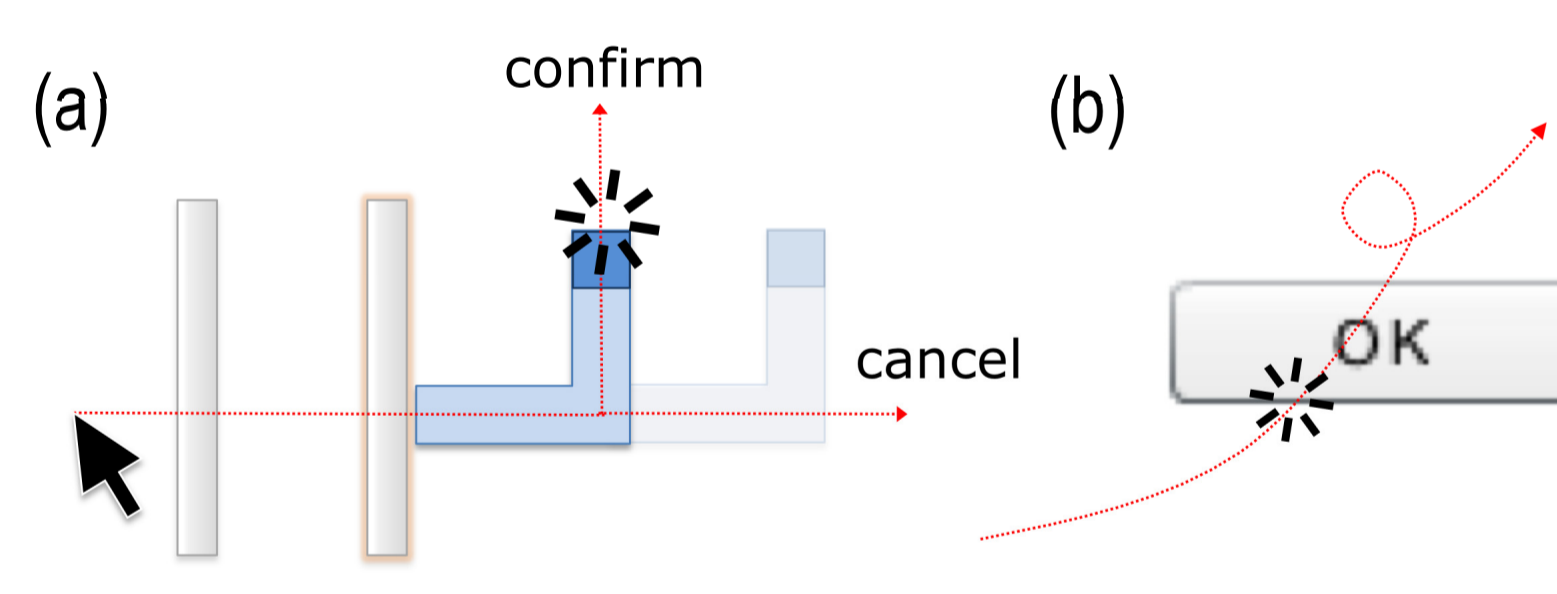


DESIGN SET

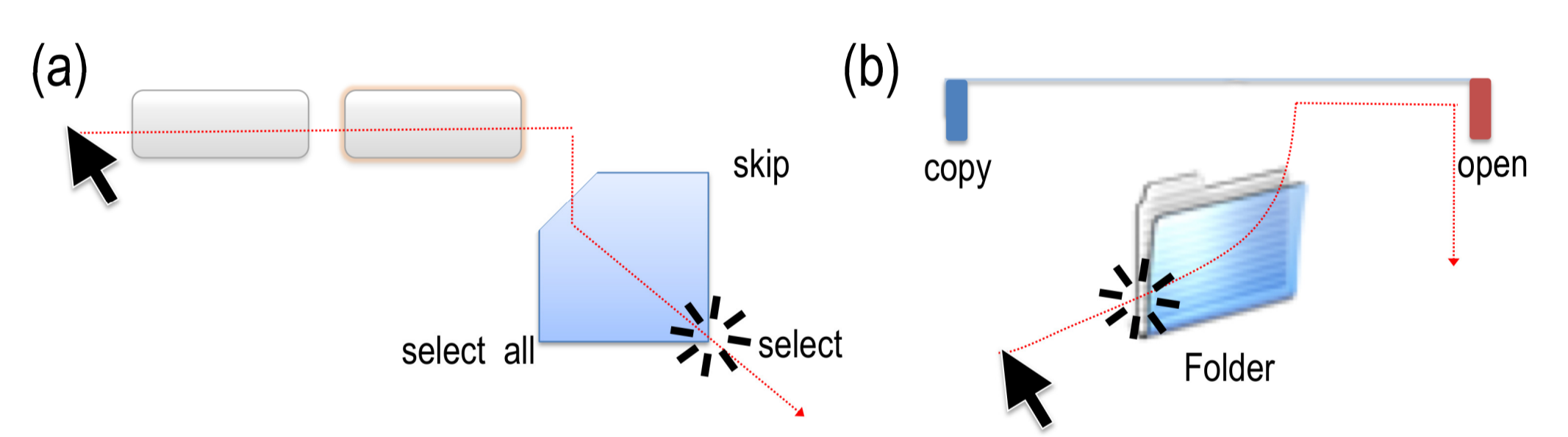
Secondary goal crossing: (a) arc, (b) cluster



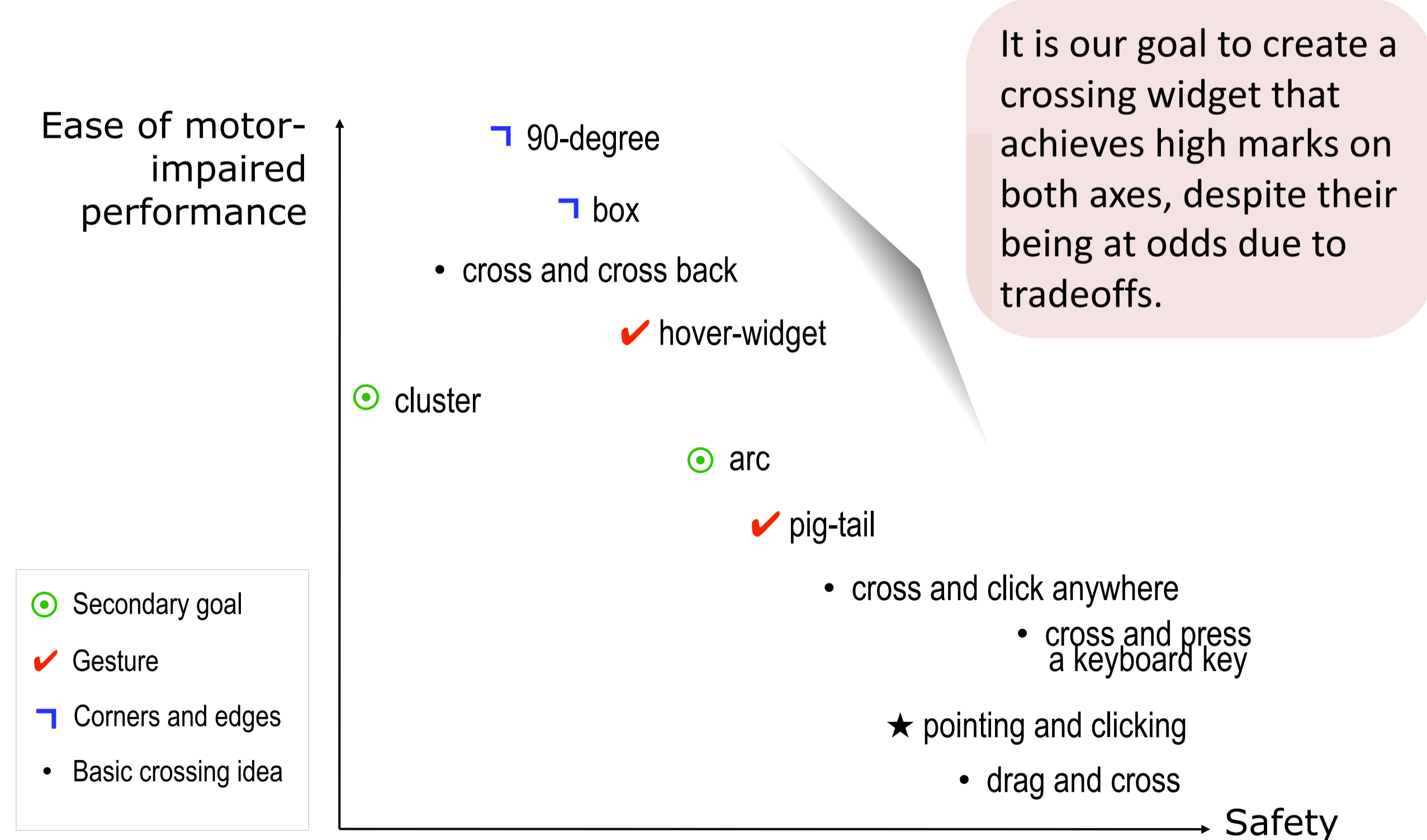
Gesture: (a) hover-widget, (b) pig-tail



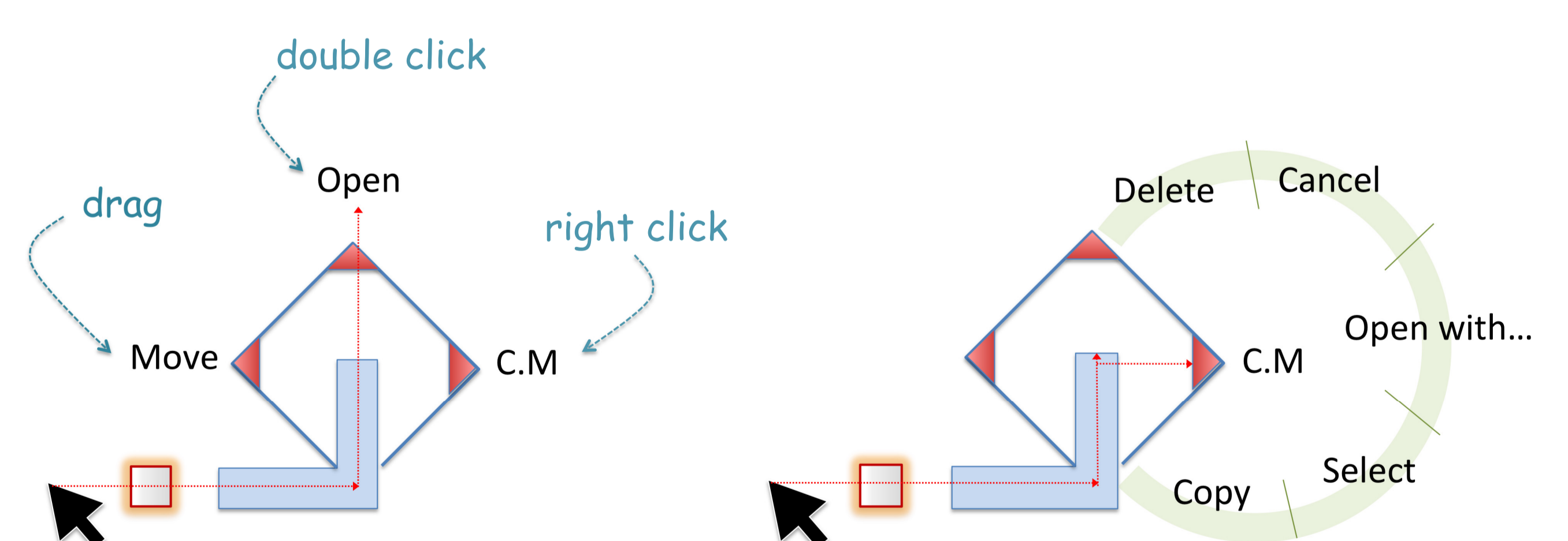
Corners and edges: (a) box, (b) 90-degree



DESIGN SPACE



DESIGN APPLICATION



Combining hover-widget design with a hard-edge box to access context menu items