

## 1093 A SUPPLEMENTAL MATERIAL

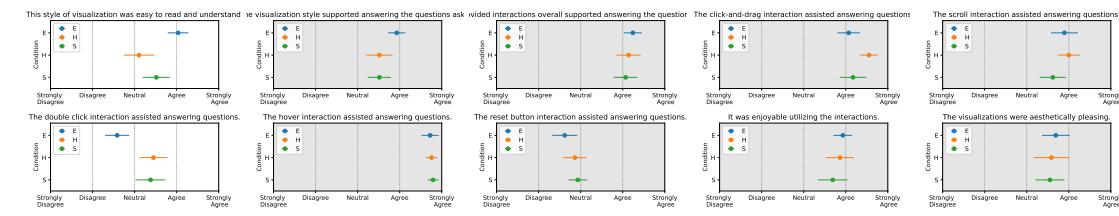
1094 We have included several figures and descriptions of our experiment that did not fit within the constraints of the submission  
 1095 format.  
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### 1097 A.1 Color scheme

1098 We use colorblind-safe options for the nodes: light blue (#648FFF) for visualizing nodes by default, yellow (#FFB000)  
 1099 for hovered nodes hovered, magenta (#DC267F) for neighbors of hovered nodes, and orange (#FE6100) for “highlighted”  
 1100 nodes related to the question.  
 1101

### 1102 A.2 Subjective feedback analysis

1103 We include the full analysis charts for the subjective feedback data in Fig. 12. Surprisingly, there is little difference in  
 1104 areas where we expected. For instance, we expected the participants would find **H** and **S** more aesthetically pleasing, but  
 1105 this did not seem to be the case.  
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1107 Fig. 12. CI charts for the subjective feedback analysis. Of the 10 questions, only two (shown with white background) had significant  
 1108 difference in their means.  
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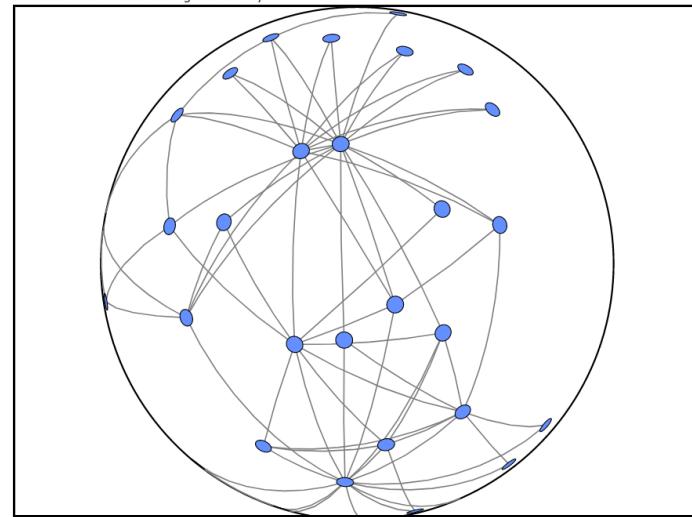
1110 *Drawings.* Table 4 and Table 5 contain all of the static drawings in each condition present in our experiment. The  
 1111 columns indicate the condition **E**, **H**, **S** while the rows are titled with the network name.  
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### 1113 A.3 Additional results visualizations

1114 During our analysis, we created several types of plots to understand our collected data. In particular, we thought the below  
 1115 interval plots were insightful. However, we ultimately decided to exclude them from the main body of the paper in the  
 1116 interest of space.  
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## 1145 Example visualization

1146 In this part of the test, you will see graph visualizations in the style below. Try spending some time familiarizing yourself with the visualization style. You can click and drag to move the visualization, hover over nodes to highlight neighbors, and double click to automatically pan to a location. The exact interactions are listed below. These descriptions will also be available during the survey.



1165 Based on different visualizations, you will be answering some questions which can involve counting, path following and estimation. You can use different interactions to make your tasks easier:

- **Click and drag:** You can click and drag to move the graph around the space.
- **Scrool (wheel):** Scrolling within the visualization will bring the graph closer or further away.
- **Hover:** By hovering over nodes, you will be able to see the hovered node highlighted (yellow) and the neighbors highlighted (red) along with them.
- **Double click:** Double clicking anywhere on any location in the drawing will recenter the point you clicked to the center of your screen.
- **Recenter:** Clicking the recenter button (top right of screen) will take the visualization back to its original placement.

1171 Fig. 13. The introduction page in our experiment.

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1173 How many neighbors of the highlighted node have degree 2? 1174 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4	1173 How many neighbors do the two highlighted nodes have in common? 1174 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	1173 What is the length of the shortest path between the two highlighted nodes? 1174 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6
(a)	(b)	(c)
1179 Please <b>estimate</b> how many <b>nodes</b> are in the graph? 1180 <input type="radio"/> 0-100 <input type="radio"/> 100-200 <input type="radio"/> 300-400 <input type="radio"/> 400-500	1179 What is the most frequent degree of the highlighted nodes? 1180 <input type="radio"/> 2 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 7	1179 How many nodes are reachable in 3 steps from the highlighted node? 1180 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 11 <input type="radio"/> 12
(d)	(e)	(f)

1185 Fig. 14. All tasks displayed to participants (a) T1 (b) T2 (c) T3 (d) T4 (e) T5 (f) T6

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Name	E	H	S
E_rand_small			
E_rand_large			
dwt_162			
H_rand_small			

Table 4. The first set of graphs and their embeddings in our experiment.

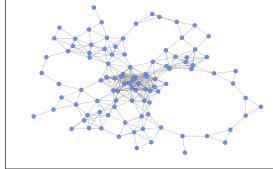
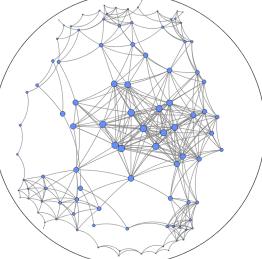
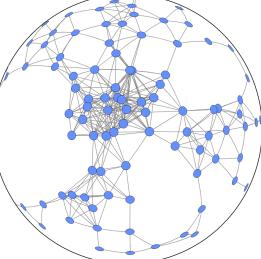
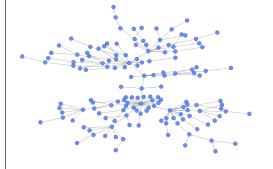
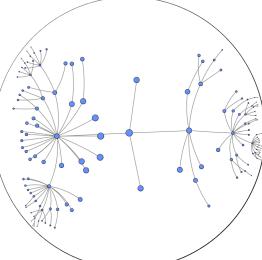
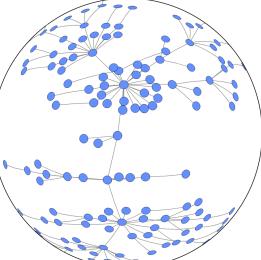
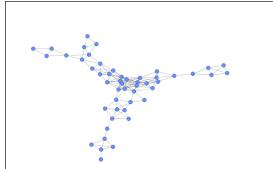
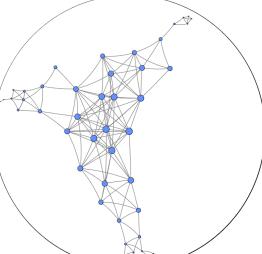
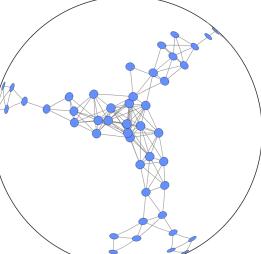
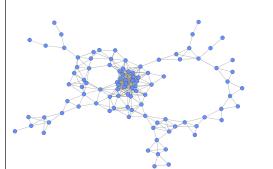
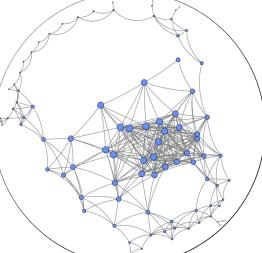
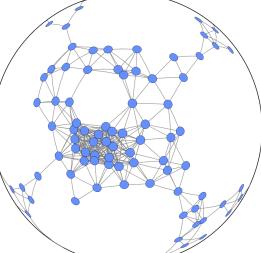
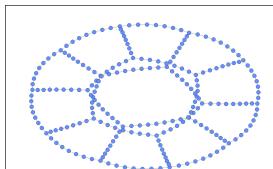
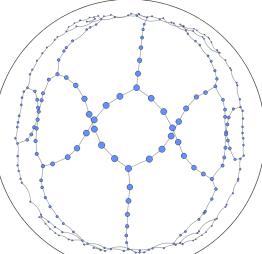
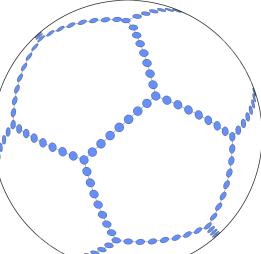
	Name	E	H	S
1249 1250 1251 1252 1253 1254 1255 1256 1257 1258	H_rand_large			
1259 1260 1261 1262 1263 1264 1265 1266 1267 1268	tree_150			
1269 1270 1271 1272 1273 1274 1275 1276 1277	S_rand_small			
1279 1280 1281 1282 1283 1284 1285 1286	S_rand_large			
1287 1288 1289 1290 1291 1292 1293 1294 1295	dodecahedron_3			

Table 5. The rest of the graphs and their embeddings in our experiment.

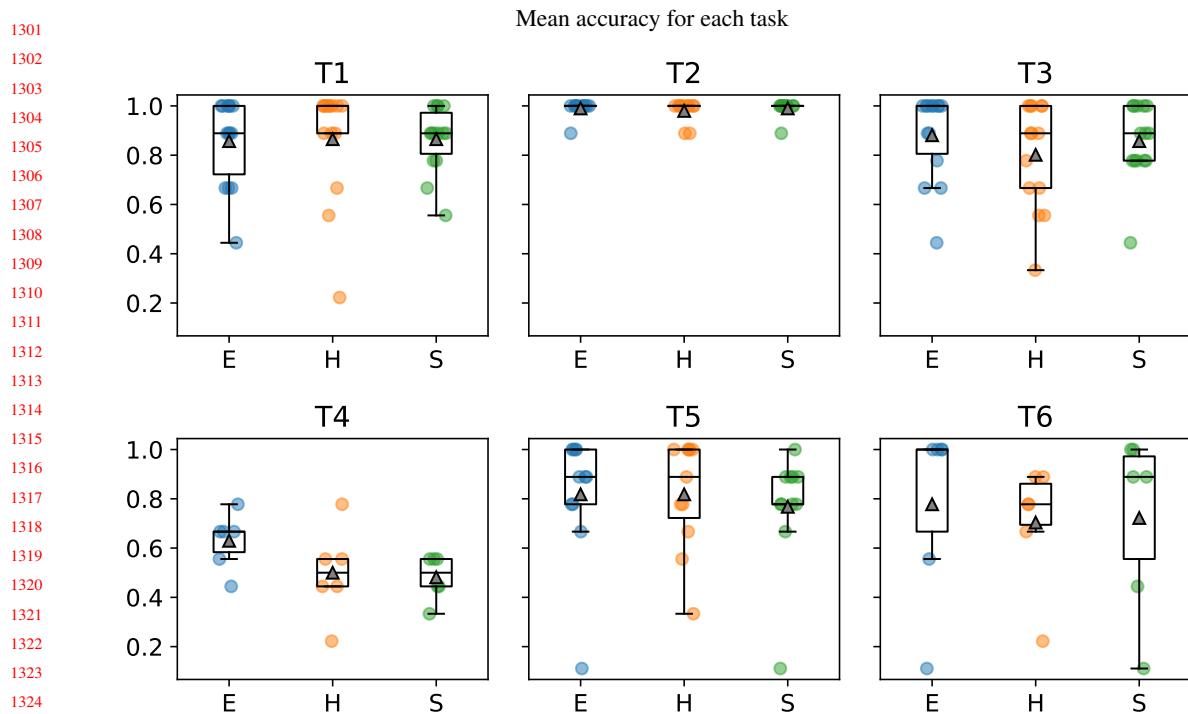


Fig. 15. Box plots in the style of Fig. 7 for accuracy results by task.

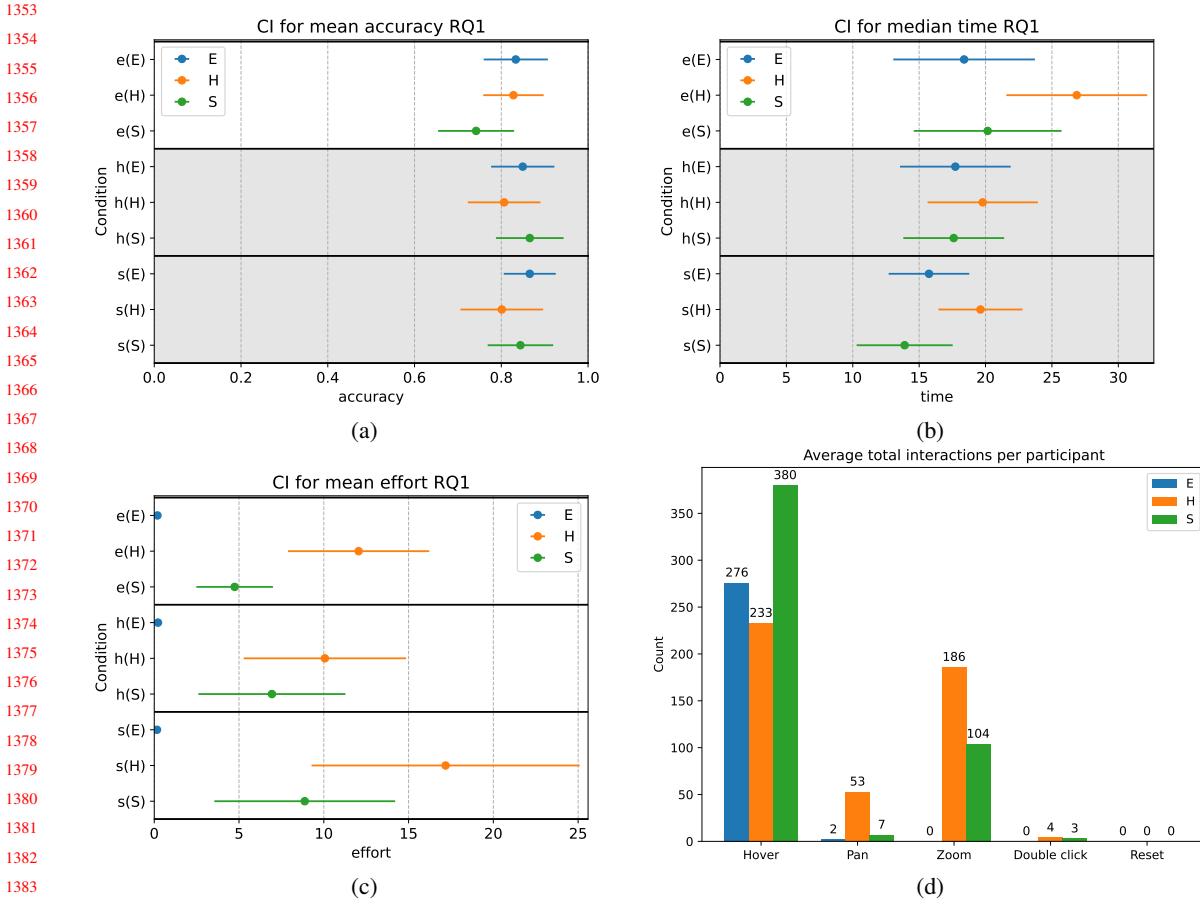


Fig. 16. Mean values for (a) accuracy, (b) time, and (c) effort means including 95% Confidence Intervals (CI) for RQ1. Grey cells indicate no significant differences were found between the three conditions, while white cells indicate at least one difference. Average number of interactions (d) show that while hover was used in all geometries, pan and zoom were utilized more in the H and S conditions.

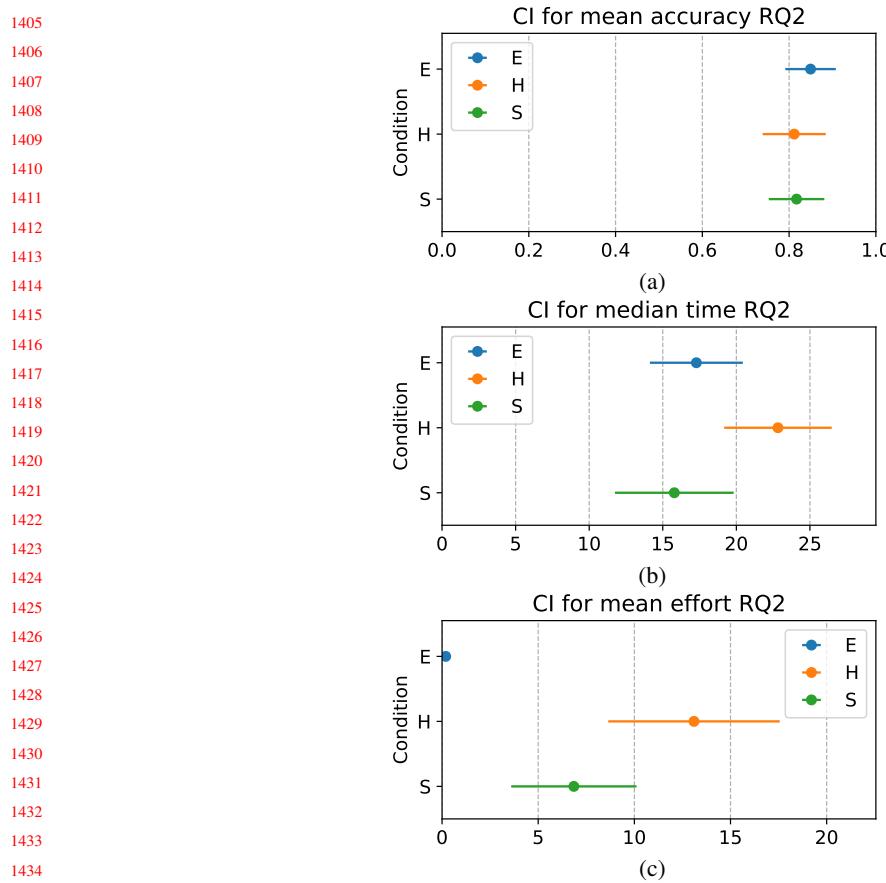


Fig. 17. Mean values for (a) accuracy, (b) time, and (c) effort means including 95% Confidence Intervals (CI) for RQ2.

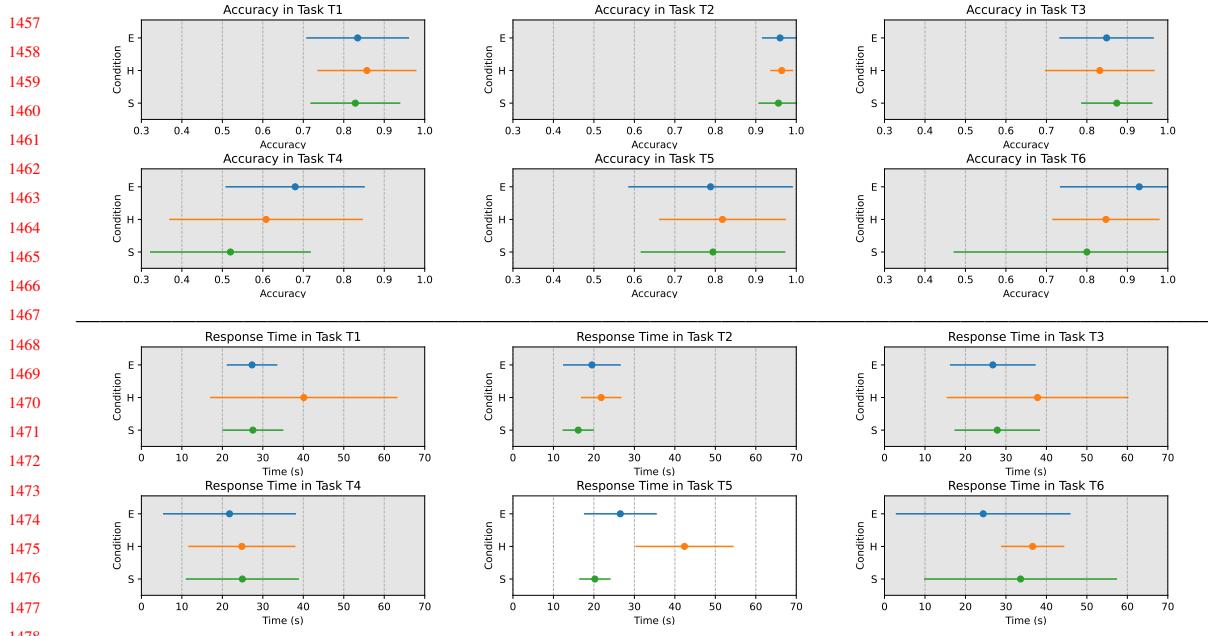


Fig. 18. Means and 95% CI by task for each visualization condition in (top two rows) accuracy and (bottom two rows) time. Grey cells indicate no statistical significance where white cells indicate at least one pairwise significance.

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