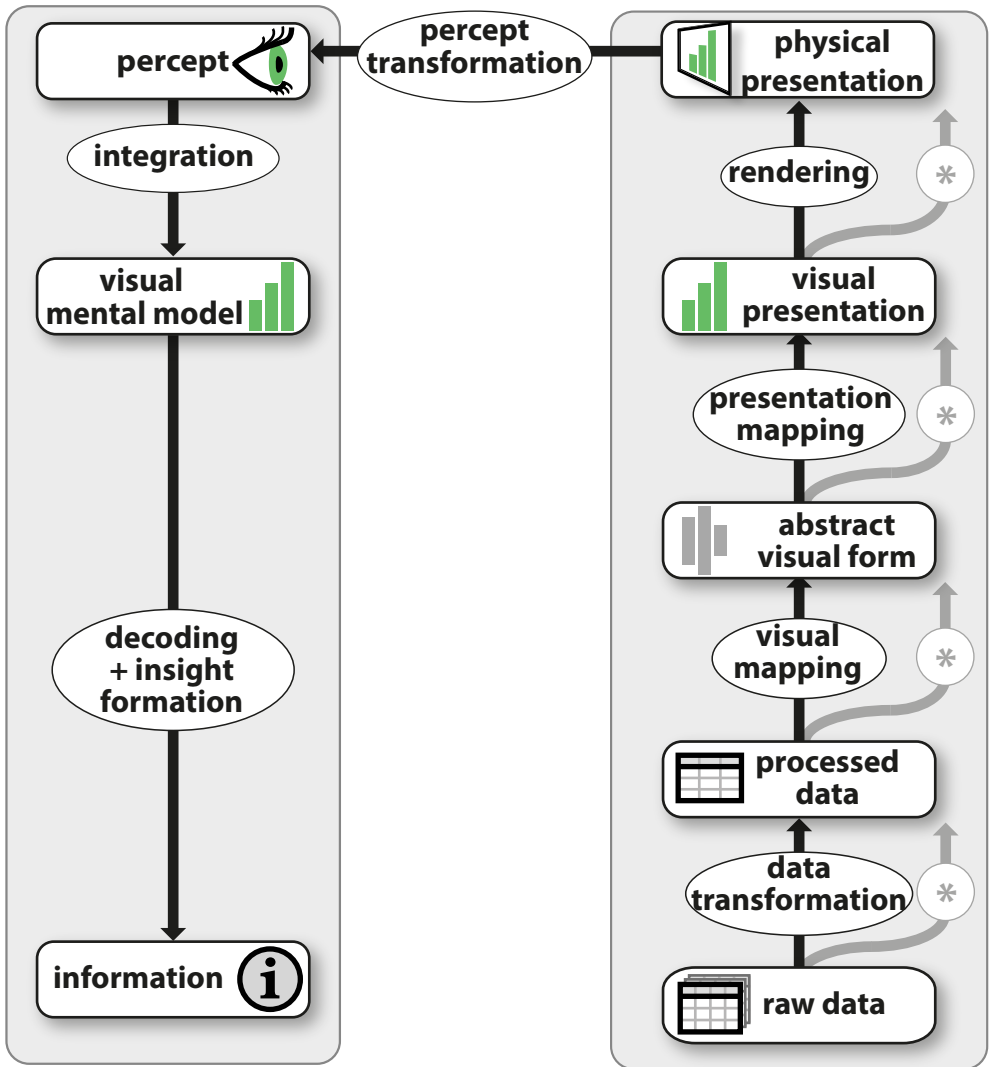
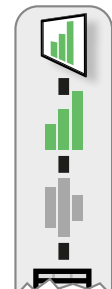


user

visualization system



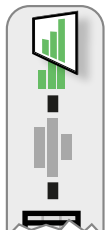
## Concrete Pipeline



## Conceptual Pipeline



## Faithful Rendering



## Branches



## Propagation

repeated



automatic



semi-automatic



manual



one-shot



## Interaction



user action

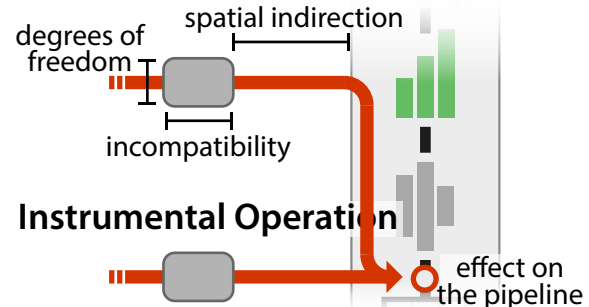


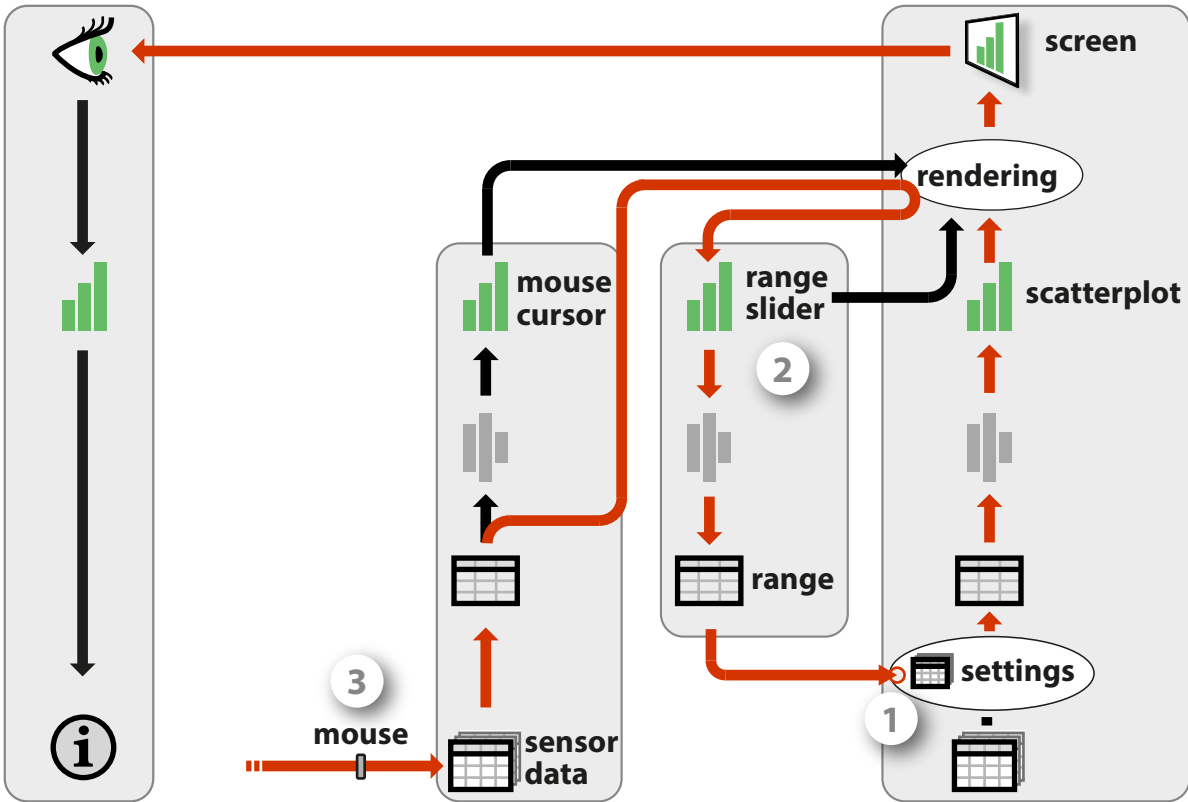
instrument

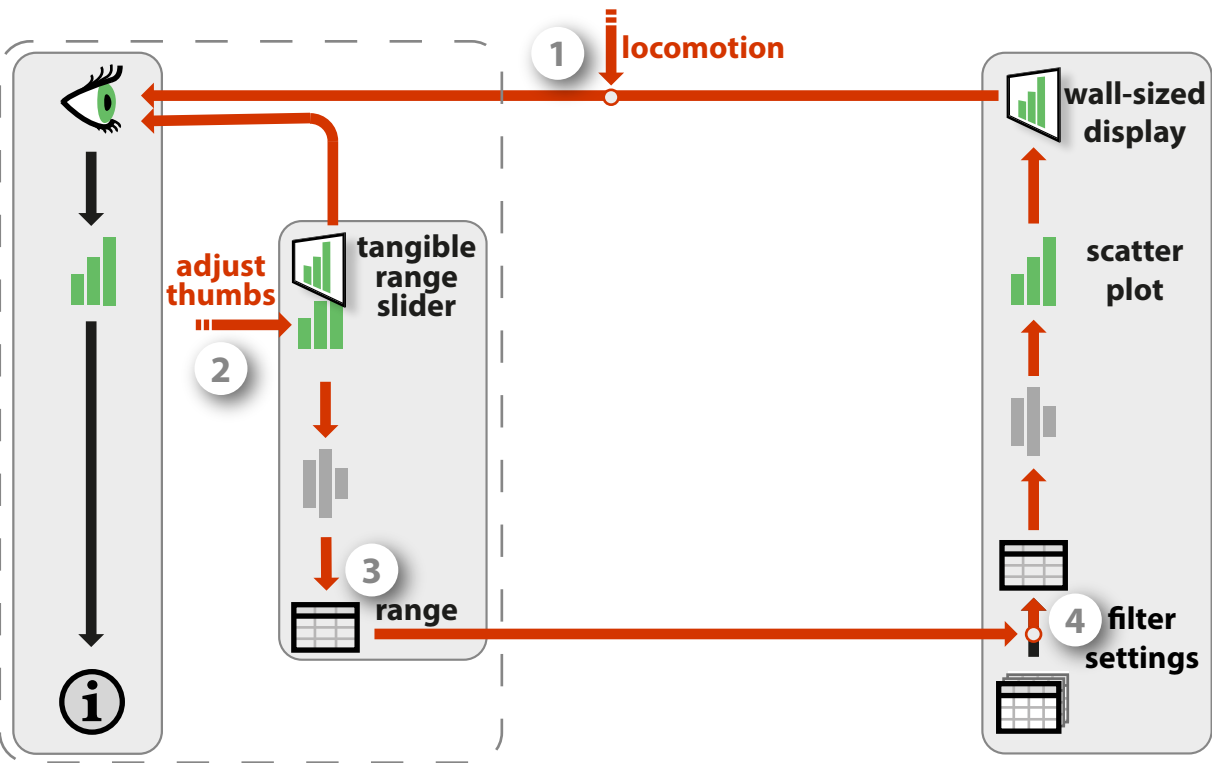


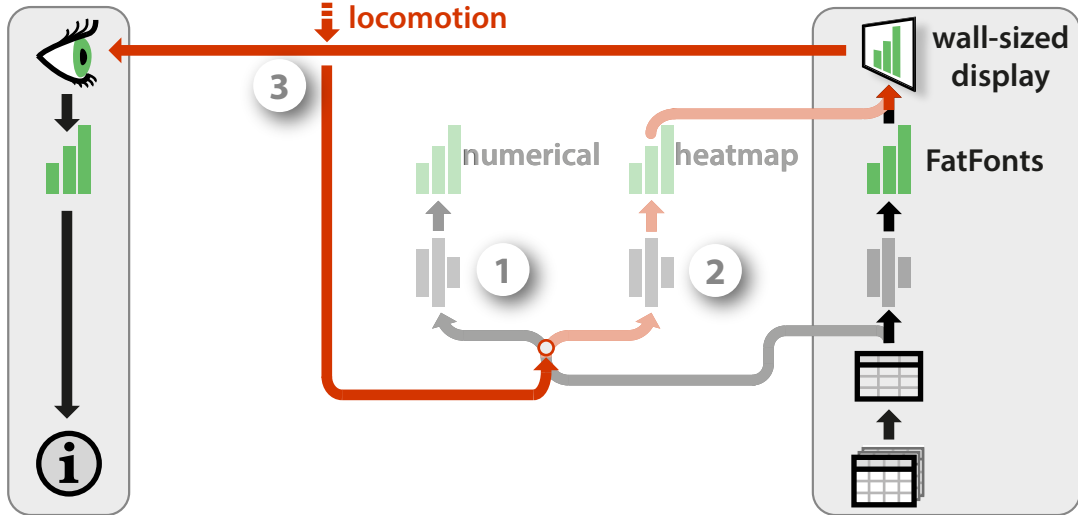
create new branch

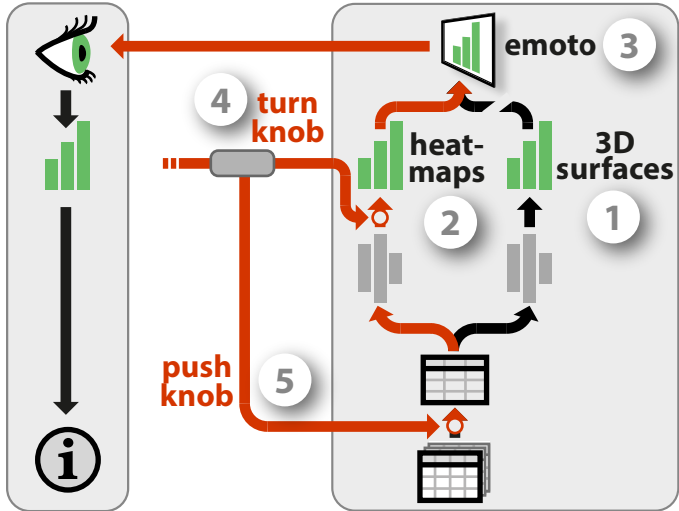
## Instrumental Manipulation

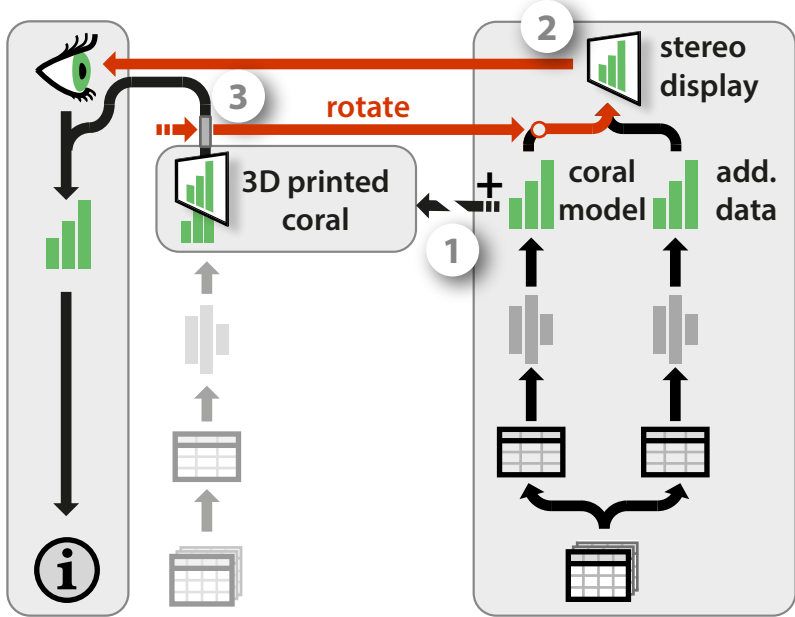












**rotate & mark**

1



**sort & filter**



**physical  
3D chart**

2





