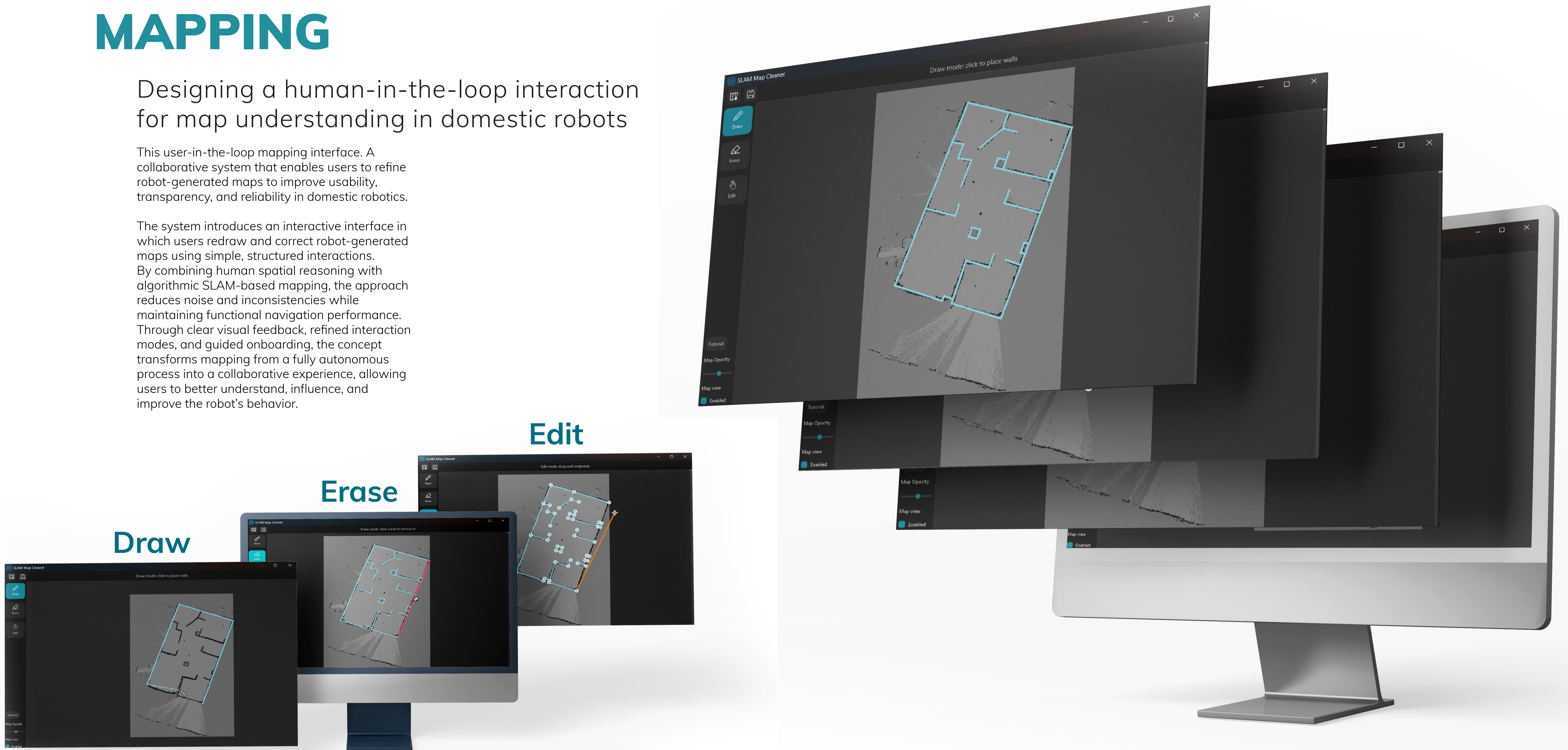


HUMANIZING ROBOT MAPPING

Designing a human-in-the-loop interaction for map understanding in domestic robots

This user-in-the-loop mapping interface. A collaborative system that enables users to refine robot-generated maps to improve usability, transparency, and reliability in domestic robotics.

The system introduces an interactive interface in which users redraw and correct robot-generated maps using simple, structured interactions. By combining human spatial reasoning with algorithmic SLAM-based mapping, the approach reduces noise and inconsistencies while maintaining functional navigation performance. Through clear visual feedback, refined interaction modes, and guided onboarding, the concept transforms mapping from a fully autonomous process into a collaborative experience, allowing users to better understand, influence, and improve the robot's behavior.



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Humanizing Robot Mapping
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Integrated Product Design

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