

Enabling Human Micro-Presence through Small-Screen Head-Up Display Devices



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Abstract

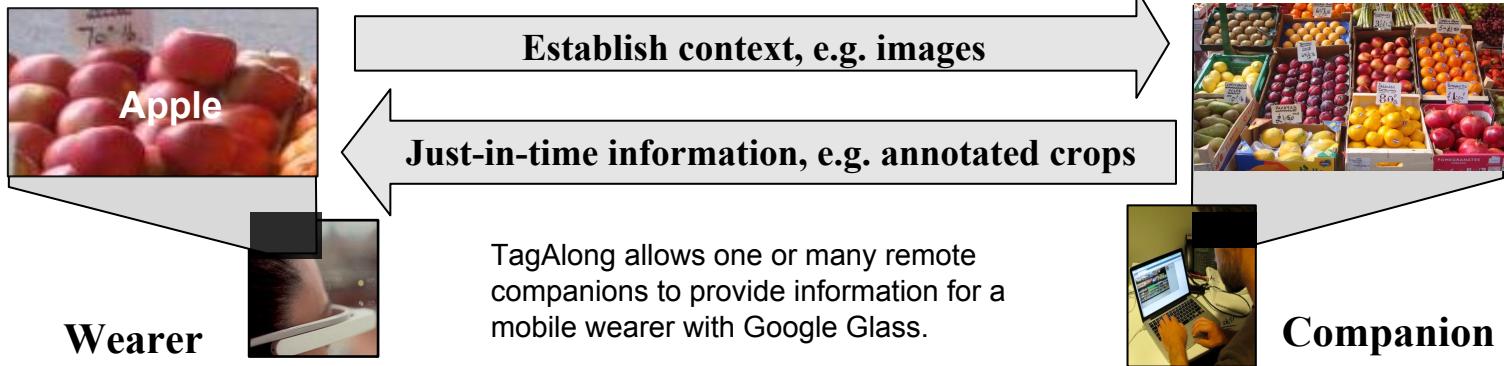
Networked head-mounted display devices promise hands-free just-in-time information experiences. We investigate micro-presence systems using mobile and wearable devices to facilitate real-time micro-interactions with remote peers.

Motivation for human micro-presence

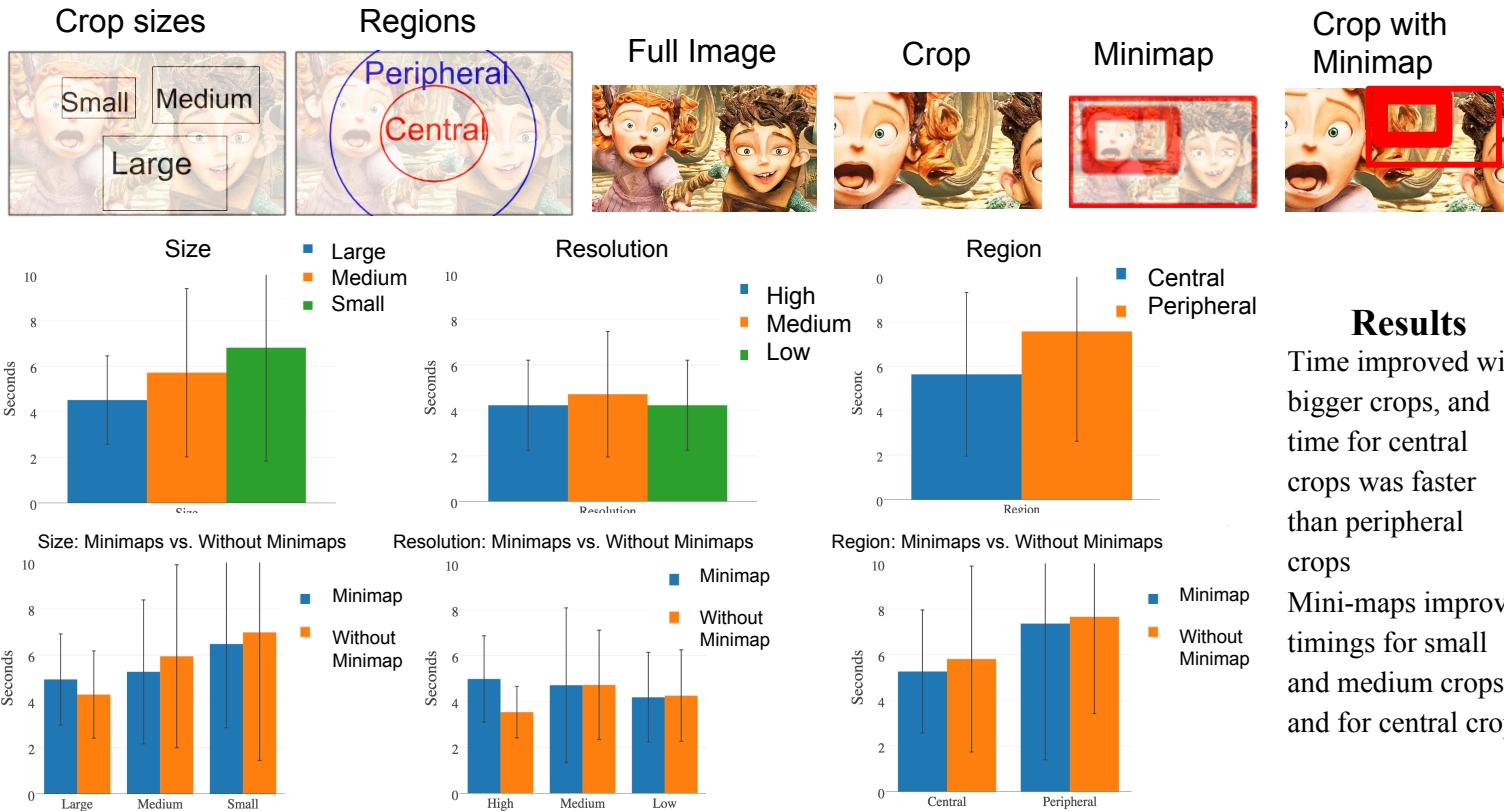
- ✓ Human micro-presence is more pleasant, personable and context-aware than computer-based help.
- ✓ Just in time information delivery allows for contextual learning, peer learning and spaced repetition for more effective learning.



Micro-presence system



Experimental Results: Target acquisition tasks



Results

Time improved with bigger crops, and time for central crops was faster than peripheral crops

Mini-maps improve timings for small and medium crops, and for central crops

Conclusions

- We introduced TagAlong to allow just-in-time information to be sent from companion(s) to wearer.
- We investigated environment and feedback variables that improve the efficiency of target acquisition.

Future Work

- Explore methods for pointing while the wearer is mobile and the scenery is changing.
- Explore the social presence aspect of micro-presence.