

Improving Search Time Performance for Locating Out-of-View Objects in Augmented Reality

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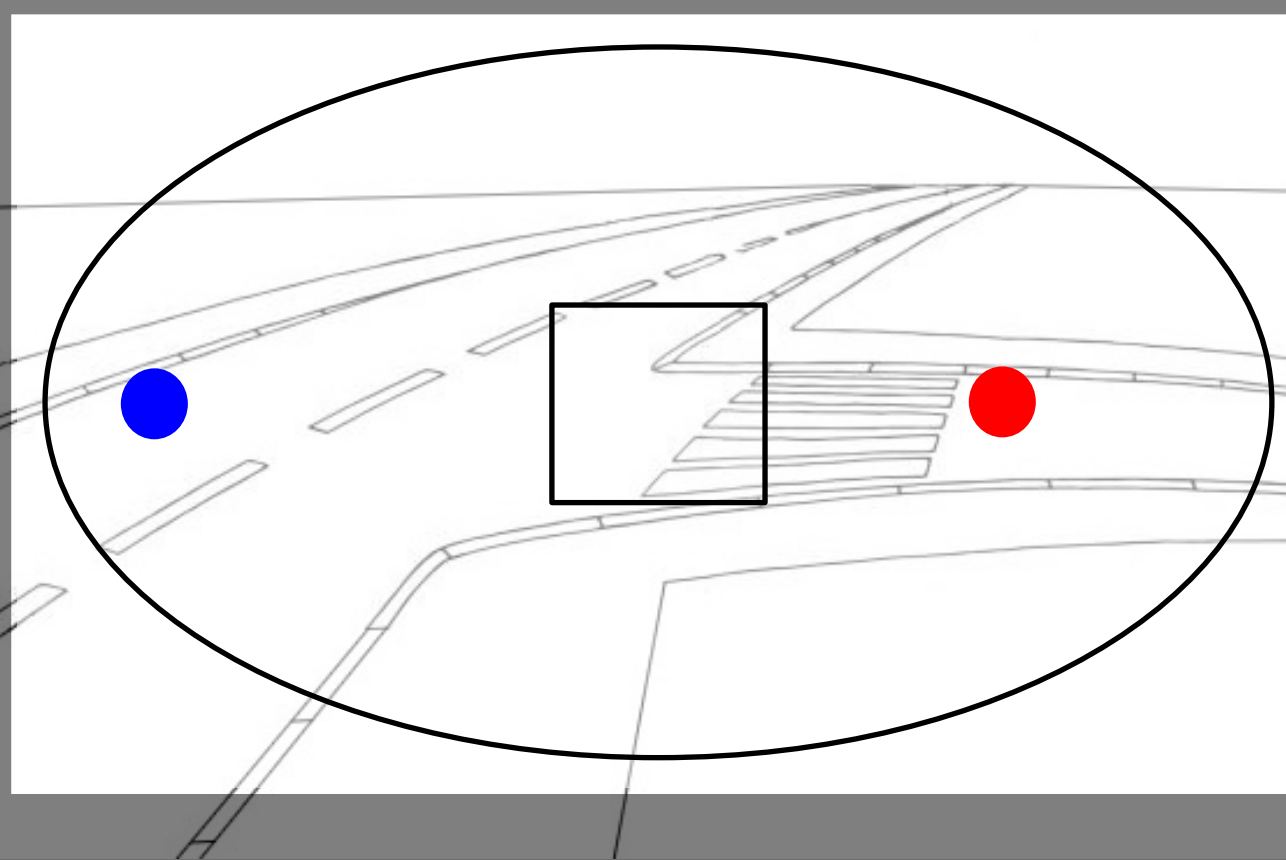
Motivation

Locating virtual (e.g., holograms) or real objects (e.g., vehicles in a traffic encounter) in head-mounted Augmented Reality (AR) can be an exhausting and frustrating task.

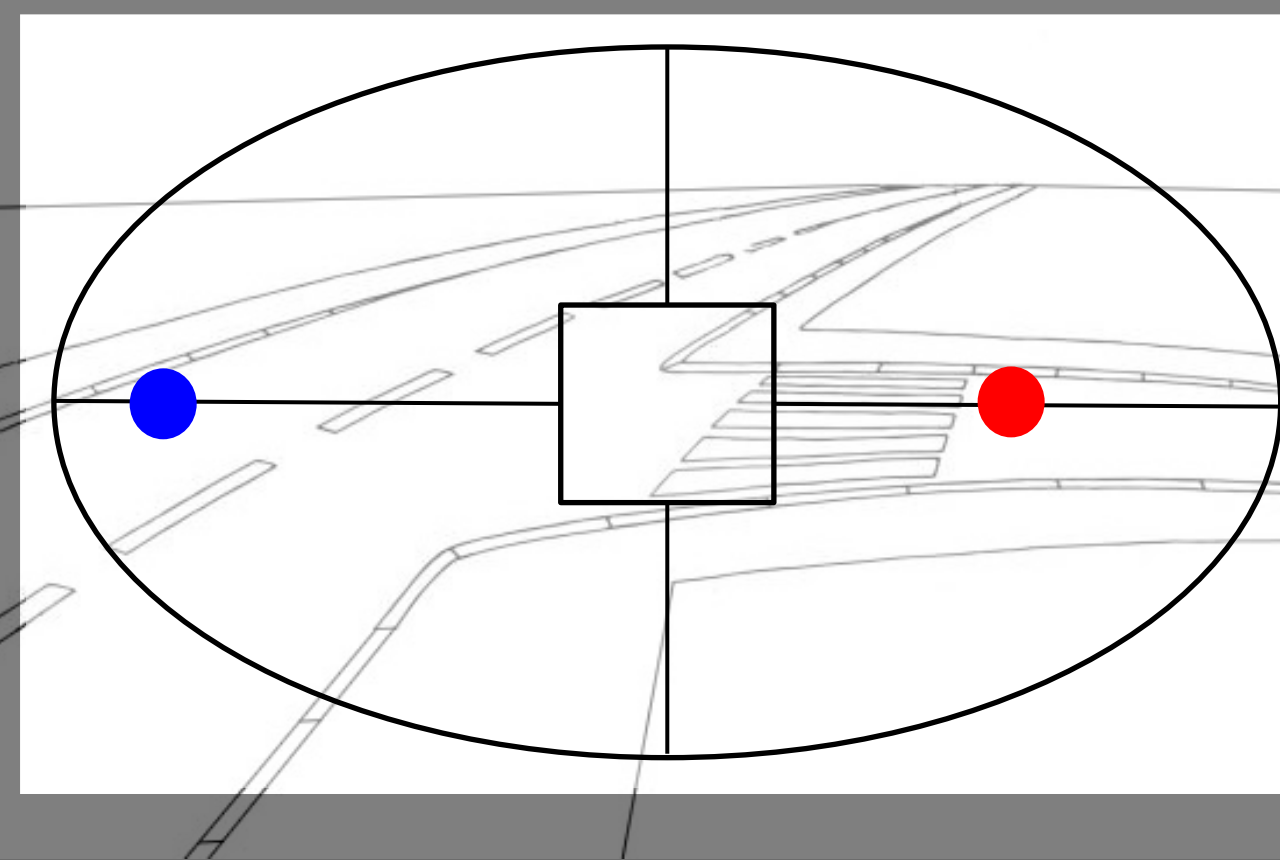
Approach

We aim to improve the search time performance for locating out-of-view objects in Augmented Reality. We compare three variants of EyeSee360 with different levels of visual information (assistance) in a laboratory user study.

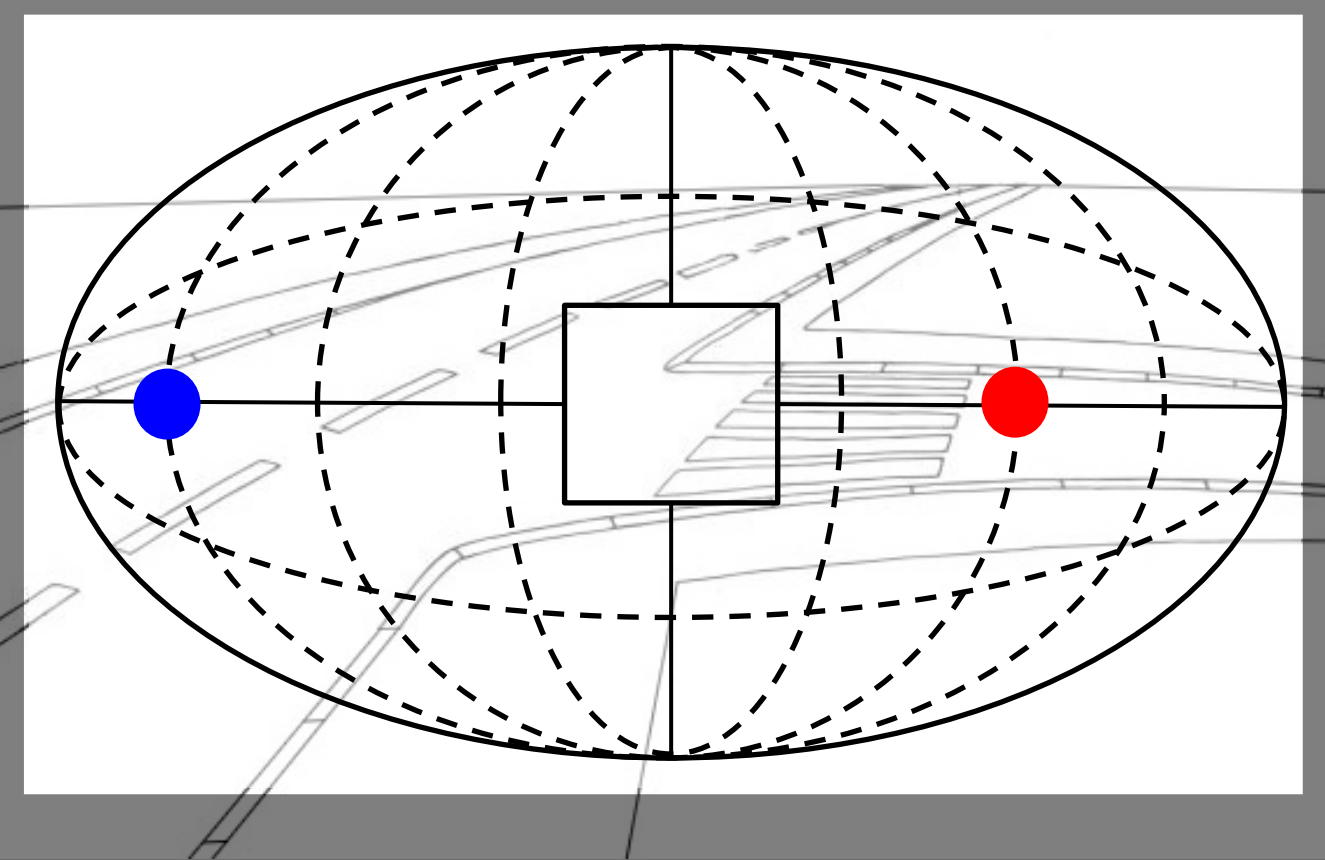
Variants of EyeSee360



No helplines



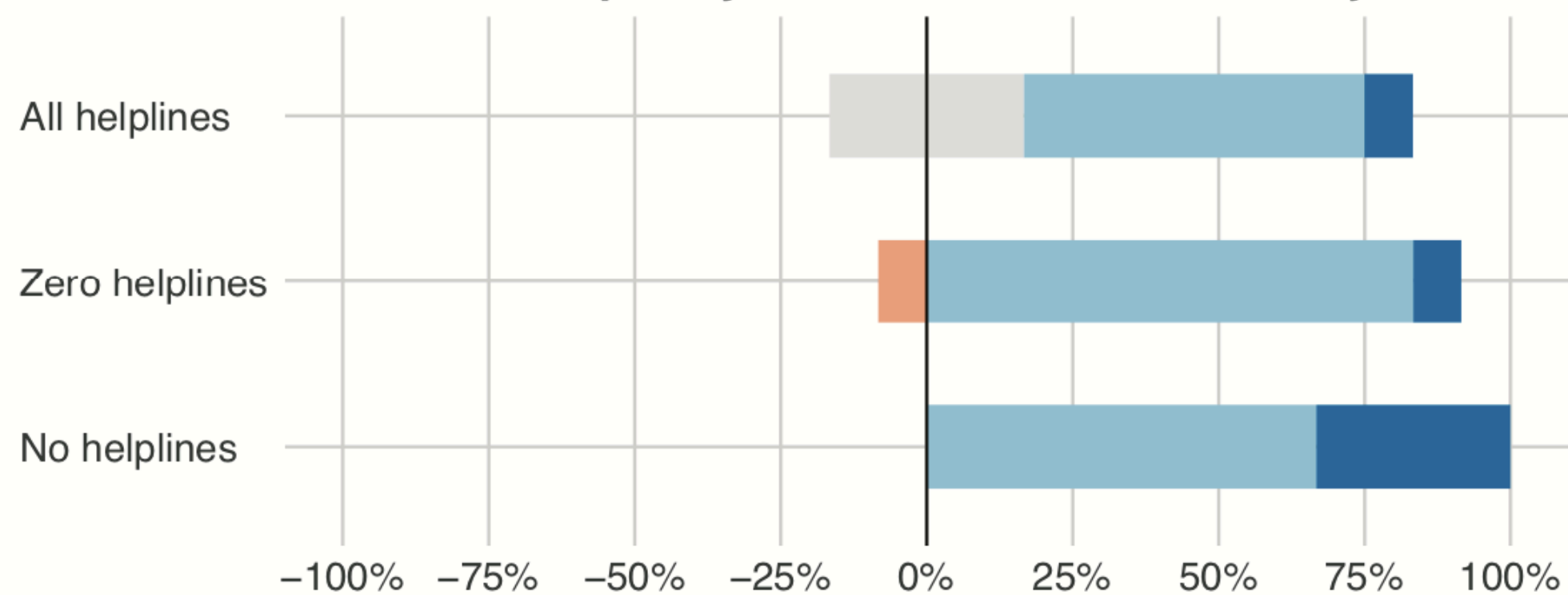
Zero helplines



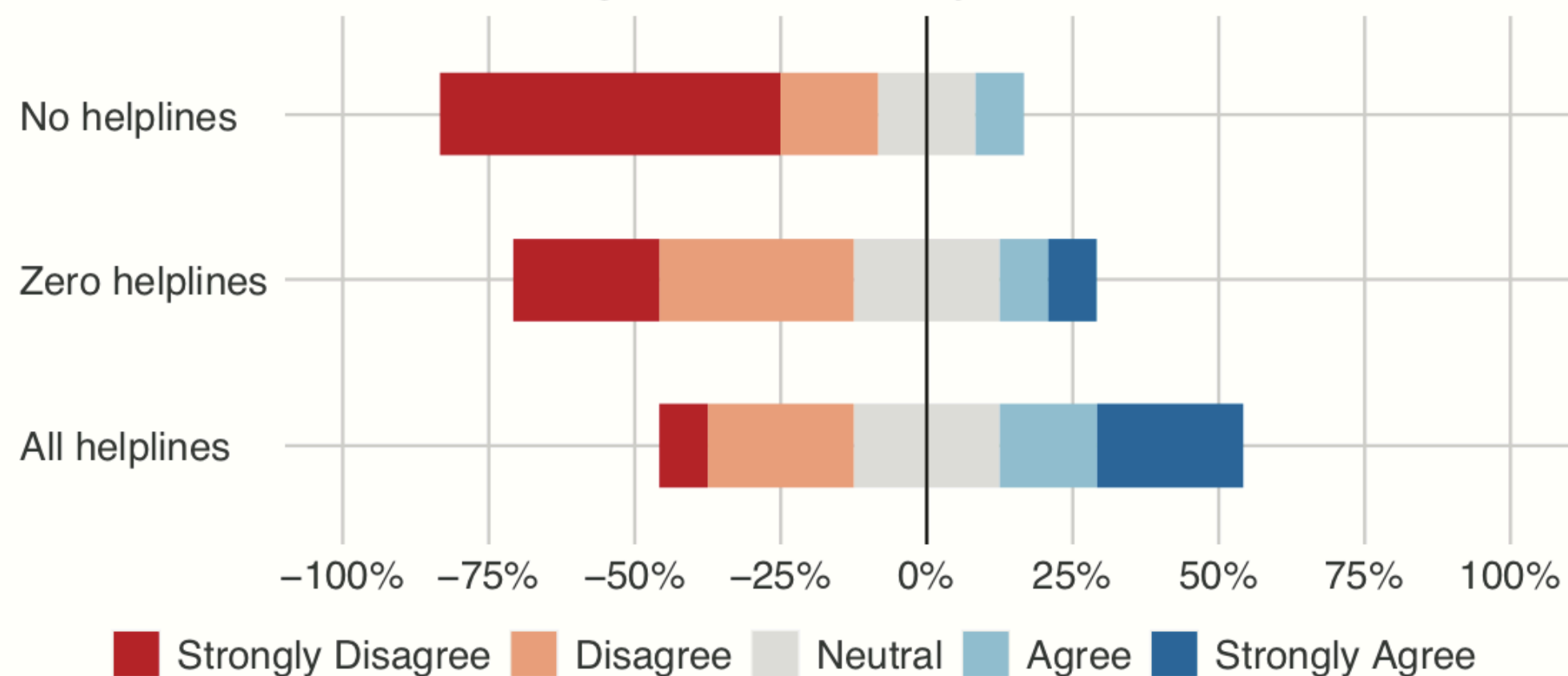
All helplines

Subjective Questionnaire

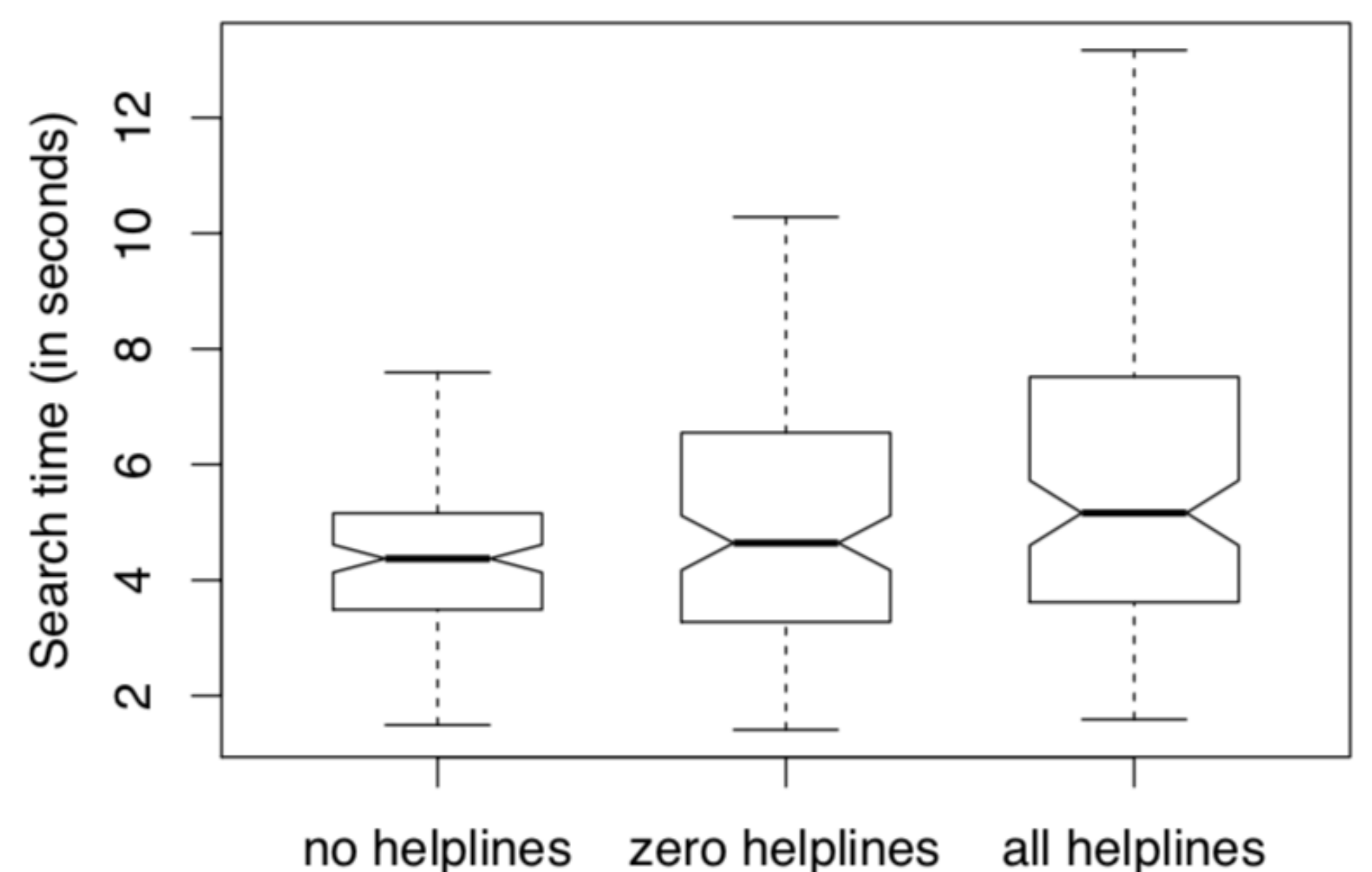
Performance: I could quickly locate the out-of-view objects.



Distraction: I got distracted by the visualization.



Search Time Performance



Conclusion

Variants with less visual clutter (no and zero helplines) perform significantly better.