

FB1: Relationship distance to content type and information density

Different content types can be displayed on the two surfaces. First of all, we want to get a feeling for the influence of distance on the perception of the content and the role played by the information density.

Test out the application. After that, we have some questions for you.

Questions

- 1.1 What differences do you notice between the content elements in terms of the maximum distance at which you can still perceive or work with the content?
- Why do you perceive them differently?
 - What do you think distinguishes the individual content types?
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- 1.2 Which of the content elements do particularly well on the ceiling?
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1.3 Is it the same on the floor?

1.4 Do you prefer one of the two placement areas?
 • If so, why?

1.A Notes

FB2: Relationship of distance to public and personal content

Six different content elements have already been presented. Some of them are only intended for you (e.g., message notification), while others could also be generally available in an environment (e.g., the supermarket floor plan). Does the distance also have an influence on this perception?

Questions

- 2.1 Do you recognize a distance threshold for personal?
- Where is it located?
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- 2.2 Does the classification of public and personal depend on the placement area?
- If so, can you define this difference?
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2.3 Which of the two placement areas do you prefer for public or personal content right now?

- Why?
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2.A Notes

FB3: Other properties for public and personal content

Personal and public content can be distinguished not only by the distance, but also by other characteristics.

Questions

- 3.1 How should personal and public content be distinguished from each other?
- How about visually, with e.g., border, color, ...
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- 3.2 One variant to distinguish the two content types is the billboarding functionality, which aligning the objects to your position. We have prepared a scene to test this out. We invite you to walk through the room. Some of the content you see now has billboarding enabled. For which elements and in which situations do you find billboarding helpful?
- Always and for all elements/for example? Triggered by proximity? Or gaze? only content with text? ...
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3.3 Does billboarding draw unwanted attention in the sense of being distracting/
perceived as disruptive?

- How do you feel about it? How would you imagine it in public space?
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3.A Notes

FB4: Relationship of posture to general perception

Now that you've walked around the room, maybe your perception of the virtual content has changed. AR glasses are not only used while sitting, but often also while standing when e.g., maintaining machines or shopping. Now stand at the same position where you were sitting before and use the distance slider in scene 1 again.

Questions

4.1 Has your preference for one of the two areas changed or increased based on the posture you were in?

- What brought you to this decision?
 - Proximity/distance?
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4.2 What other postures or adjustments in the environment can you think of that might change your preference?

- Running, lying down, kneeling?
 - Table at which you sit, sitting in a car, supermarket with shelves?
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4.A Note

FB5: Interaction with content on ceiling and floor

It is not only important to be able to see the content on the ceiling and floor, but also to interact with it.

Questions

- 5.1 Do you find implicit interaction (by looking) sufficient for our design space?
- What would you want to interact with in the first place?
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- 5.2 Would you rather have a different, more direct way of interacting?
- Is there a difference between interacting with the ceiling or floor?
 - If so, which would it be? Foot-based, Proxy-based, ...
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- 5.3 Imagine you want to view a more complex content, like the recipe, for a longer time. Would you find the ceiling/floor suitable as a display surface for this?
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- 5.4 Do you like the idea of information coming down to the eye level as well?
- How would you want to trigger this change?
 - In which cases?
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- 5.5 In scene 3, we have implemented two interaction variants and would like you to try them out. What do you think of them?
- Which one do you like better?
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5.A Notes

FB6: Final questions

Finally, we have some general questions that we like you to answer. Feel free to put down the HoloLens if you like.

Questions

- 6.1 For which functionalities could you also imagine to use the ceiling and floor?
- What do you think of, e.g., Storage of information, ...
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- 6.2 The ceiling and floor are currently mainly for secondary content. Could you imagine it for primary activities like data analysis as well?
- Are there other primary activities you would like to be supported?
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- 6.3 How would you assess the influence of ergonomics while using the HoloLens for content on the ceiling and floor?
- Is there a difference between both areas?
 - Is it dependent on the device?
 - Dependent on viewing duration?
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- 6.4 What (other) problems do you see with the use of the ceiling and floor?
- Dark Pattern?
 - Out-of-View?
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6.A Notes

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End: Concluding remarks

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