

Appendix A. Characterization Questionnaire used during the judge experiment

Characterization Questionnaire

1) Academic background

☐ Ph.D.

☐ Ph.D. student

☐ Master's

☐ Master's student

☐ Bachelor

☐ Undergraduate student

Year of admission: _____ Year of completion (or expected completion): _____

2) General Background

a. What is your experience with graphs? (check all items that apply)

☐ Never worked with graphs

☐ Read about

☐ I am a student in a graph course.

☐ I already finished a Graph course.

☐ I'm a graph specialist.

Appendix B. Content Evaluation Questionnaire used during the judge experiment

Content Evaluation Questionnaire

- 1) Regarding the **DAG 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 2) Regarding the **DAG 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 3) Regarding the **TREE 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 4) Regarding the **TREE 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 5) Regarding the **LINEAR 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 6) Regarding the **LINEAR 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 7) Regarding the **Semi-Monotonic DAG 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 8) Regarding the **Semi-Monotonic DAG 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 9) Regarding the **Semi-Monotonic TREE 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 10) Regarding the **Semi-Monotonic TREE 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 11) Regarding the **Semi-Monotonic LINEAR 01** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 12) Regarding the **Semi-Monotonic LINEAR 02** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 13) Regarding the **LINEAR 03** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)
- 14) Regarding the **CAR** graph, which of the options presents a better clustering in your point of view?
(A) (B) (C) (D)

Appendix C. Post-Experiment Questionnaire used during the judge experiment

Post-Experiment Questionnaire

Please complete the following questions on this experiment using a scale of 1 to 5 (where 1 disagrees fully, 2 disagrees, 3 is neutral, 4 agrees, 5 fully agrees and N/A means does not apply)

1. What was your degree of certainty when you answered the questionnaire?

1 2 3 4 5 N/A

2. Did you find it easy to understand what was expected in the experiment?

1 2 3 4 5 N/A

- From the presented graphs, which was the one that you had the most difficulty to choose the clustering:
- | | |
|-------------------------|----------------------------|
| ○ Dag 01 | ○ Semi-Monotonic Dag 02 |
| ○ Dag02 | ○ Semi-Monotonic Tree 01 |
| ○ Tree 01 | ○ Semi-Monotonic Tree 02 |
| ○ Tree 02 | ○ Semi-Monotonic Linear 01 |
| ○ Linear 01 | ○ Semi-Monotonic Linear 02 |
| ○ Linear 02 | ○ Linear 03 |
| ○ Semi-Monotonic Dag 01 | ○ Car |

3. If you have proposed any other form of collapse, what was the criterion used to group the vertices of the graph?

4. On the last analyzed graph, the positioning of the vertices according to the spatial information from where they were executed helped in its decision process?

5. Still about the last analyzed graph, after knowing the meaning of the colors and the context of the data, did it influence the decision process? Justify.

6. Would you have any other comments you would like to make about the elaboration of the experiment?
