Proposal for a Blind Navigation and Wayfinding Data-Sharing Standard

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Introduction

Navigating the world as a blind or visually impaired individual has become increasingly viable with advancements in AI-powered assistive technologies. However, the current landscape is fragmented, with multiple point solutions specializing in different aspects of navigation, wayfinding, and scene description. This proposal outlines the need for a standardized data-sharing framework that enables seamless interoperability between these solutions, creating a more natural, hands-free user experience.

Objectives

The goal of this initiative is to develop an industry standard for real-time data exchange between blind navigation, wayfinding, and scene detection applications. This will:

- Reduce the need for users to juggle multiple apps manually.
- Enable devices and software solutions to work together harmoniously.
- Improve efficiency, accuracy, and reliability in navigation and object recognition.
- Foster innovation by allowing new solutions to integrate into an existing ecosystem.

Proposed Approach

We propose a phased approach, starting with a proof-of-concept (PoC) developed in collaboration with a small group of contributors, followed by an industry-wide standardization effort.

Phase 1: Proof-of-Concept Development

- 1. **Define Core Use Cases:** Identify scenarios where interoperability is most impactful (e.g., turn-by-turn navigation, object recognition, scene description).
- 2. **Select Initial Contributors:** Engage key stakeholders, including technical and business leaders from the leading companies serving the blind community.
- 3. **Develop a Prototype API:** Create a foundational framework to facilitate real-time data sharing between selected applications.

- 4. **User Testing & Feedback:** Work with blind and visually impaired users to refine the solution based on real-world feedback.
- 5. **Document Findings:** Publish a report on the benefits, challenges, and recommendations for broader implementation.

Phase 2: Industry Standardization

- 1. **Engage Industry Bodies:** Evaluate industry bodies to identify potential home for the standard.
- 2. **Expand Contributor Base:** Invite additional technology companies, research institutions, and advocacy groups.
- 3. **Refine and Formalize Specification:** Build on PoC learnings to create a robust, adaptable data-sharing standard.
- 4. **Advocate for Adoption:** Encourage widespread industry adoption through conferences, partnerships, and policy discussions.

Key Considerations

- **Data Privacy & Security:** Ensure that shared data complies with privacy regulations and gives users control over their information.
- **Technical Feasibility:** Optimize for real-time, low-latency data exchange without excessive battery drain.
- **Scalability & Flexibility:** Allow integration with future innovations in AI and wearable technology.
- User-Centric Design: Prioritize accessibility and usability for blind and visually impaired users.

Next Steps

- Identify and reach out to potential contributors for the proof-of-concept.
- Establish an initial working group to define technical requirements.
- Develop a roadmap for API design and early testing.
- Plan a roundtable discussion with industry leaders to gather input and refine the vision.

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