

Clutter and declutter

- There is an information need, but the user should not be overloaded.

2 Footer Soesterberg, 02 October 2008

Three declutter algorithms

-Aggregate: If two icons of the same type are less than an iconsize apart from each other, aggregate

-Spread: Done by hand, because the algorithms that were tried (move overlapping icons in opposite directions took quite some time and resulted in other icons overlapping each other.

-Aggregate Spread: Apply the aggregate algorithm, but also leave the icons, scaled down, on their original position.

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Tasks

- A search task: Find the nearest X (shop, parking or restaurant) and find out on which street it is.
- A locate task: In which street is X (shop, parking or restaurant) with number Q.
- An identification task: Find an X (shop, parking or restaurant) with label Y and find out which number it has.
- A navigation task: You are in parking with number Q, and must plan the shortest circuit of three shops and a restaurant

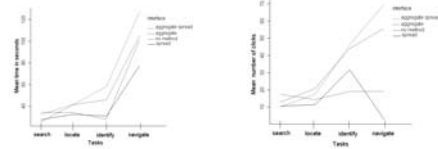
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Design

- Every participant performed the four tasks with each interface. The interfaces were balanced between the subjects.
- The hypothesis we tested was that the best declutter approach is task dependent.
- 8 participants
- Measures:
 - Time spent to complete a task (efficiency)
 - Number of clicks (efficiency)
 - Errors (effectiveness)
 - Questionnaires regarding user preferences and satisfaction



Results time and clicks (no errors were made)



- Spread and no method in general faster than aggregate and aggregate spread.
- No significant differences on time for tasks but significant differences over all tasks. Aggregate methods significantly slower than other two methods.
- Significant differences on locate (aggregate spread vs. spread) and navigate (aggregate methods vs. spread and no method) for number of clicks.

Questionnaire

	Int.	clear	Easy in use	Good idea	Easy to learn	Enjoy-able	fast
NM	1,5	2,88	3,25	1,5	3,25	3,13	
AGS	1,75	2,13	3	1,75	3,38	1,25	
AG	1,75	2,75	2,63	1,38	2,88	2,88	
S	1,38	2,25	2,13	1,25	2,5	2,38	

Int.	Search task	Locate task	Identify task	Navigate task
NM	1,75	2,25	3,375	3,13
AGS	1,75	2,125	3,625	3,38
AG	1,75	1,88	3,13	3,38
S	1,13	2,25	2,25	3,13

Conclusions

- User preference is task dependent, user efficiency and effectiveness not really.
- Speed aggregate methods can be increased by providing more information in the text box (left bottom corner).
- Future research: looking into user dependency (observation: big differences in remembering important locations when changing zoom levels, visible layers.)

