

Monocular Group Meeting People Localization and Other Projects

By Gerald Dalley

MIT AI Lab Vision Retreat

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Overview

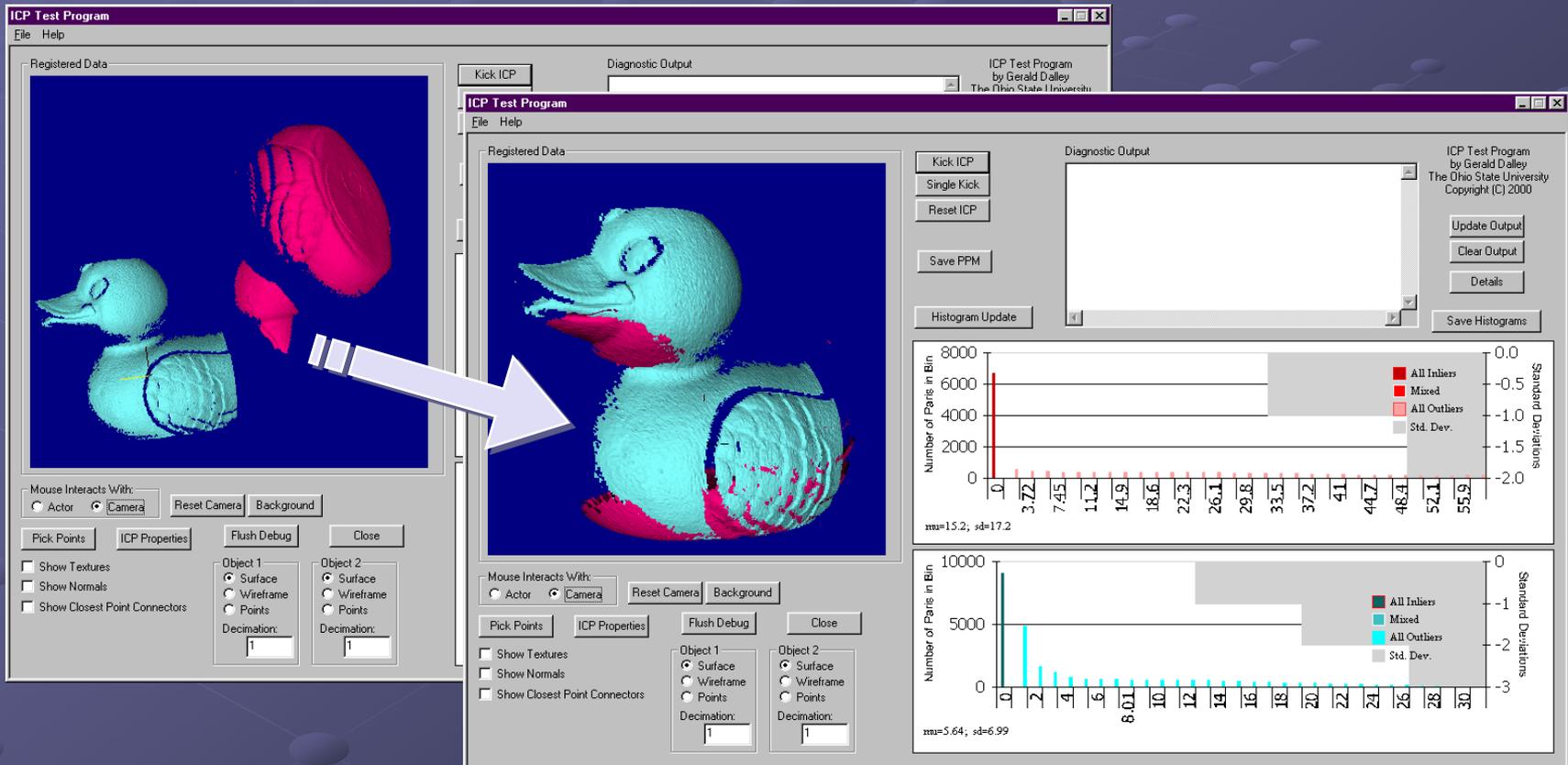
● Who Am I?

- 1st year Ph.D. student in Eric Grimson's activity group
- Past and Present Projects...

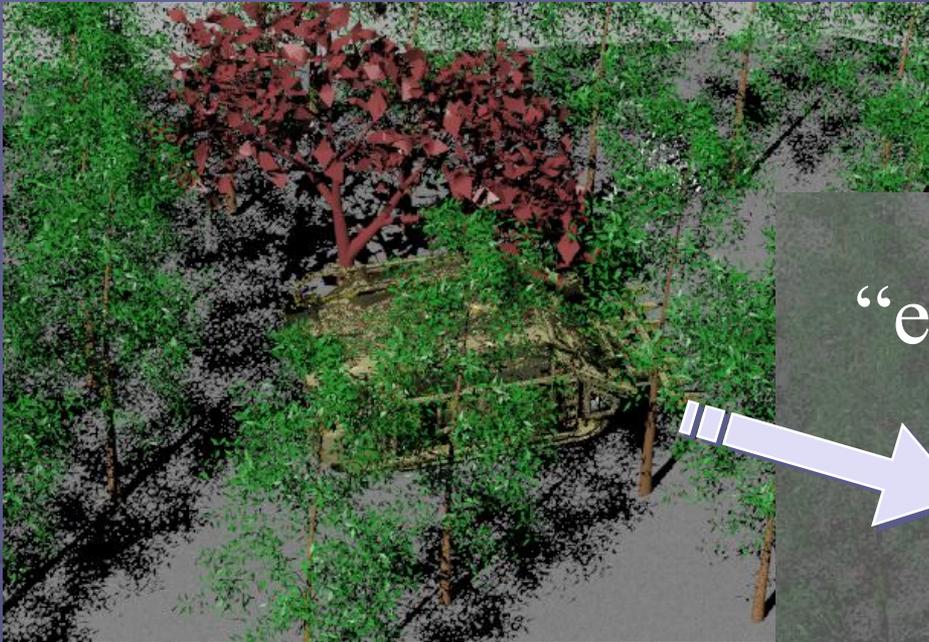
● People Localization

- System design
- Challenges

Who Am I: Past and Present Projects: Range Image Registration (B.S. @ OSU)



Who Am I: Past and Present Projects:
Vehicle Recognition From Cluttered
Range Images (M.S. @ OSU)



Who Am I: Past and Present Projects:
*Equations and Figures: Matlab, PowerPoint,
Word, LATEX, and More (current)*

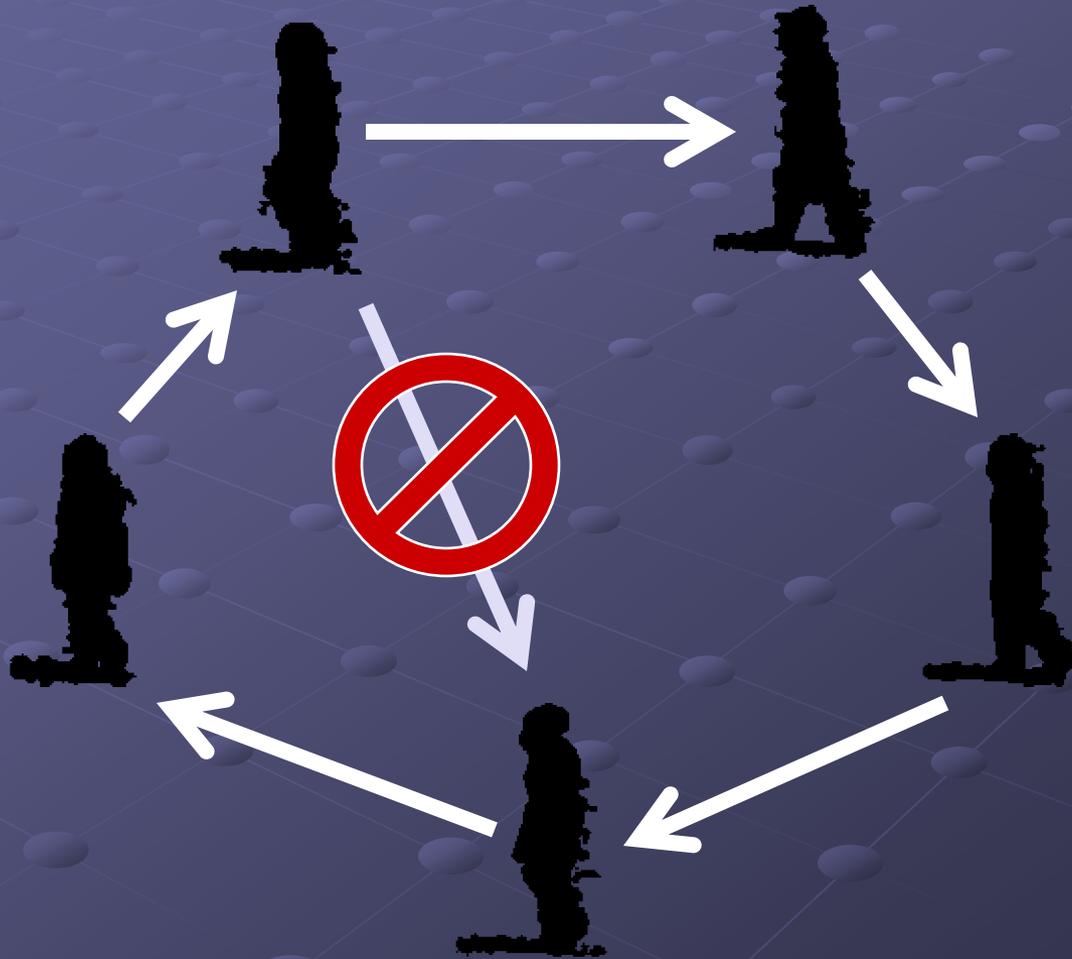
- Making equations...
- Matlab figure tricks
- Embedding LaTeX in PowerPoint

This is \LaTeX embedded

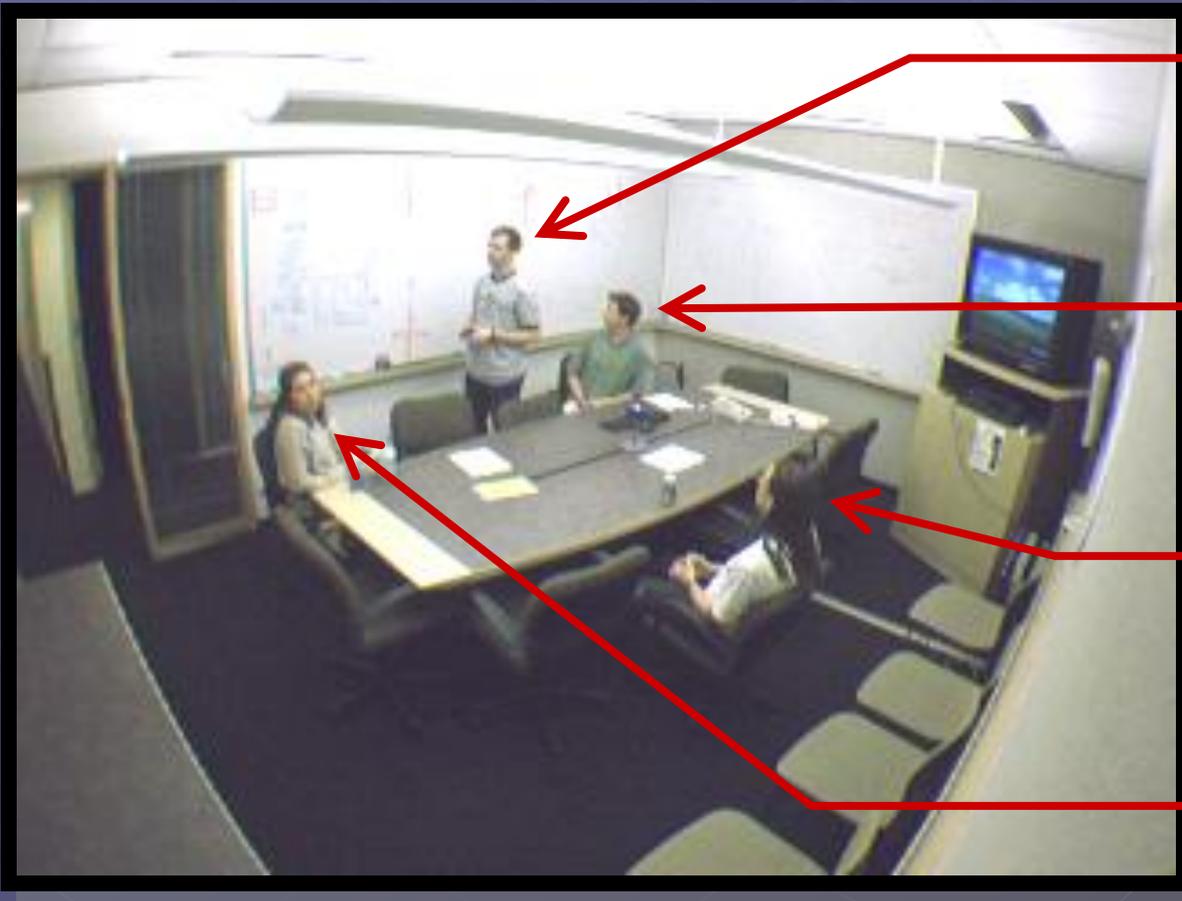
in PowerPoint $\left(\text{and } x = \int_{-\infty}^{\infty} \alpha(t) dt \right)$

- Tell me about your problems (and/or solutions)

Who Am I: Past and Present Projects: HID Consistency Constraints (current)



Who Am I: Past and Present Projects: People Localization (Microsoft + MIT)



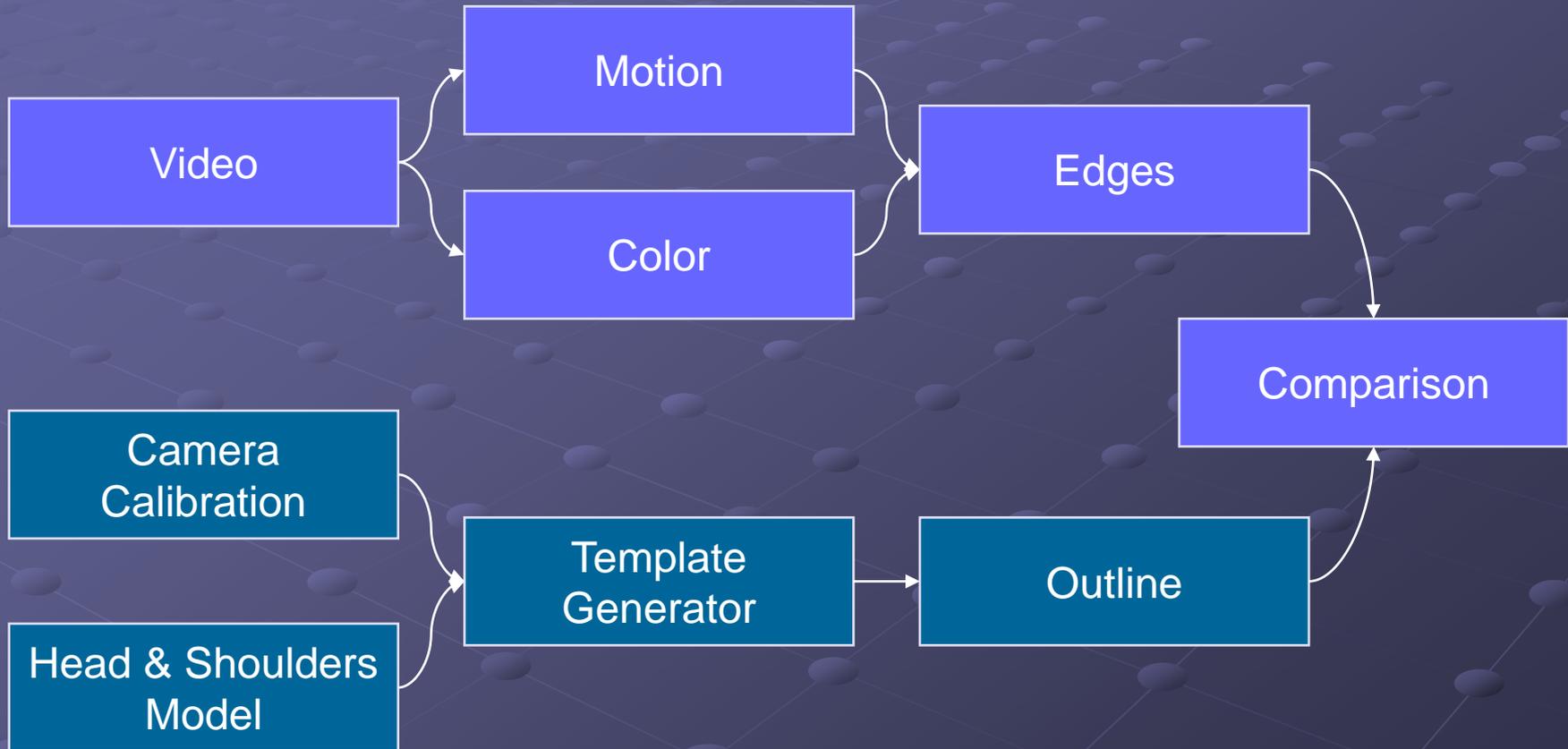
(267,195,180), 270°

(282,182,142), 292°

(219, 26,149), 270°

(176,188,139), 270°

People Localization: System Design



Challenges

● Inherent challenges

- No stereo
- Widely-varying occlusion levels
- Low contrast between walls and people
- Scale

● Implementation challenges

- Chamfer, Hausdorff, *etc.* distances have not been good discriminators yet