Prototyping Mid-Air Display for Anywhere Robot Communication With Projected Spatial AR

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Motivation

Headset-based AR suffers scalability issues

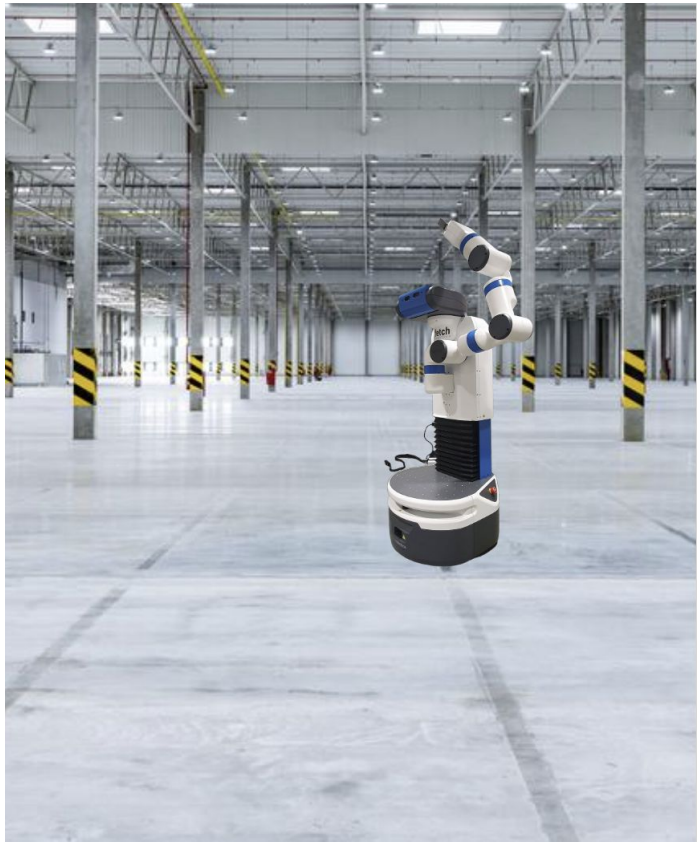
- Every viewer must wear a headset.

Introduction

Projector-based AR solves this

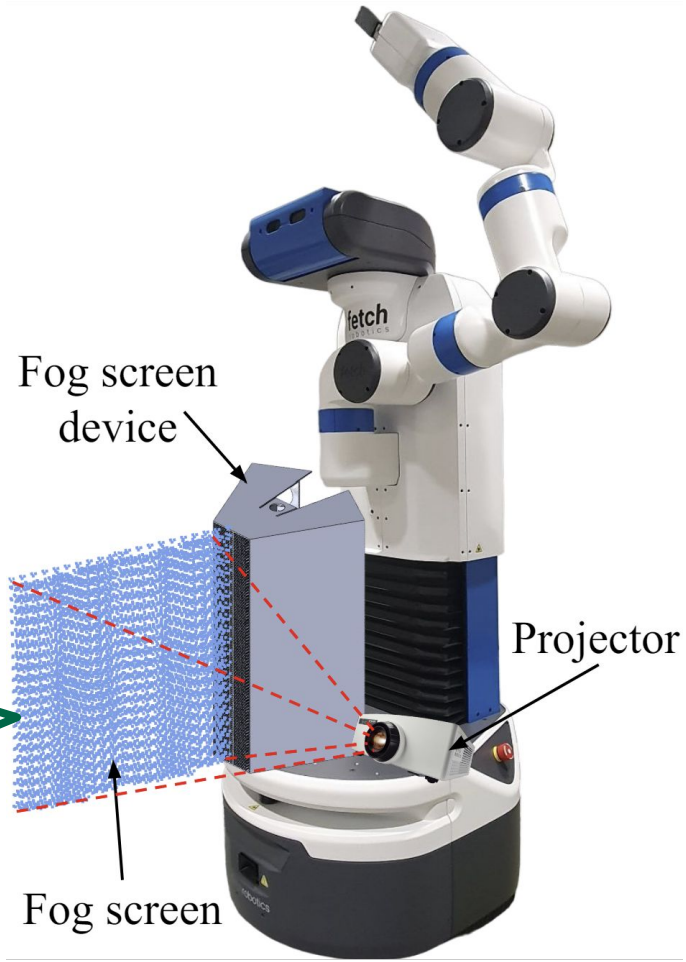
- But it requires flat surface
- Some environments may not have it

To overcome this limitation...

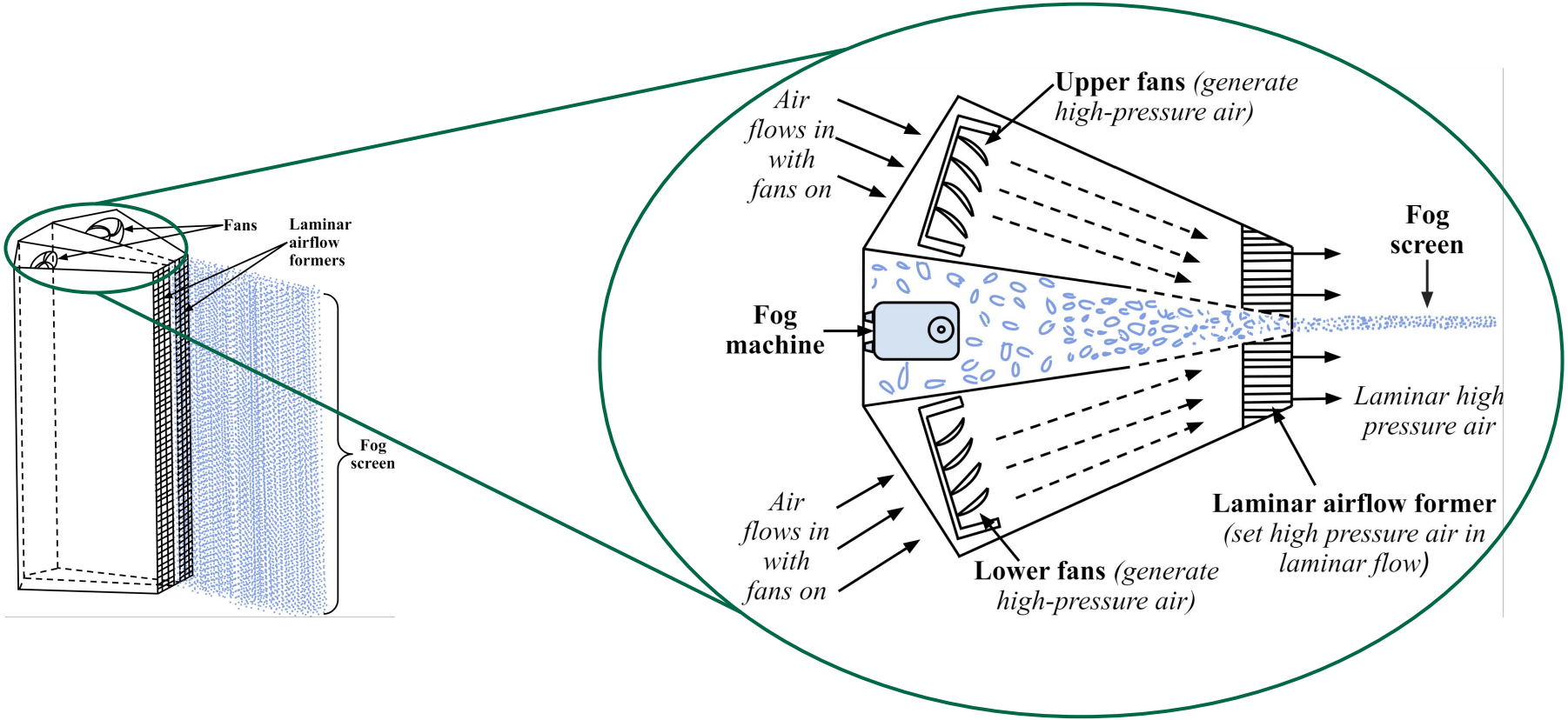


Fog Screen Device

- We propose a fog screen device that creates a mid-air fog screen.



Design: Fog Machine, Fans & Airflow Formers



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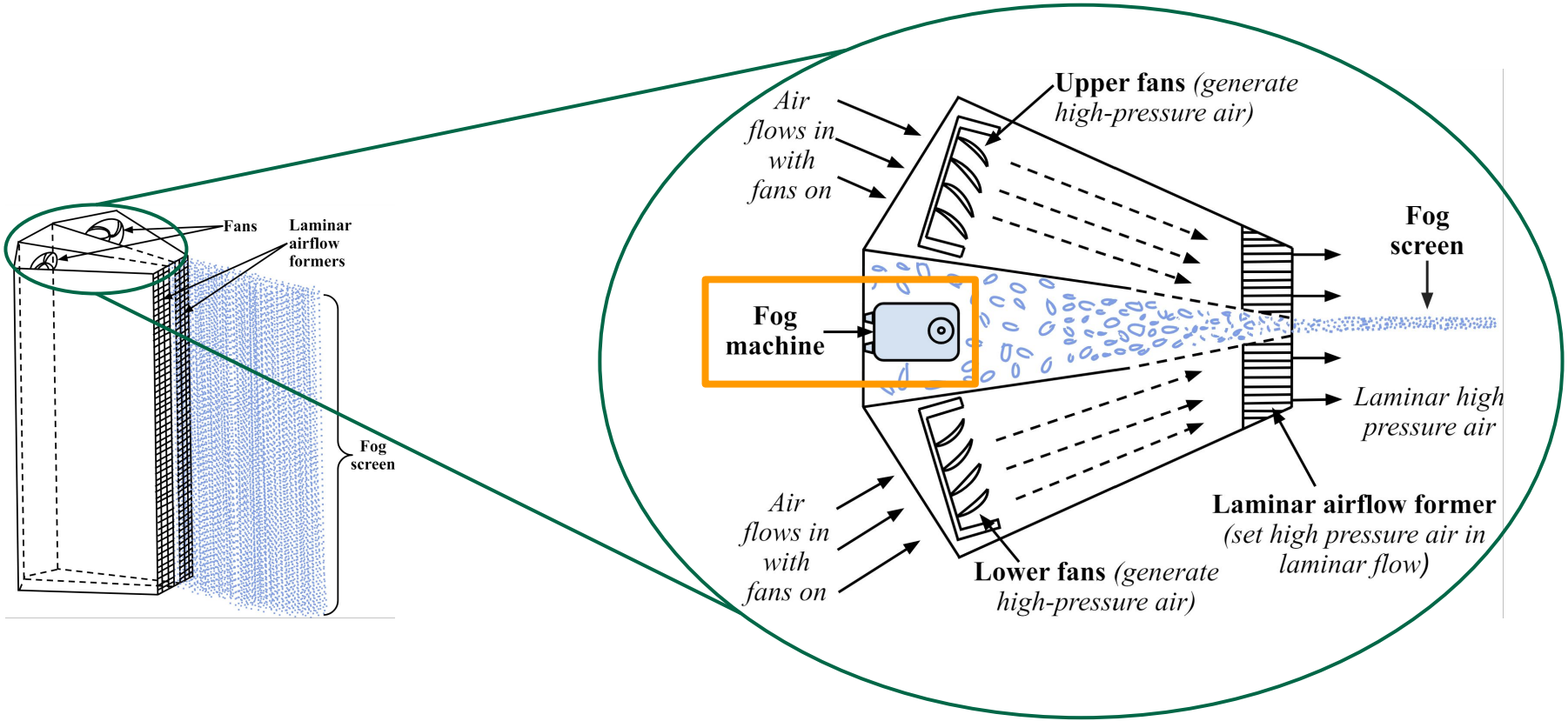

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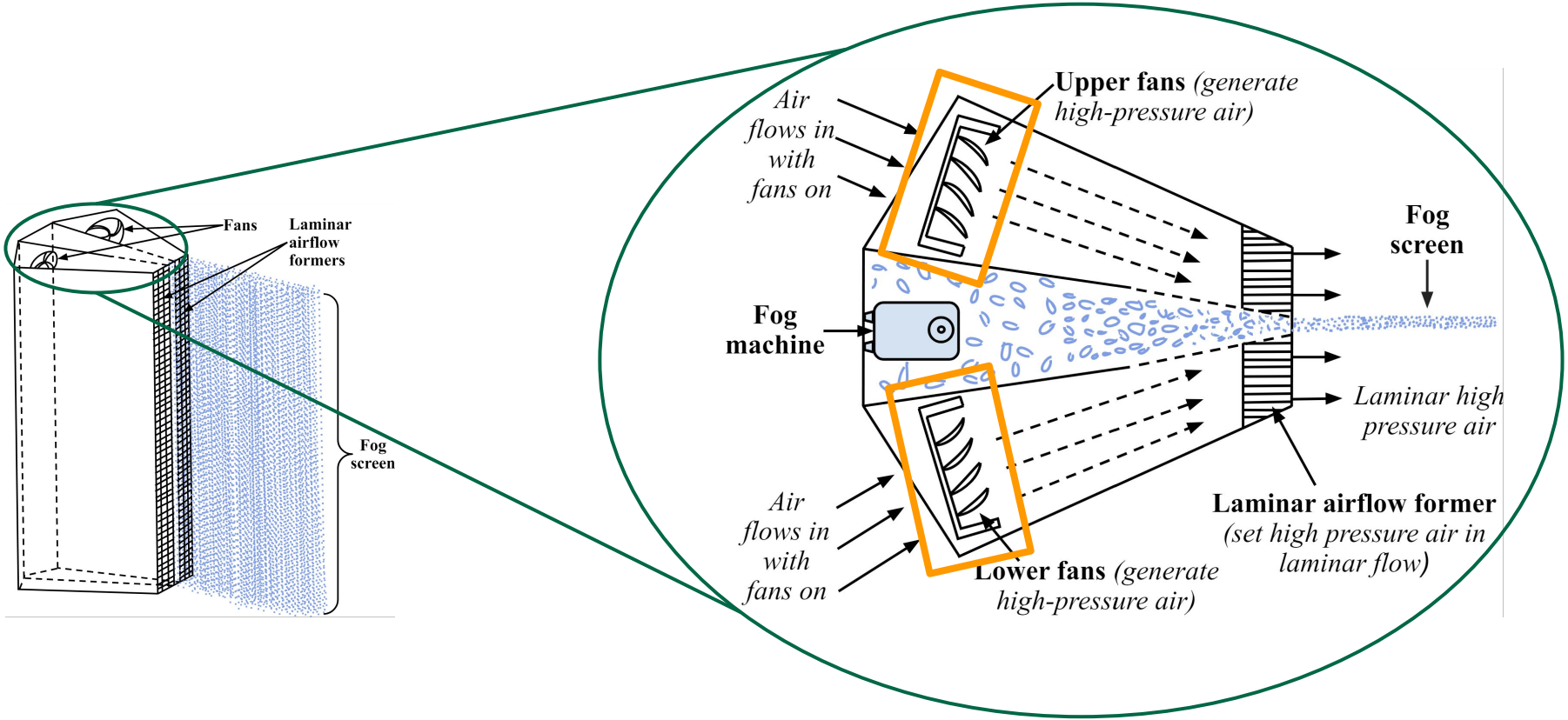

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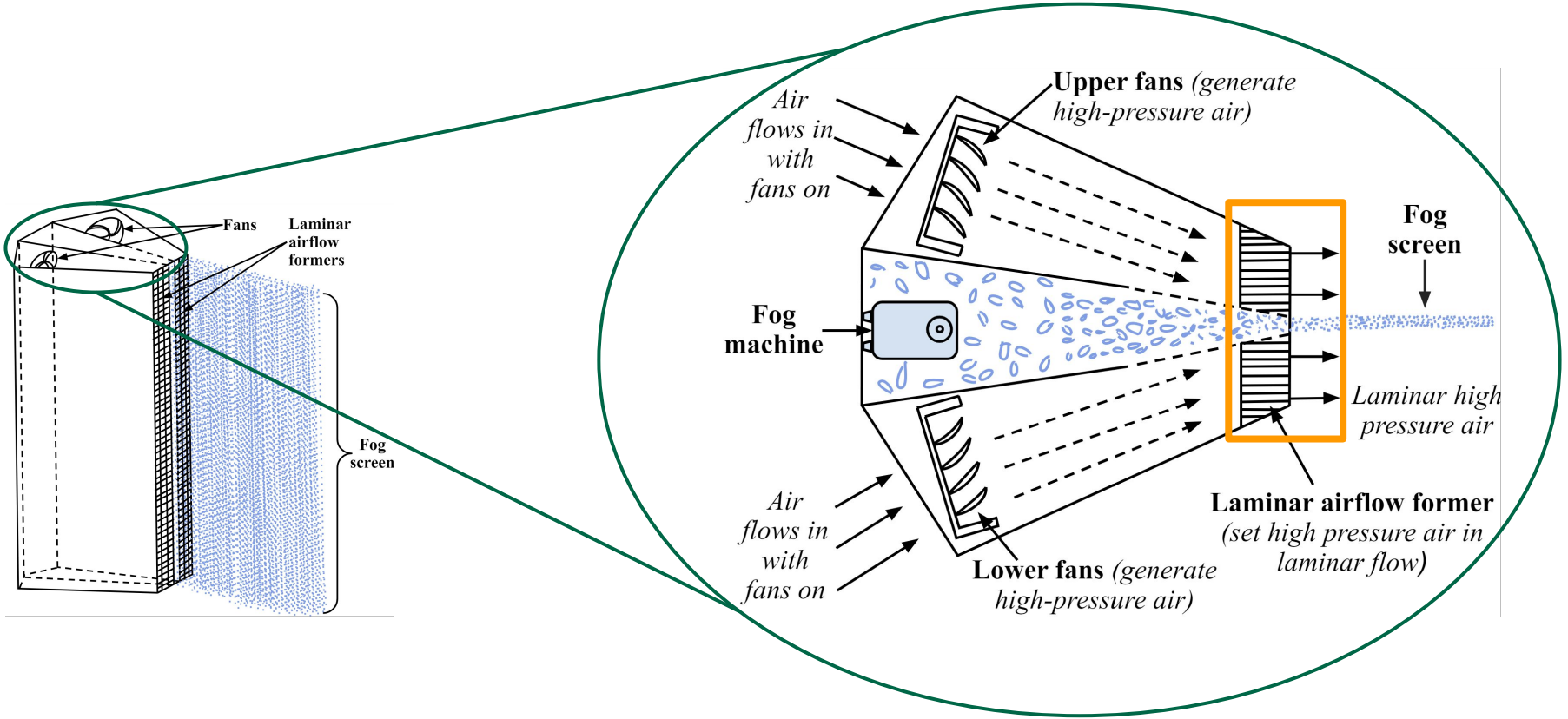

Evaluation Plans

1. Build the prototype & verify flat fog screen.
2. Examine the airflow former's ability to maintain laminar fog flow.
3. Conduct formal human evaluation to gather user perception and feedback for potential design improvements.

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Key Takeaways

1. Proposed fog screen addresses the limitation of projector-based AR.
2. The fans and the airflow formers keep the fog flat.

Work In Progress...