Revising Poor Man's Eye Tracker For Crowd-Sourced Studies

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Research Question

1. How to collect gaze data in crowd sourced studies when the use of eye tracking is too costly/ not possible?
2. How to reduce the limitations of mouse tracking (Poor Man's Eye Tracker)?

Implementation

- Extension of mouse tracking by a fog
- Only a circular area around the mouse pointer is without fog
- Steering the field of vision with the mouse pointer
- Mouse movement is recorded

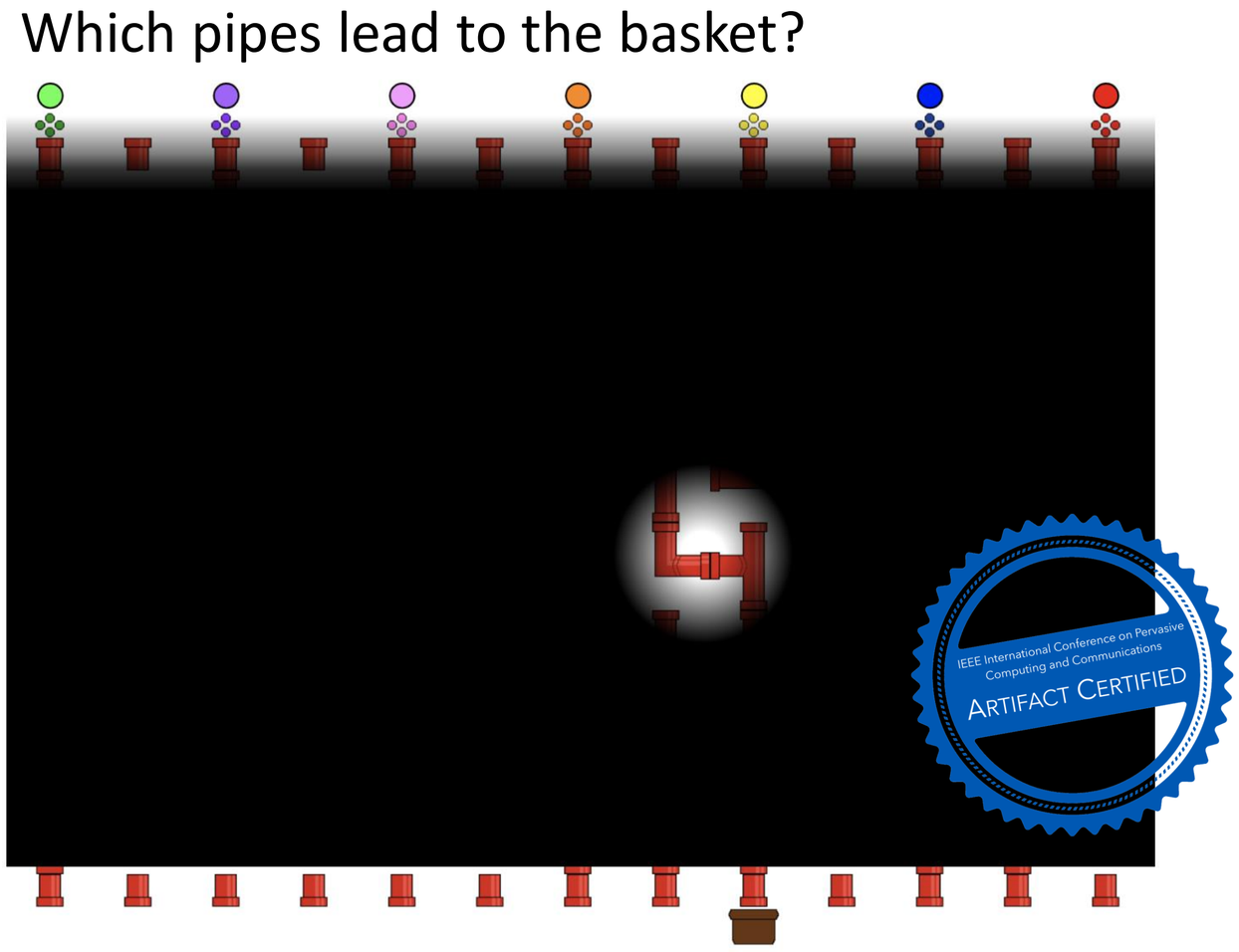

Fig. 1. Fogged pipe maze with part of it revealed through the cursor.

- Details that are not the focus of attention are obscured by the fog
- Mouse pointer must follow the gaze
- Only reliably recorded information can be perceived
- Collected data provides information about what a test person might have perceived
- Increased game difficulty

Visualisation

- Draw recorded mouse positions and path (in relation to time)
- Make mouse movement speeds visible
- Display the achieved score

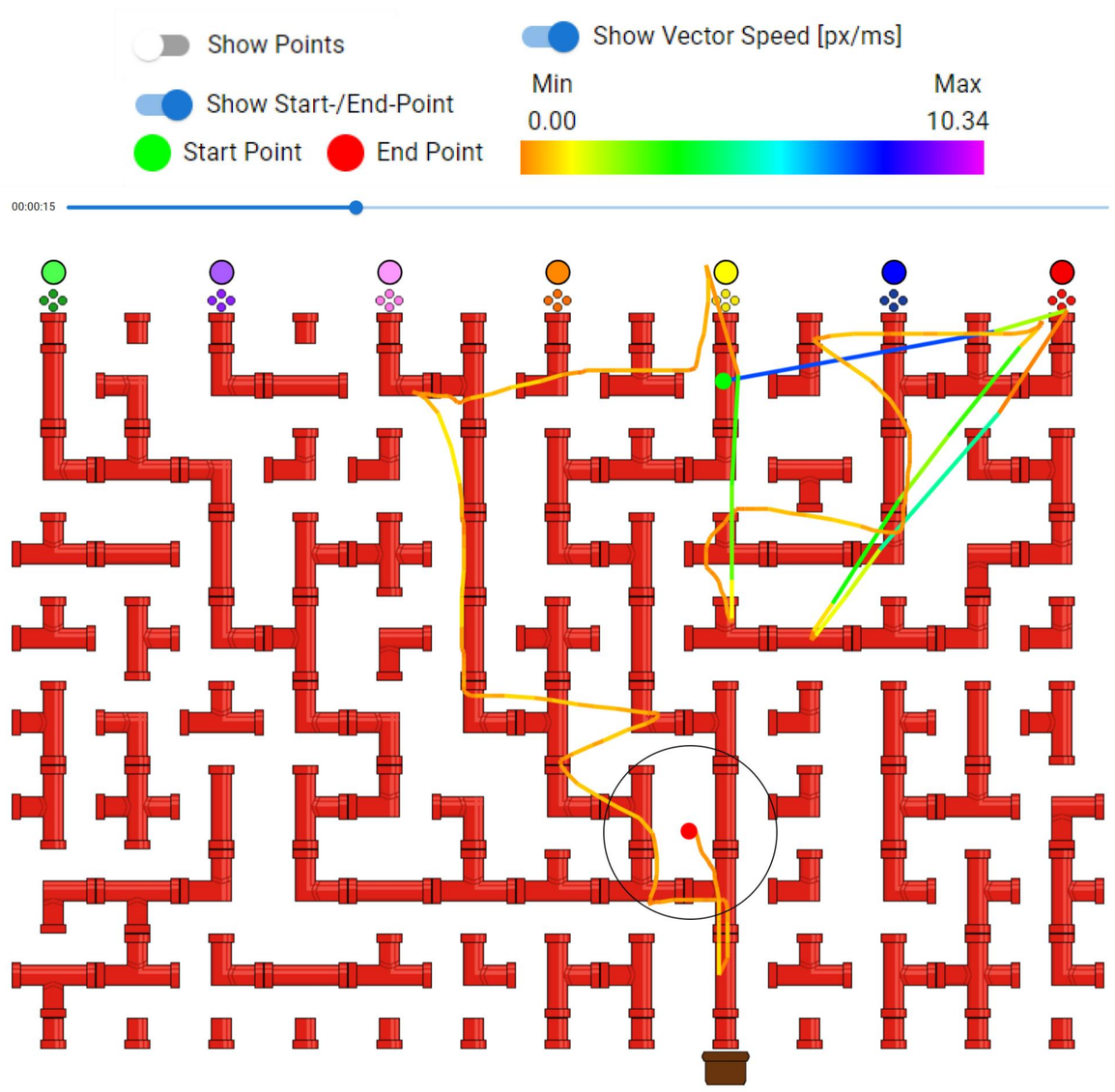

Fig. 2. Visualisation tool displaying the start- and end-point, and vectors speeds with the corresponding option control panel.

Derived Information

- Focus
- Points of interest
- Procedure

} Strategies

Research Contribution

- Usable for large-scale crowd-sourced studies
- Visualisation helps to evaluate strategies
- Provides insights into the actions and procedures of a test person
- Expands the tools for collecting and evaluating gaze data
- Automatising can save time and enables laypersons to understand the process

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