Whirling Wishes:

A Paper-and-Breath Interactive Media Installation for Hospital Waiting Spaces

Yucheon Park, Younsung Lee, Sung-Hyun Kim, Eunju Kwon, Eunsung Song, Kyung-Joong Kim
Gwangju Institute of Science and Technology (GIST), South Korea

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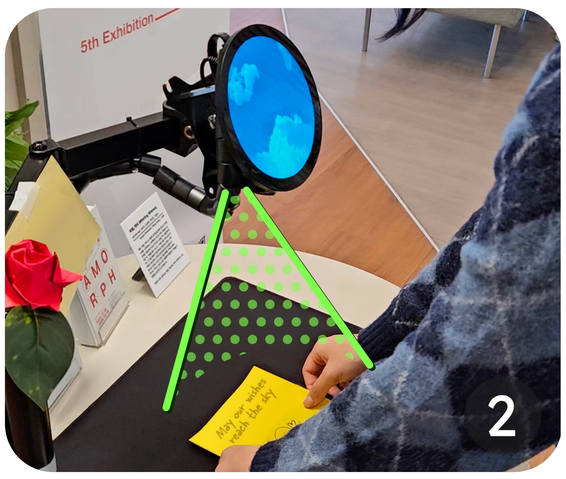

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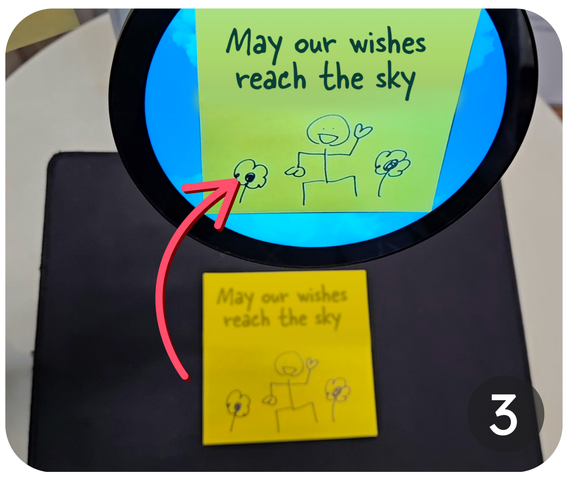

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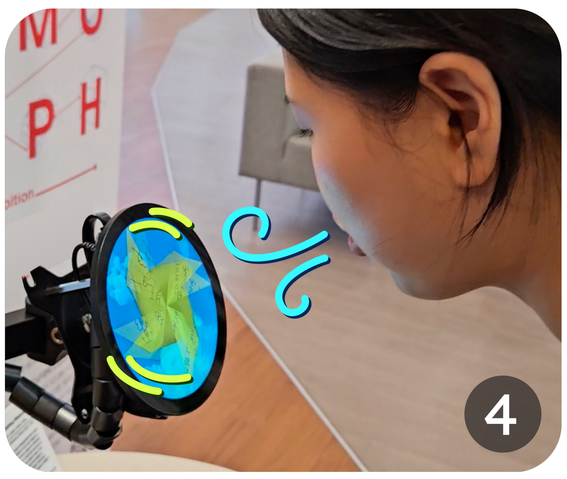

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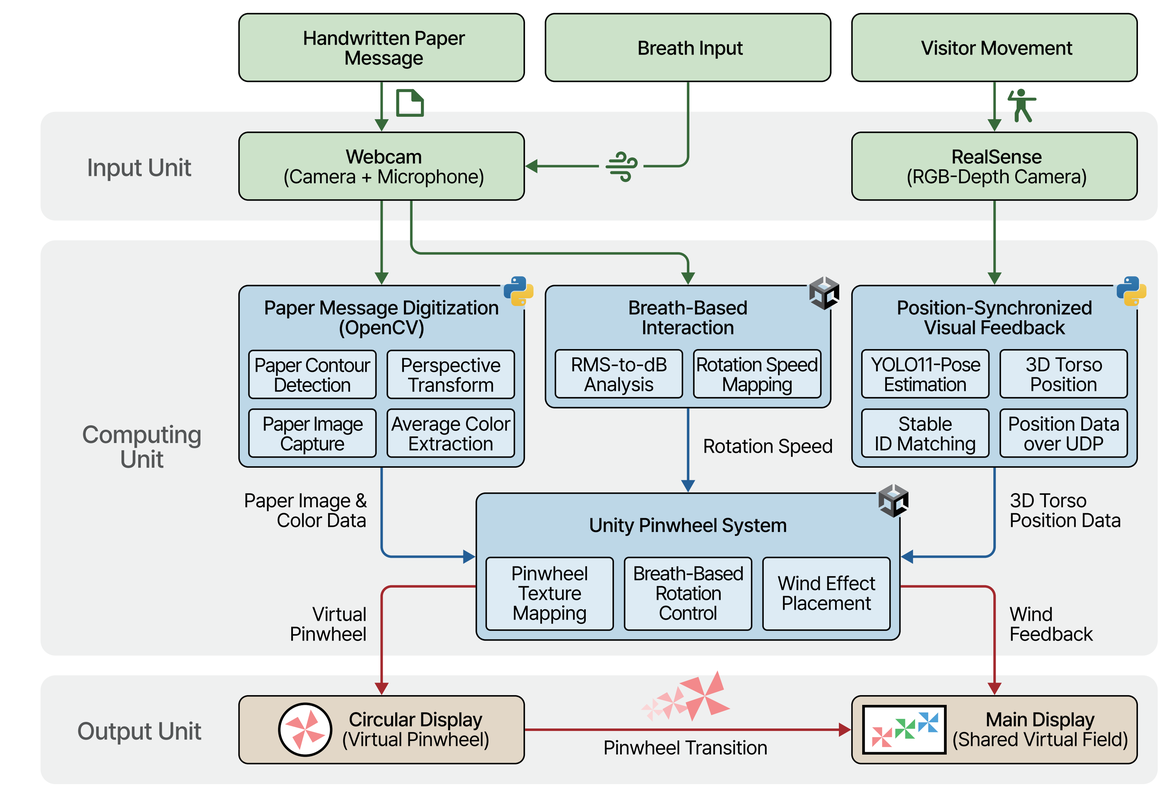
#Interactive Media Installation #Hospital Waiting Spaces
#Contactless Interaction #Positive Distraction

Contribution

- **System Design**: Designed an interactive installation transforming handwritten messages into virtual pinwheels.
- **Contactless Input**: Proposed individual paper and breath inputs to avoid shared touchscreen contact.
- **In-the-wild Deployment**: Conducted a 5-day deployment in a hospital lobby to identify practical design considerations.

Method

- **Paper Digitization**: A webcam extracts handwritten messages, mapping them onto 3D virtual pinwheels.
- **Breath Interaction**: A microphone translates audio levels into pinwheel rotation speed for contactless input.
- **Position Tracking**: A RealSense camera with YOLO11-Pose maps visitors' locations to virtual wind effects.



Result & Conclusion

- **Active Facilitation**: Proactive engagement increased participation (60 contributions in 2 days) compared to passive encouragement (16 in 3 days).
- **Clear Feedback Need**: Abstract wind effects were easily overlooked, highlighting the necessity for visually salient, high-contrast feedback.
- **Safety Limitations**: Breath input poses airborne infection risks. Future iterations will explore mask-friendly modalities (e.g., voice, gestures).