



VISION.IO

Digital-haptic city model for information transfer using XR/AR



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What is Vision.IO?

Vision.IO, a digital-haptic city model for information transfer through XR/AR showcases the potential of merging augmented reality with physical interactions. This immersive experience transforms augmented reality into extended reality, offering an innovative way to perceive and interact with urban environments.



Requirements



Narrative

What information do we want to present with the city model?



Model

What should the city model look like?



Communication

How does the virtual city model know which haptic interactions have been triggered?



Interactions

Which physical Interactions should be used?

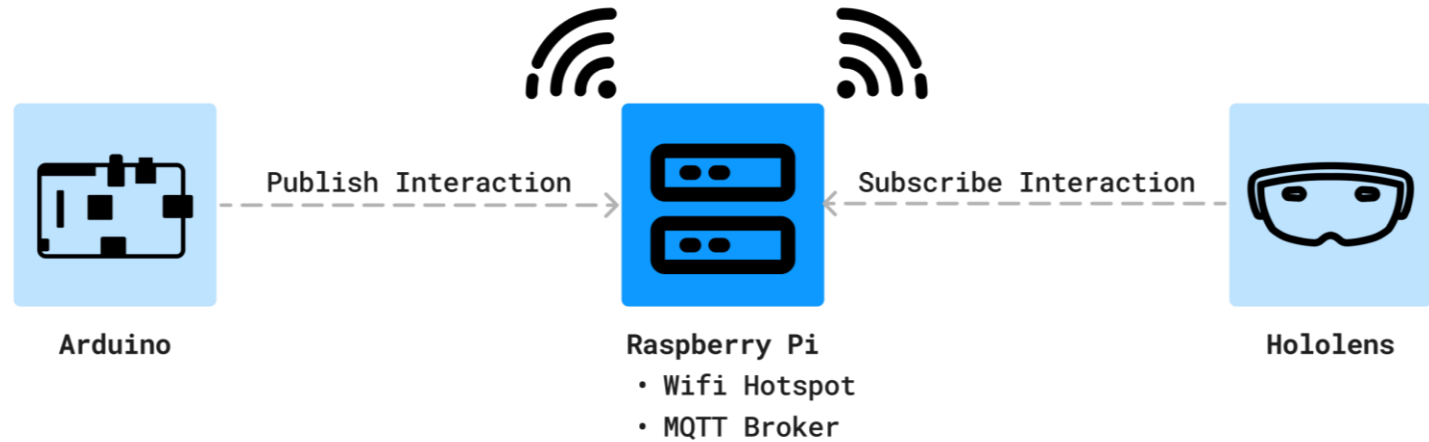


Narrative & Model

- Environmental Impact of different Sectors
 - Energy
 - Industry
 - Housing
 - Nature
- Physical Model for interactions
- Digital Model for visualization

Communication

- Publish/Subscribe Model with MQTT
- Raspberry Pi as a Communication Hub



Interactions



Button



Potentiometer

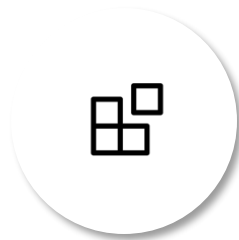


NFC-Reader

Benefits



Low Budget
Implementation



Extendability



Ease of Use



Unique haptic-visual
feedback

The Team



Chris

- Arduino
- Organisation & Planning



Jonas

- XR/AR-APP
- Design



Timo

- XR/AR-APP & 3D Assets
- Network



Yasmine

- XR/AR-APP
- Communication



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