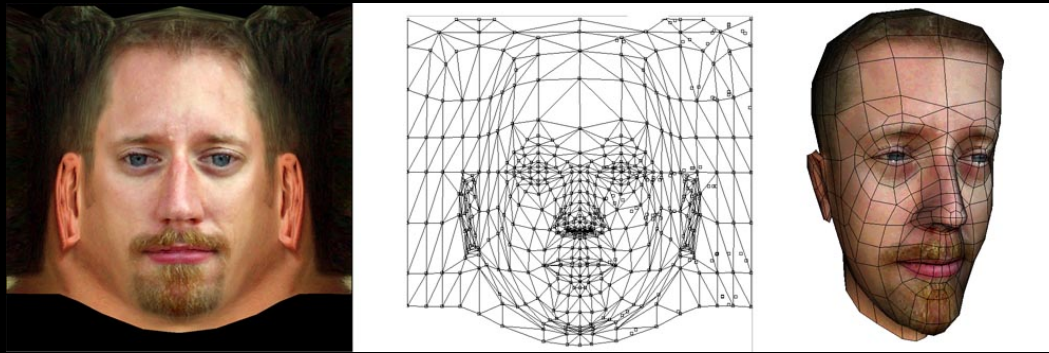


Using VR to improve Eyewitness Accuracy in Police Lineups



Details of Experiments:
<http://vhil.stanford.edu>

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Overview

- The problem of eyewitness testimony
- Overview of technology
- Discuss similarity of virtual busts to people
- Virtual lineups: Advantages and limitations

Virtual Head Construction

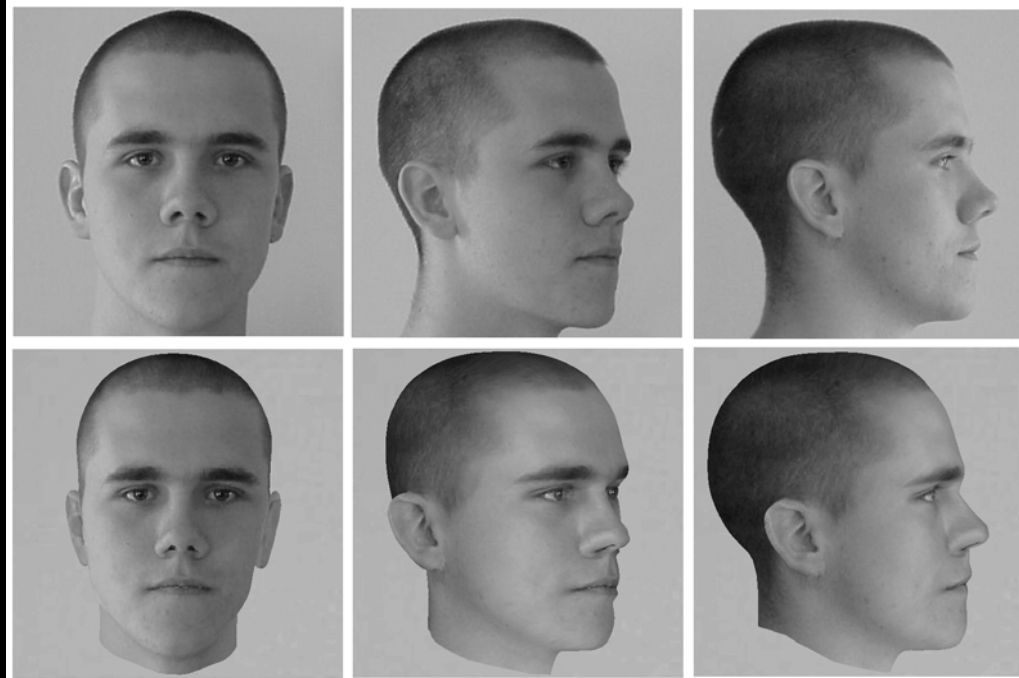
- 3D Scanner



Realism of Virtual Heads:

Previous work:

- Objective (Structural) Similarity
- Cognitive (Memory) Similarity
- Subjective (Emotional) Similarity



The problem of eyewitness testimony



How do virtual heads facilitate person identification?

- Virtual Reality Lineup



How do virtual heads facilitate person identification?

- Virtual Reality Lineup
 - Implicit recognition measures (personal space, eye gaze)
 - Use morphing procedures on 3D models to get mathematically exact 'dissimilar' foils
 - Insert the lineup in the crime scene (Contextual Memory)
 - Gesture lineup
 - More accurate cues (see virtual busts from any distance or angle)
 - Current study

Conclusions

- Virtual heads may greatly aid person identification
- Multiple experiments run thus far show advantage for VR over 2d photographs
- Realism should increase greatly over the next few years



Thank you!

Virtual Human Interaction Lab

<http://vhil.stanford.edu>