Investigating the Effects of **Splitting Detailed Views** in **Overview+Detail** Interfaces

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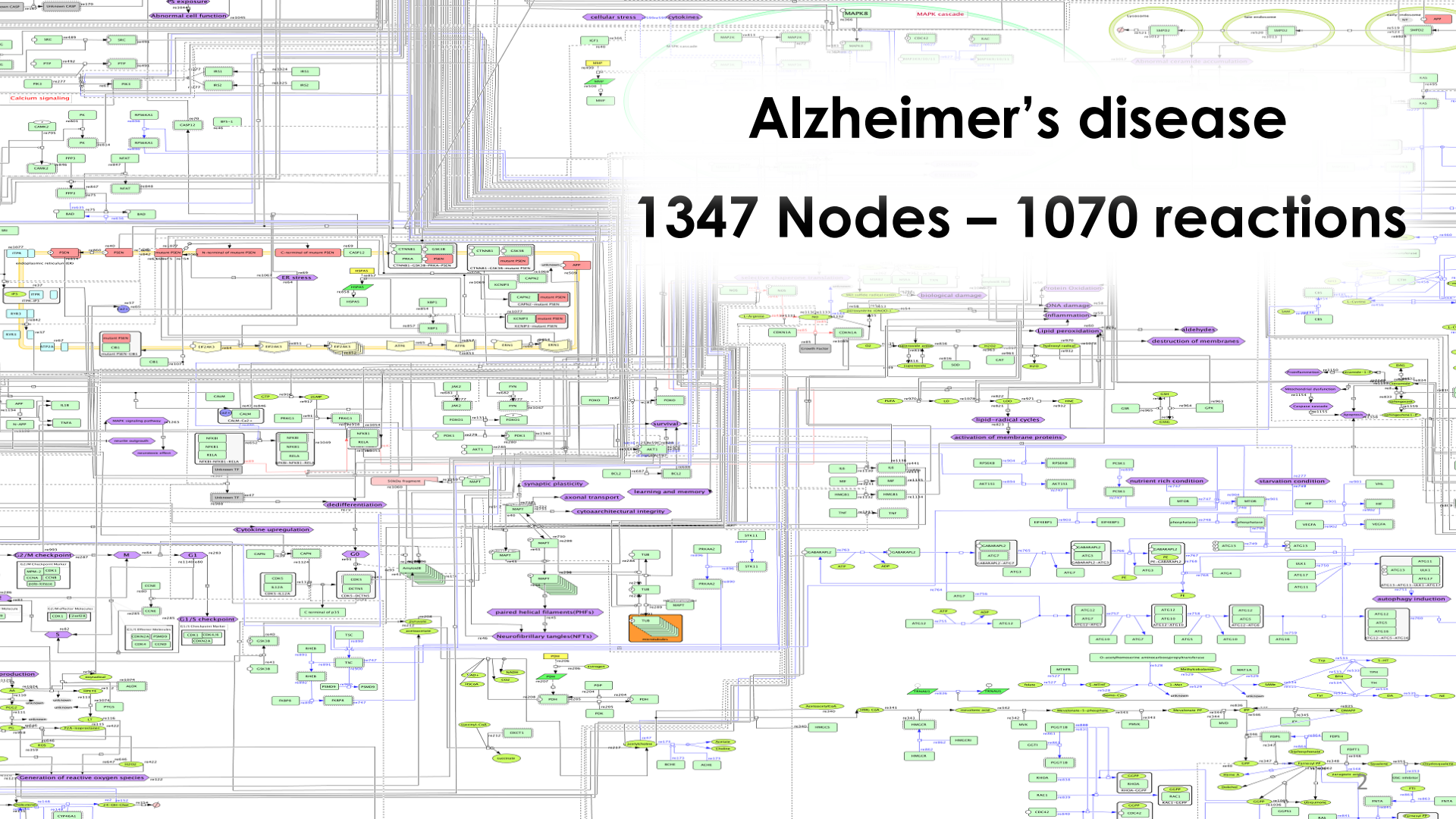
Alzheimer's disease
1347 Nodes – 1070 reactions

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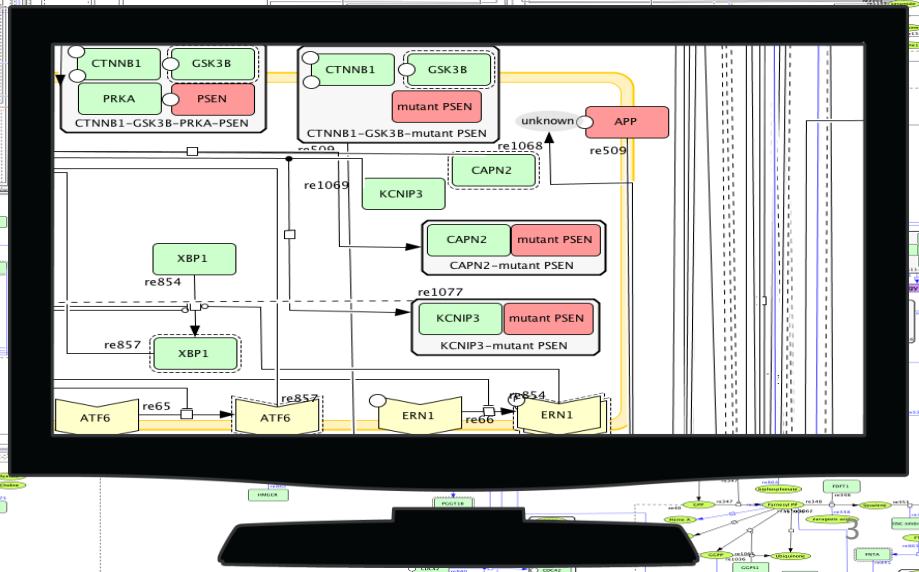
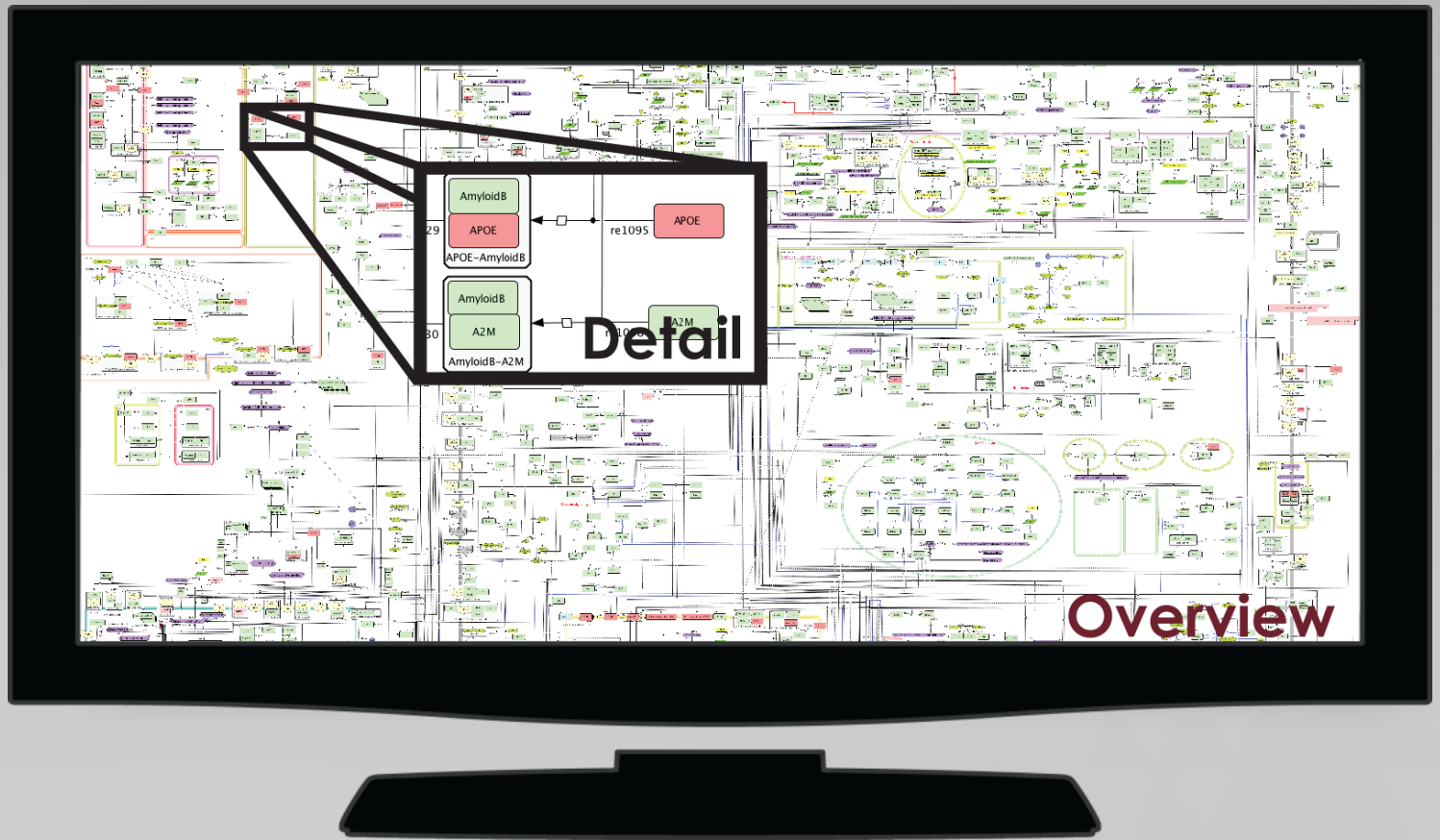


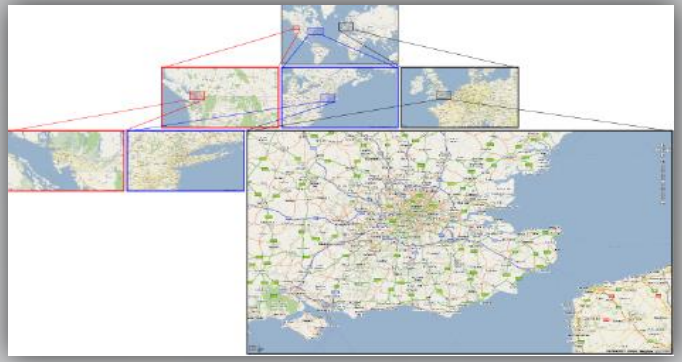
Overview + detail interfaces



Existing solutions: Multiple detailed views

- Overview + detail interfaces with multiple detailed views answer that.

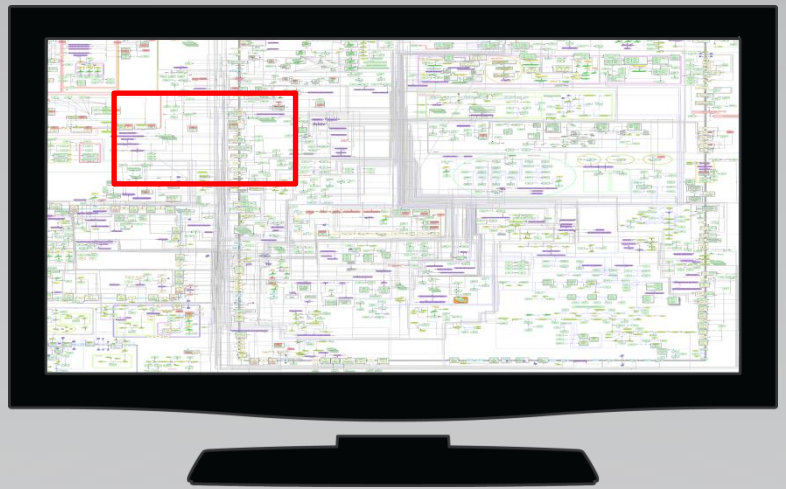
SpaceFold, Butscher[2014]



Polyzoom, Javed[2012]

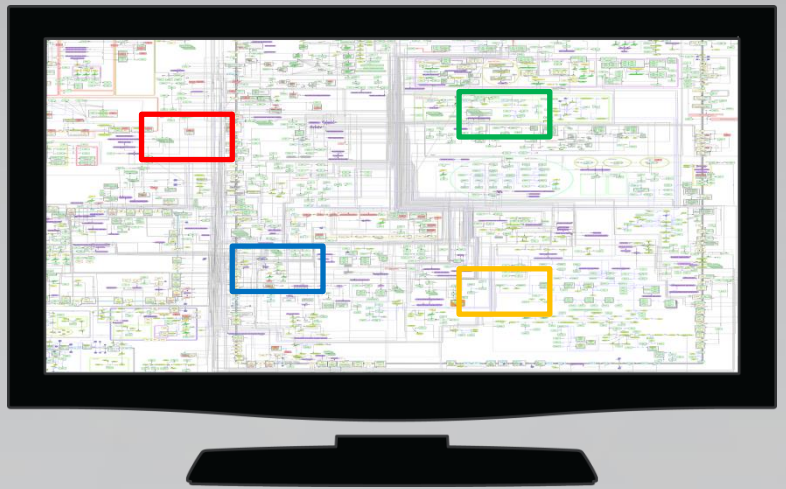
Problem

1 Detailed view



+ Large detailed view
- Sequential exploration of the overview

4 Detailed views



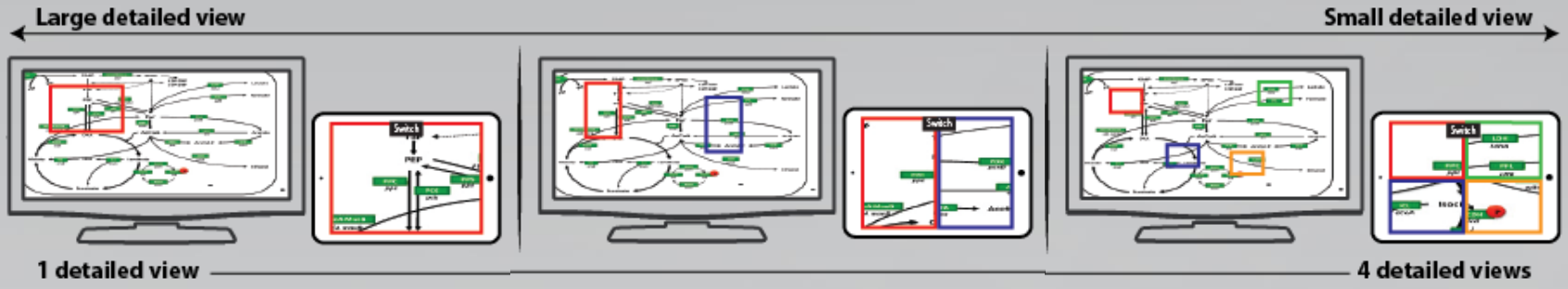
+ Parallel exploration of the overview
- Small detailed views

Objective

- **Goal:** Investigating the benefits of splitting the detailed view in O+D interfaces for working with very large graphs.
- **Questions to answer:**
  - Are multiple detailed views better than one to interact with large graphs?
  - What is the optimal number of detailed views needed?

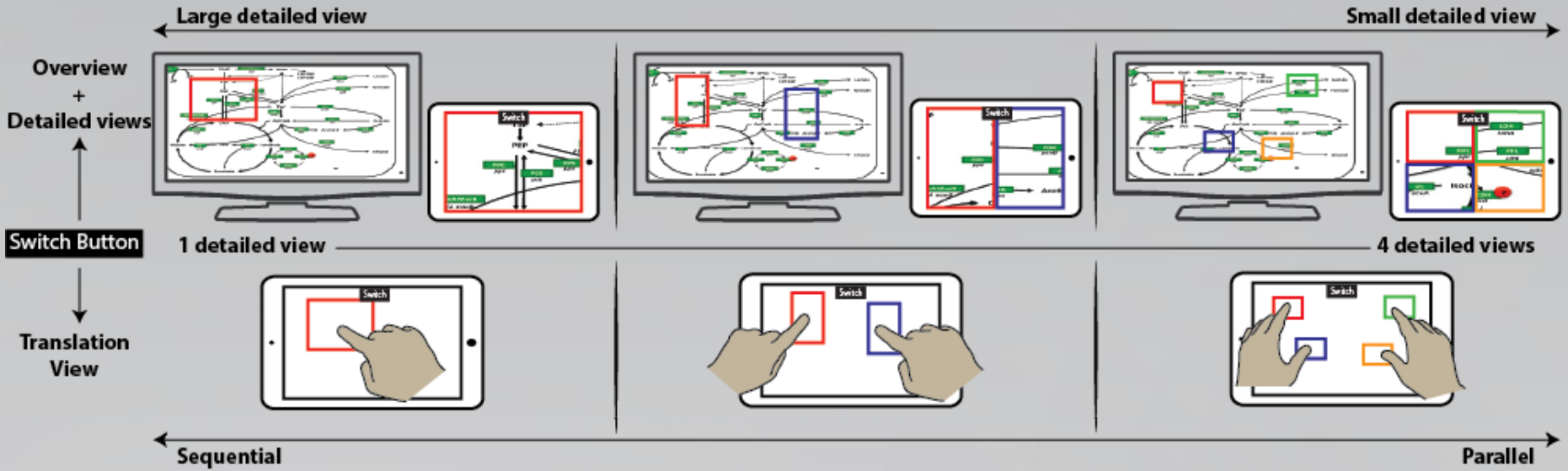
A Multi-view Overview + detail interface

- An overview displayed on a large screen.
- Up to 4 split views (detailed views) displayed on a tactile tablet.

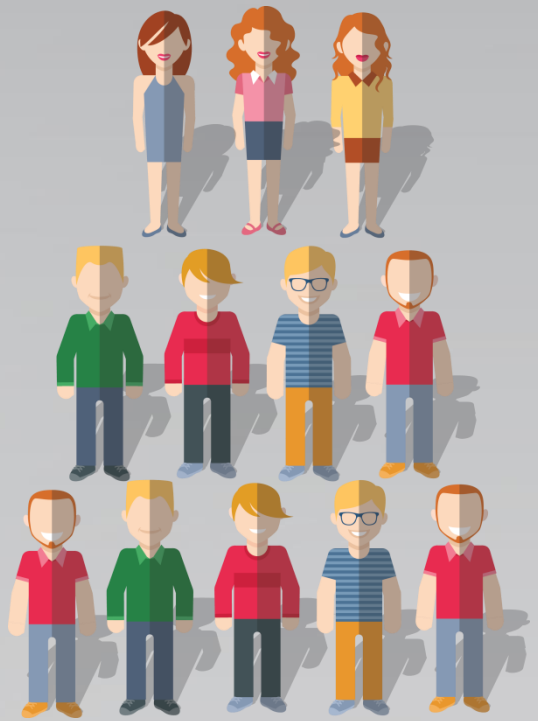


Translating the split views: Pan and translation view

- Standard Pan
- Multi-touch MiniMap

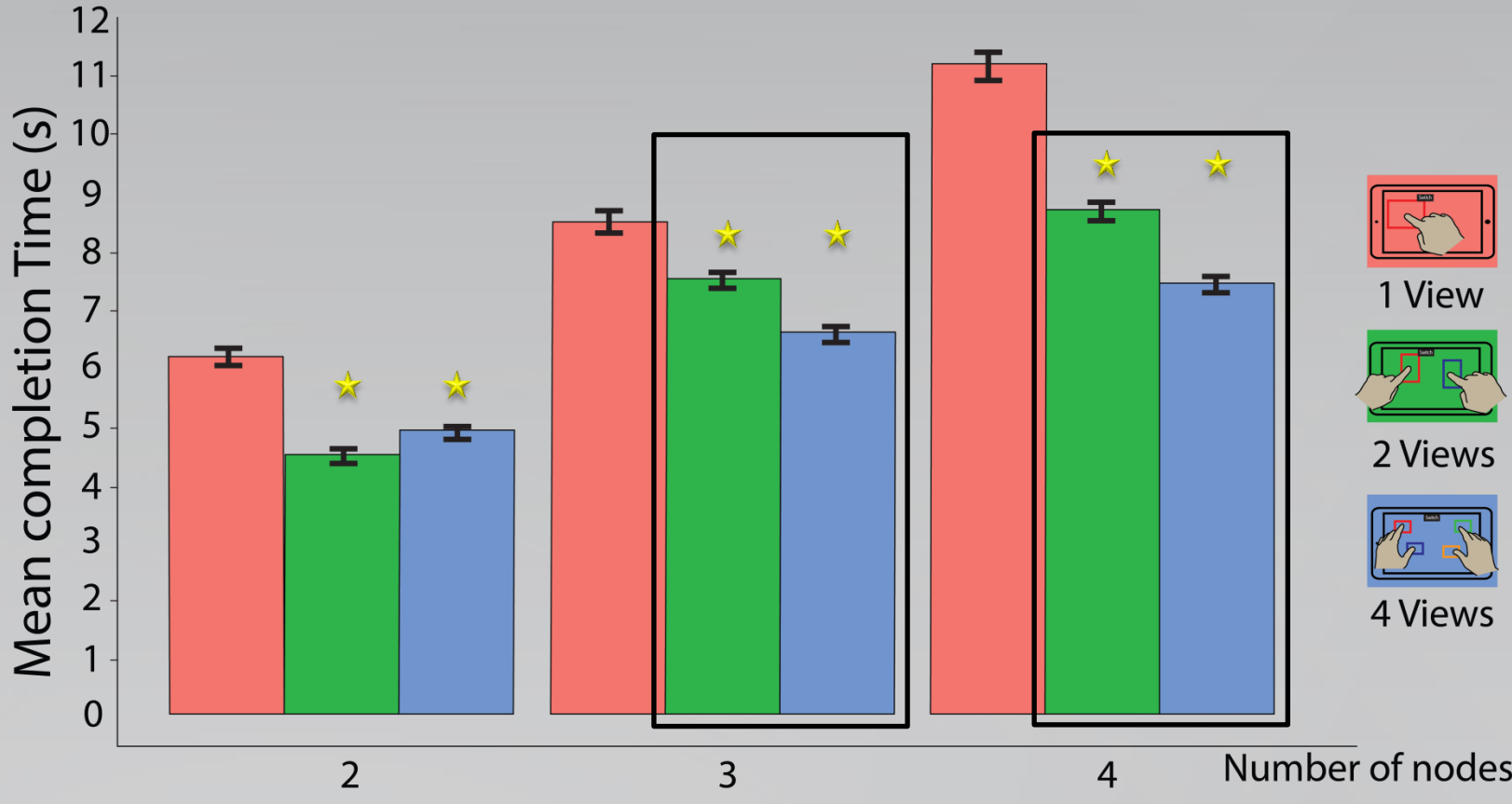


Experimental conditions

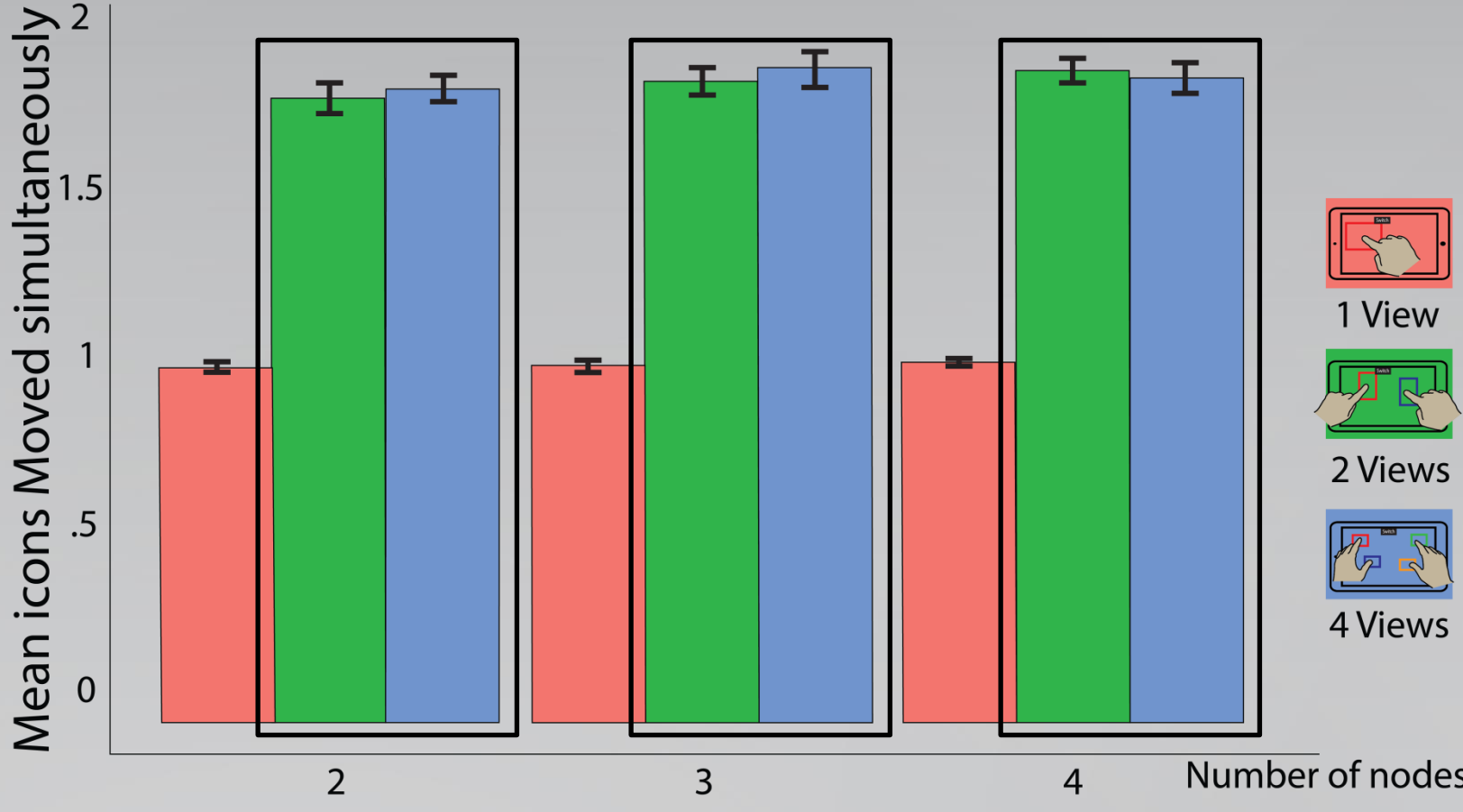


- **Task:** create a connection between 2, 3 or 4 nodes
- **Design**: within-subject design
- **Factors:**
  - Number of split-views: 1,2 or 4
  - Number of nodes to connect: 2, 3 or 4
- **Collected data:**
  - Trial completion time
  - Number of view icons translated simultaneously
  - User preference

Mean completion time



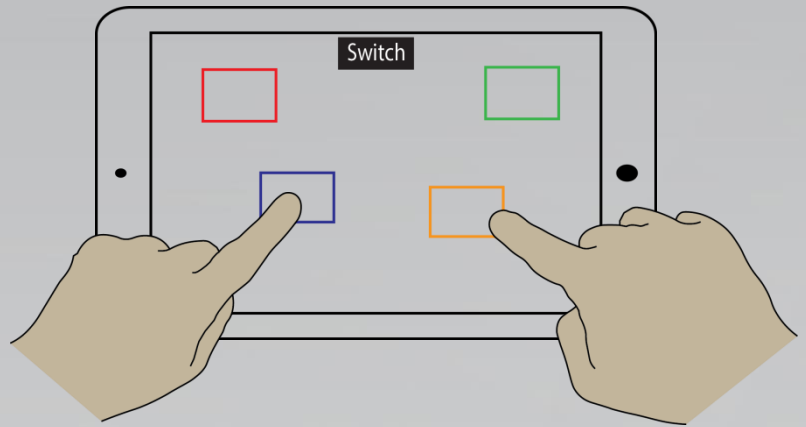
Mean Icons moved simultaneously



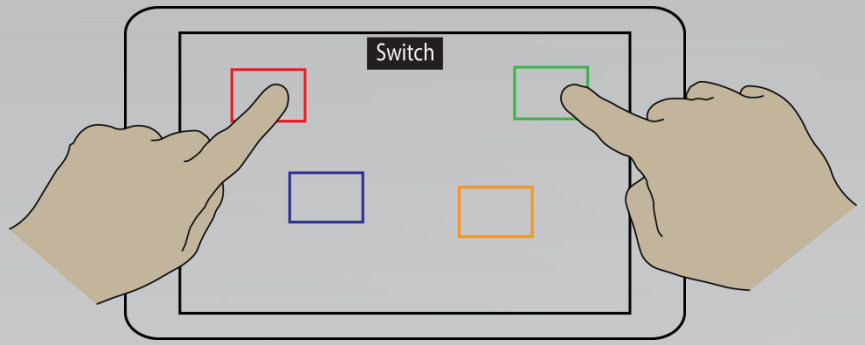
User preference

- 1V and 4V good, 2V excellent.
- 4V preferred for 3 and 4 nodes tasks.
- Mixed opinions on 2 nodes tasks

Bimanual multitouch interaction



Bimanual multitouch interaction



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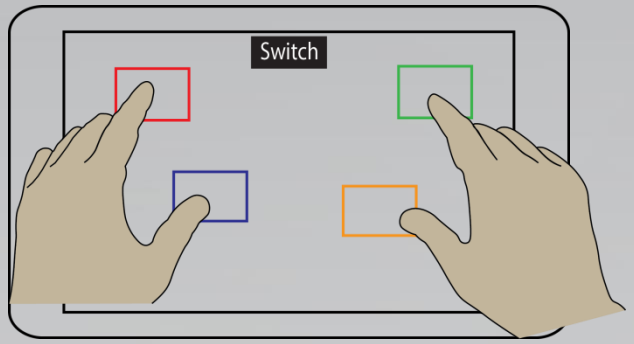

Bimanual multitouch interaction

- One work [Geyer 2012] exploring bimanual multitouch interaction
  - Up to 47% of the trials were performed using multiple fingers in a bimanual setting
- Our results indicate that symmetric bimanual multi-touch input is hard to perform

Future work

- Design questions
  - Improve bimanual multitouch.
  - Other potential uses of the remaining fingers.

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