

# CSE 510: Advanced Topics in HCI

Design Tools

James Fogarty  
Daniel Epstein

Tuesday/Thursday  
10:30 to 12:00  
CSE 403



# ABC News and IDEO's Deep Dive

Things to see in this video:

brainstorming

inquiry

sketching

critique

Why build a shopping cart with no bottom?

A highly iterative design process  
with a variety of intermediate artifacts

# ABC News and IDEO's Deep Dive (1999)



# Sketching in Design (2007)

“Design is Choice”

“the creativity that you bring to enumerating meaningfully distinct options from which to choose”



# Sketching in Design (2007)

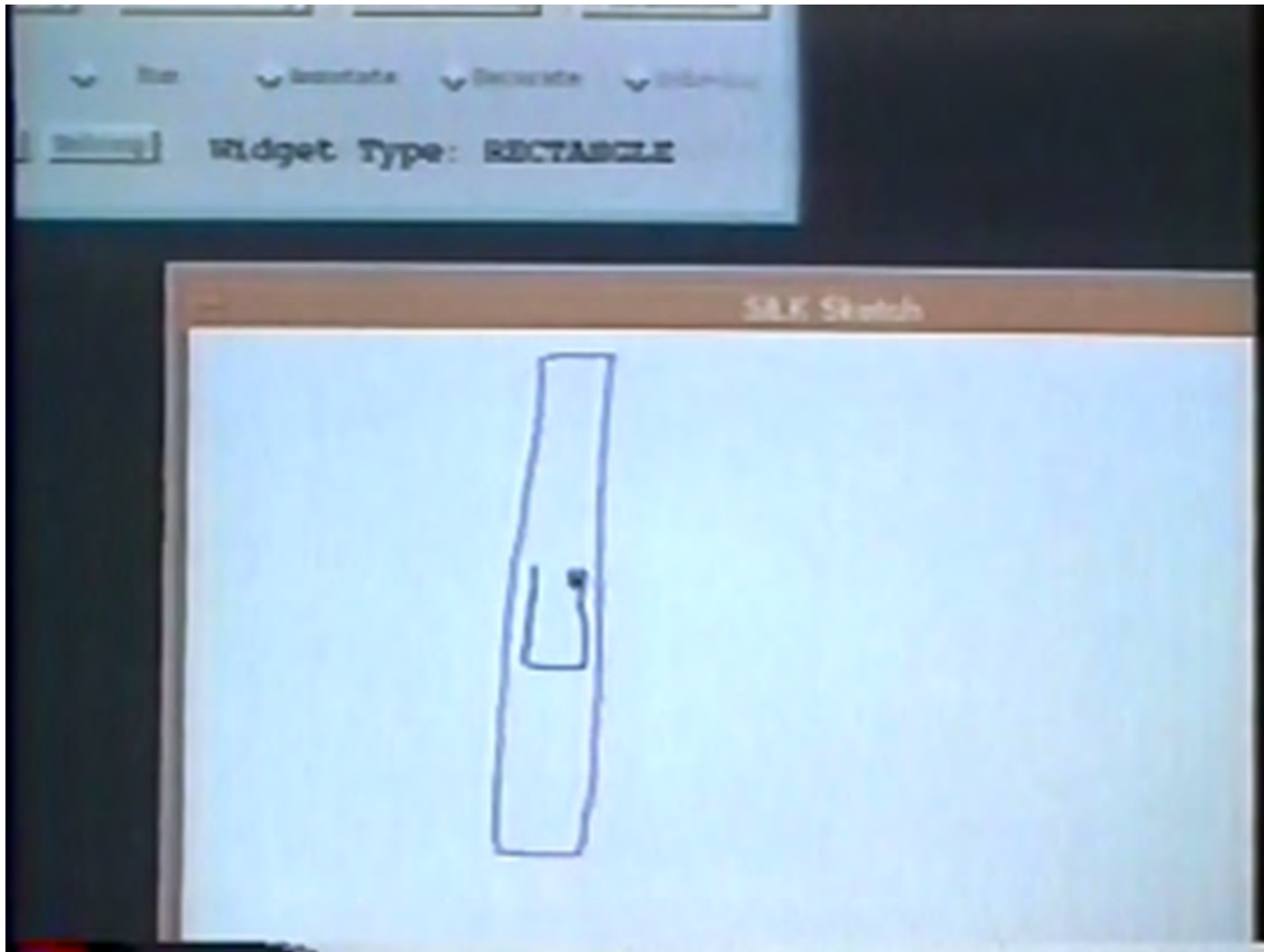
“Design is Choice”

“the creativity that you bring to defining the criteria, or heuristics, according to which you make your choices”

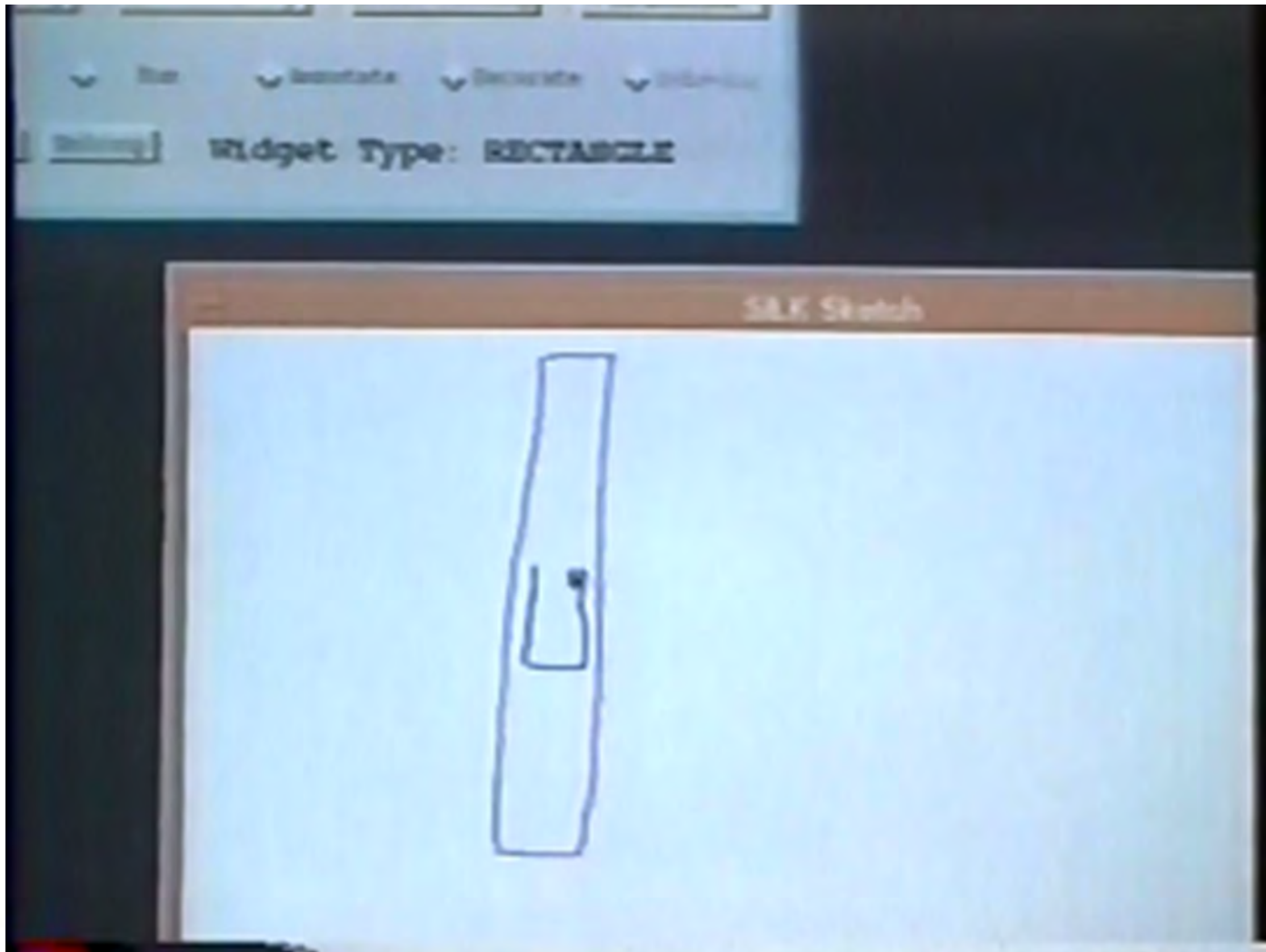




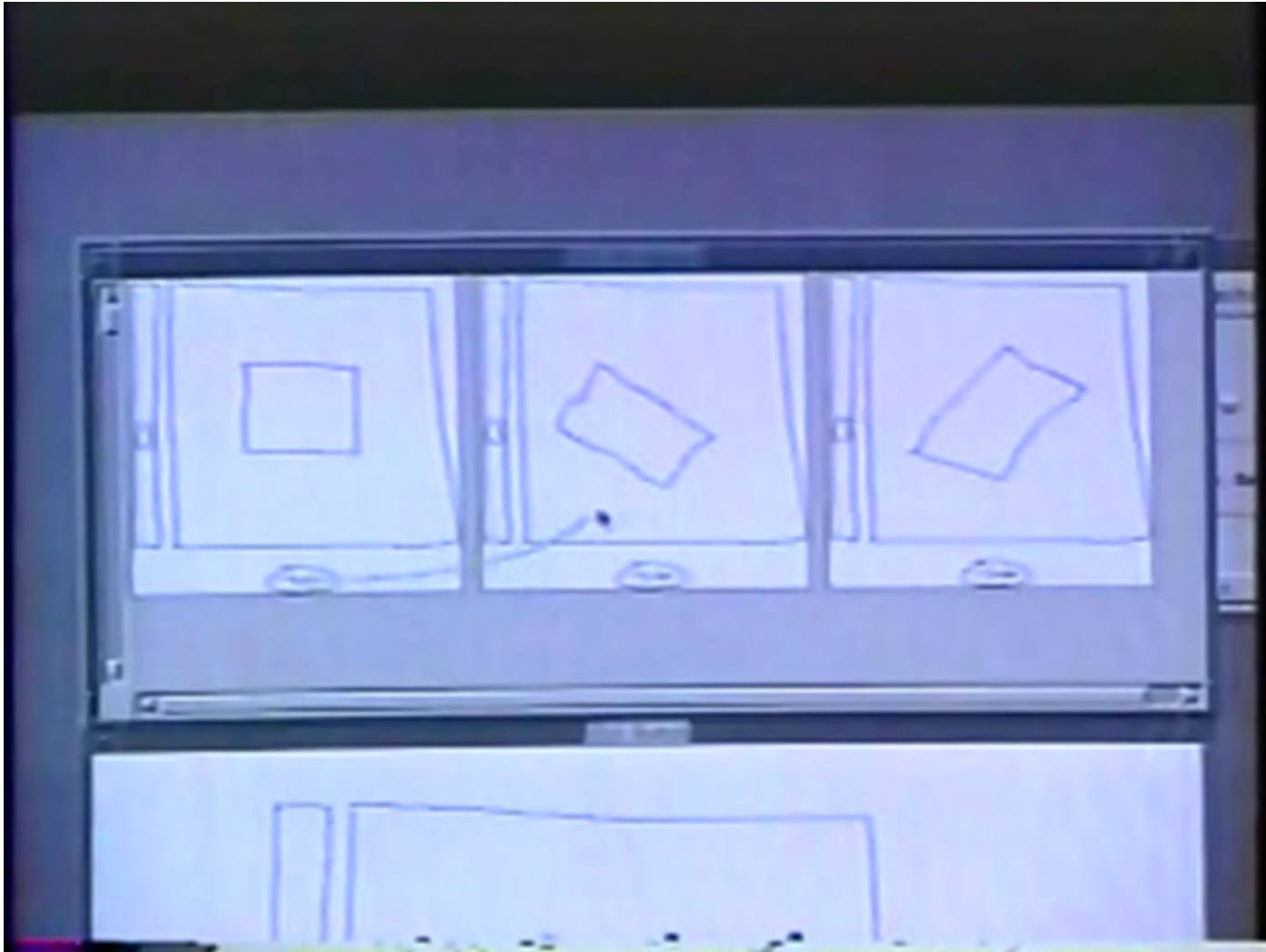
# SILK (1996)



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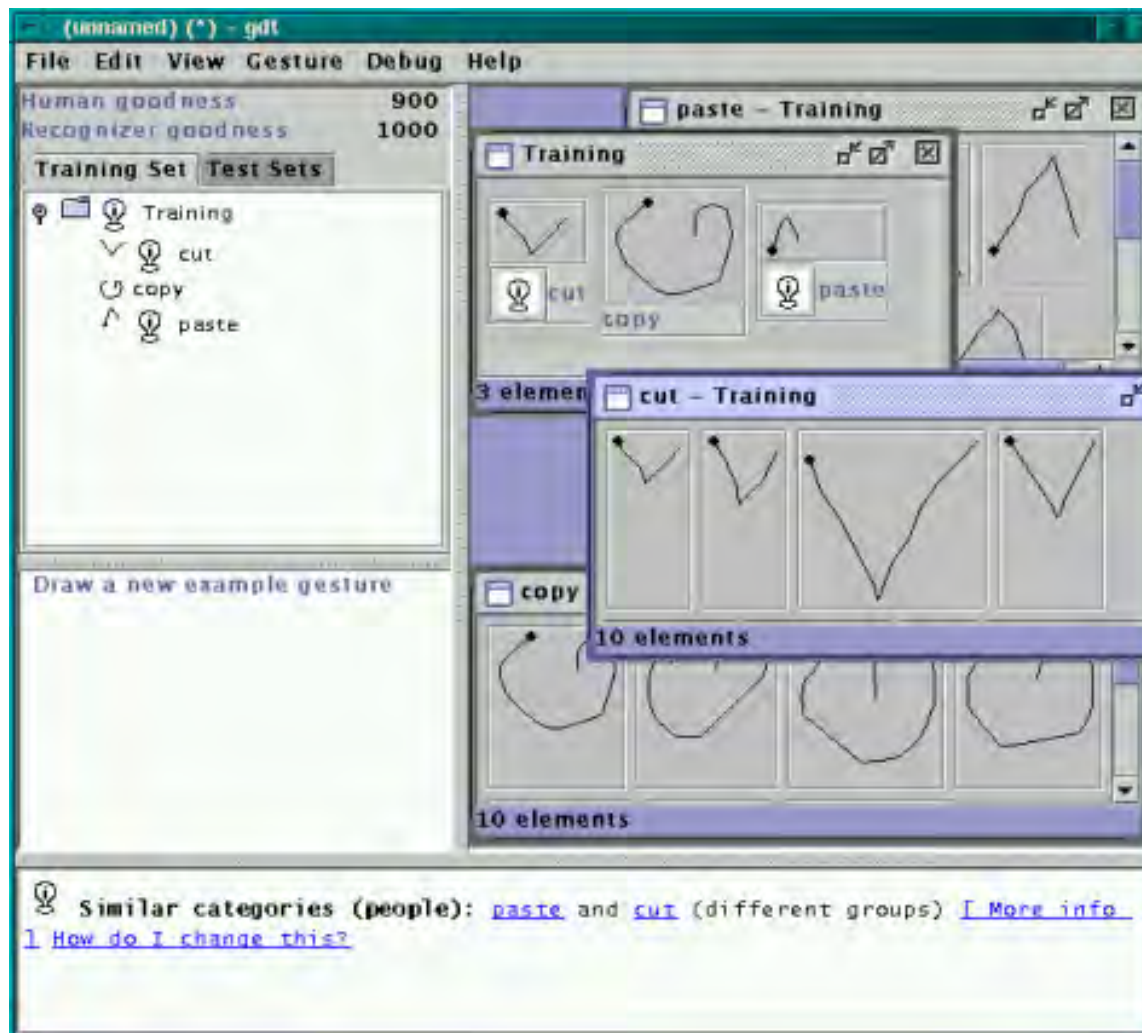


# SILK (1996)

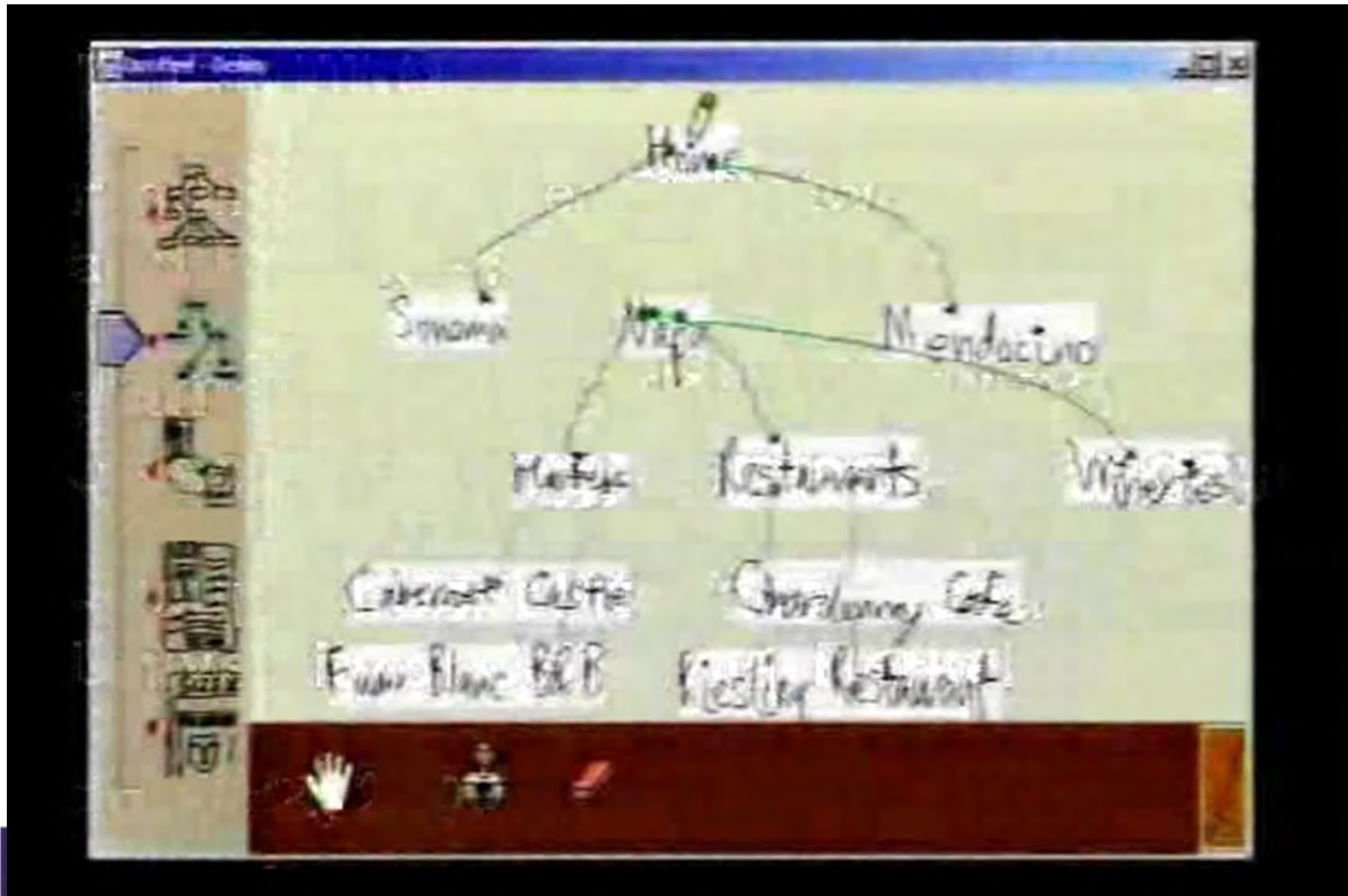




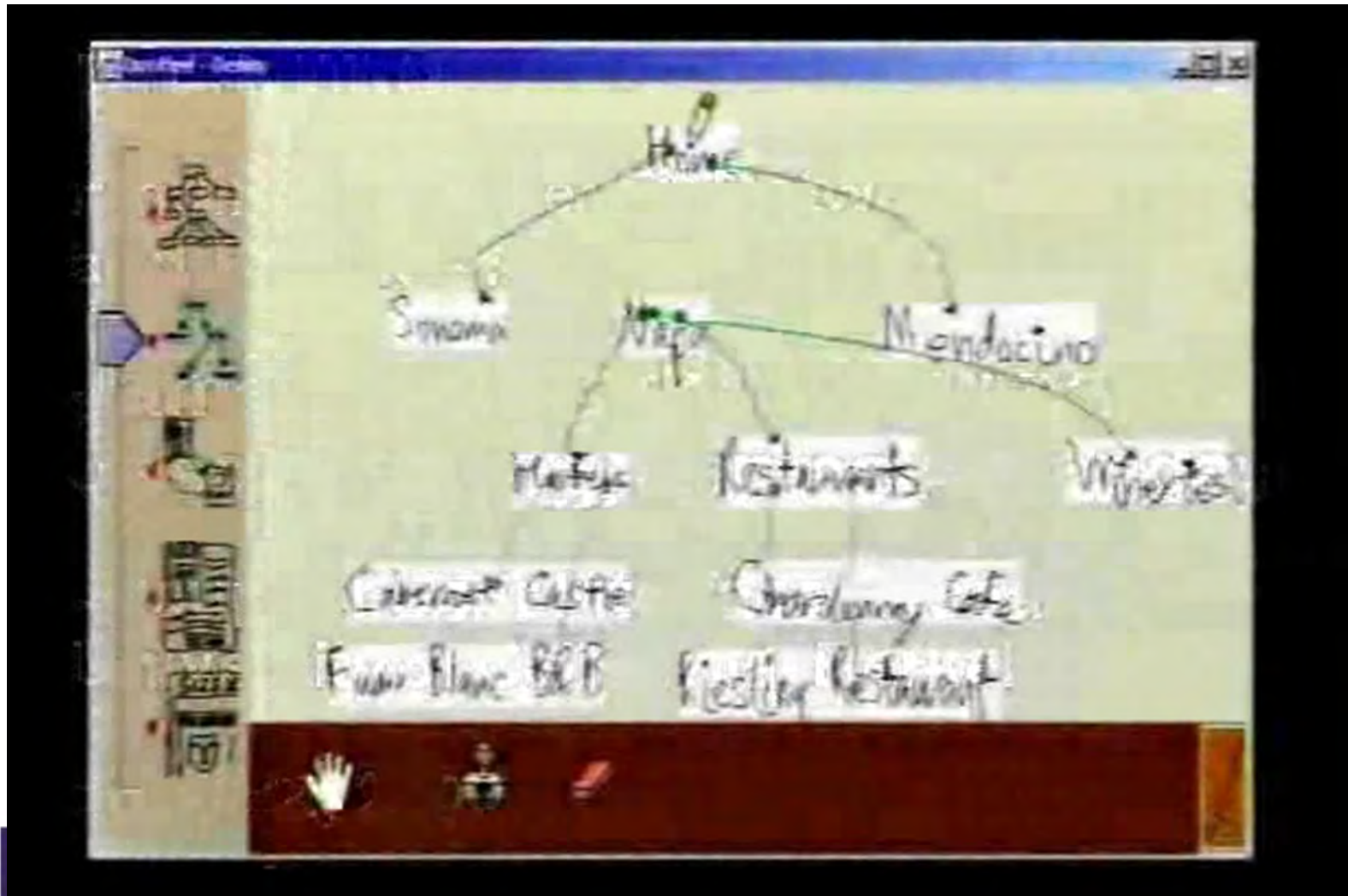
# QUILL (2000)



# DENIM (2000)

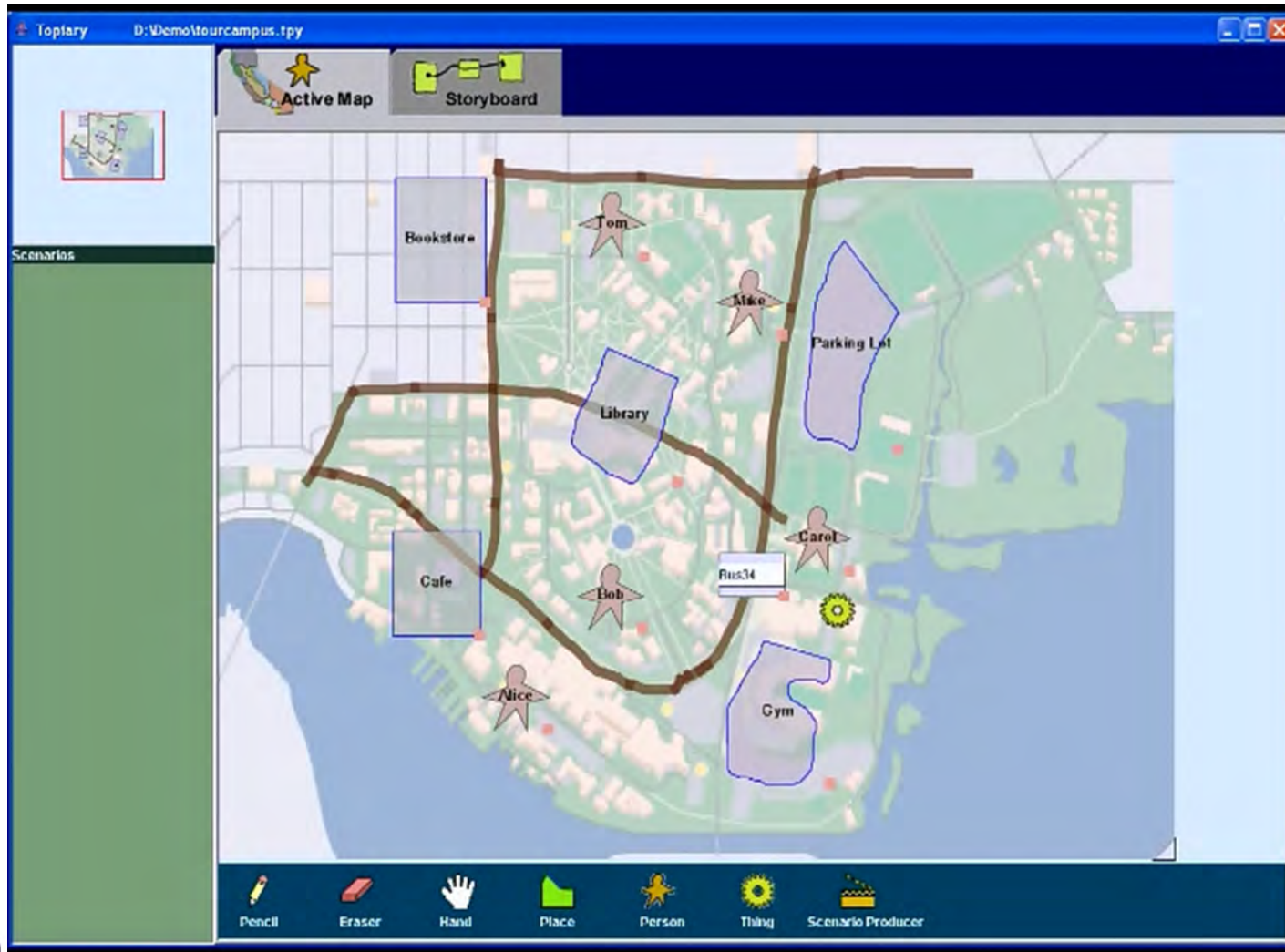


# DENIM (2000)

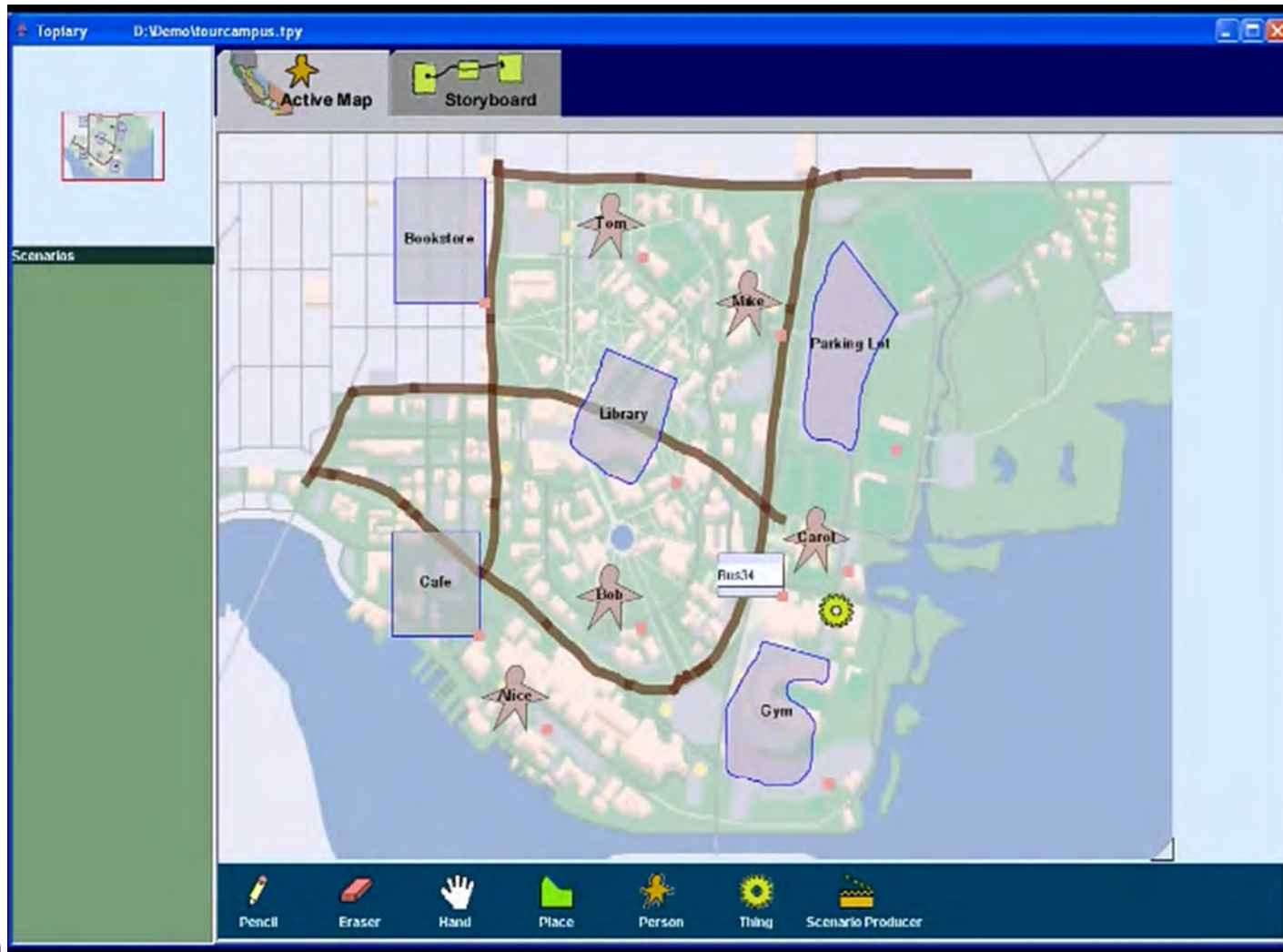




# Topiary (2004)



# Topiary (2004)





# Activity Designer (2008)

## ActivityDesigner

Activity-Based Prototyping of Ubicomp Applications

Yang Li & James Landay

Computer Science & Engineering  
University of Washington

Intel Research Seattle

January 2008



# Designer's Outpost (2001)



# Designer's Outpost (2001)



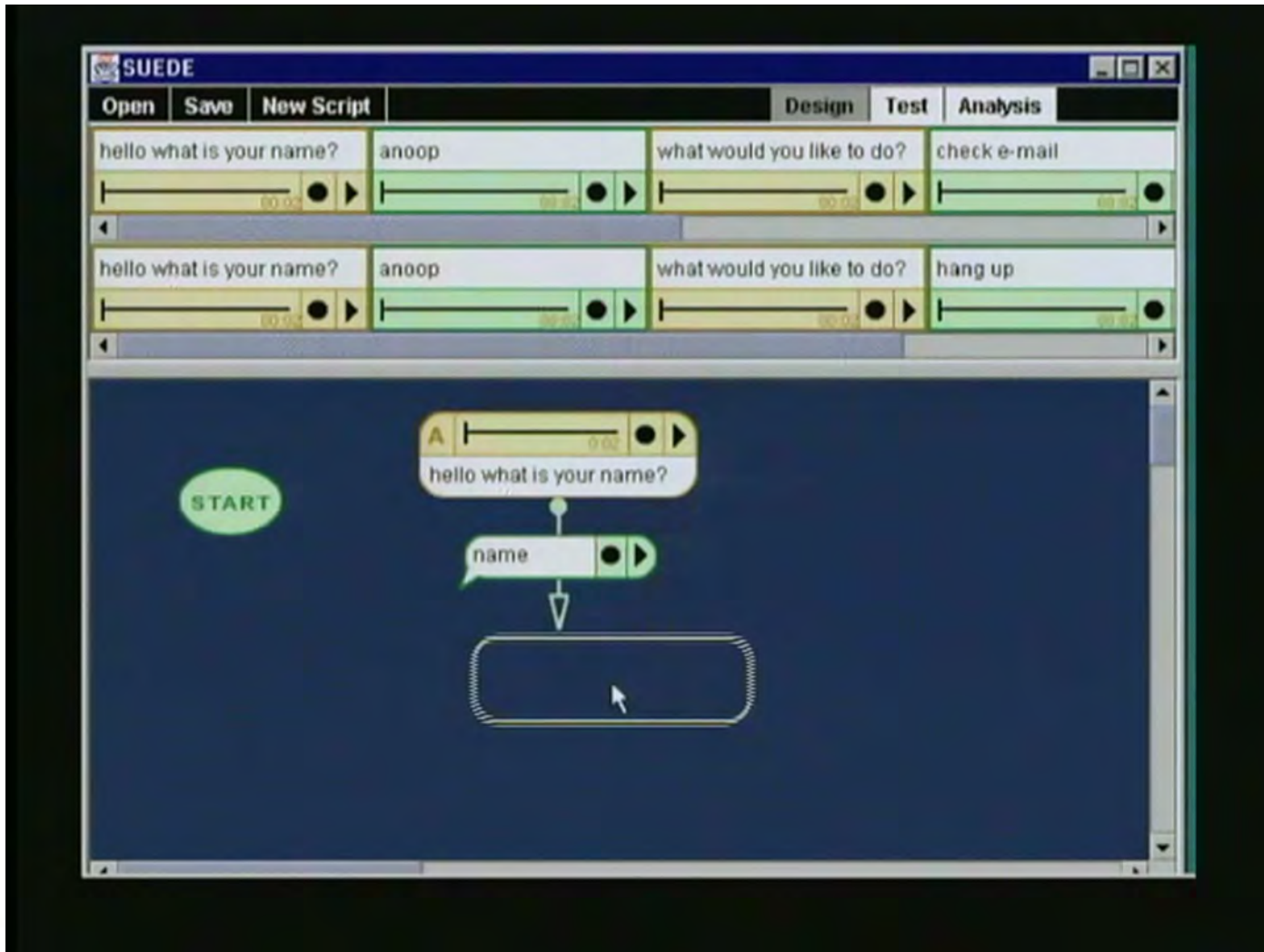
# FrameWire (2010)

## FrameWire

- analyzes paper prototype test video
- extracts interaction logic
- generates functional prototypes

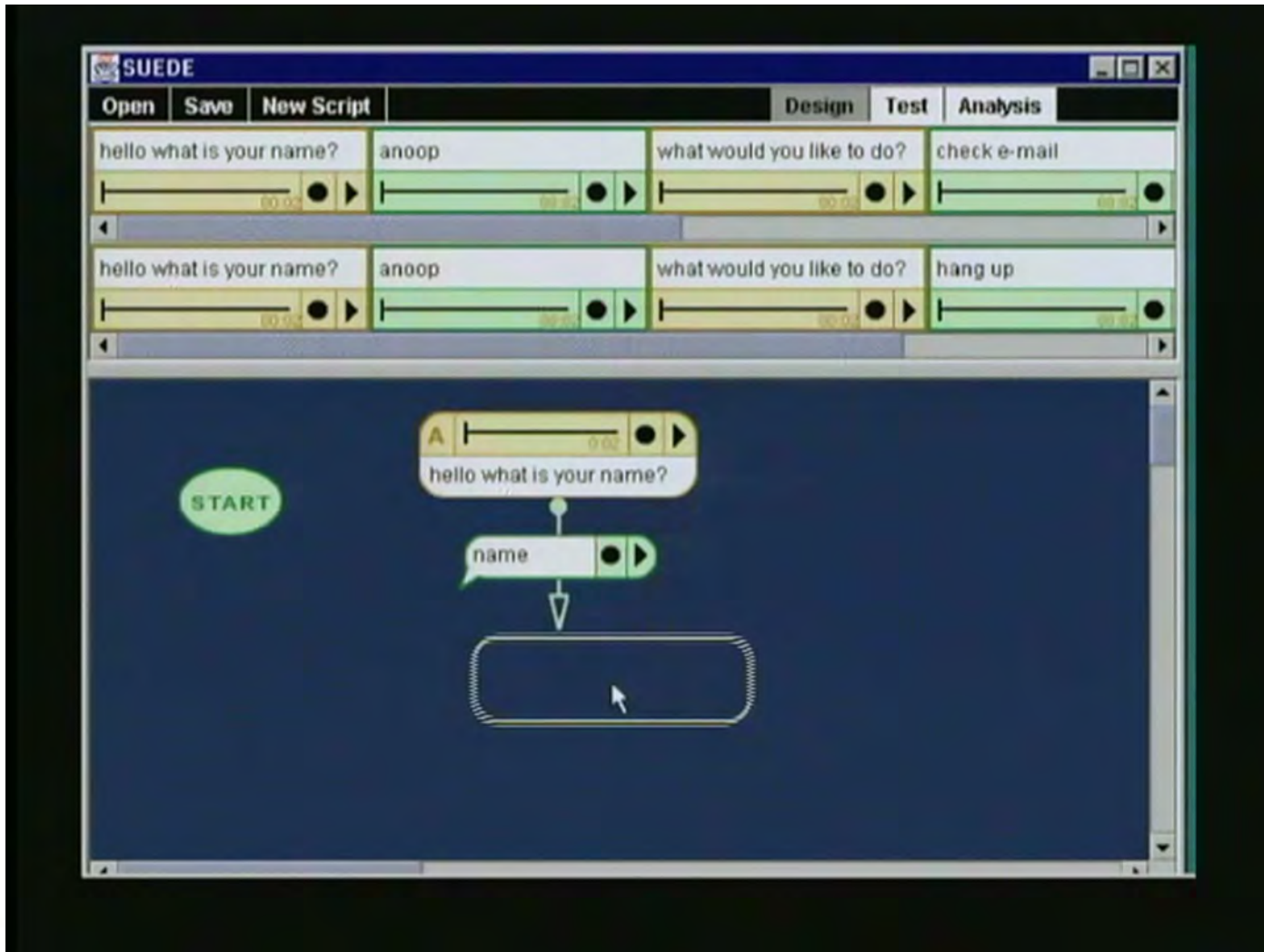


# SUEDE (2000)

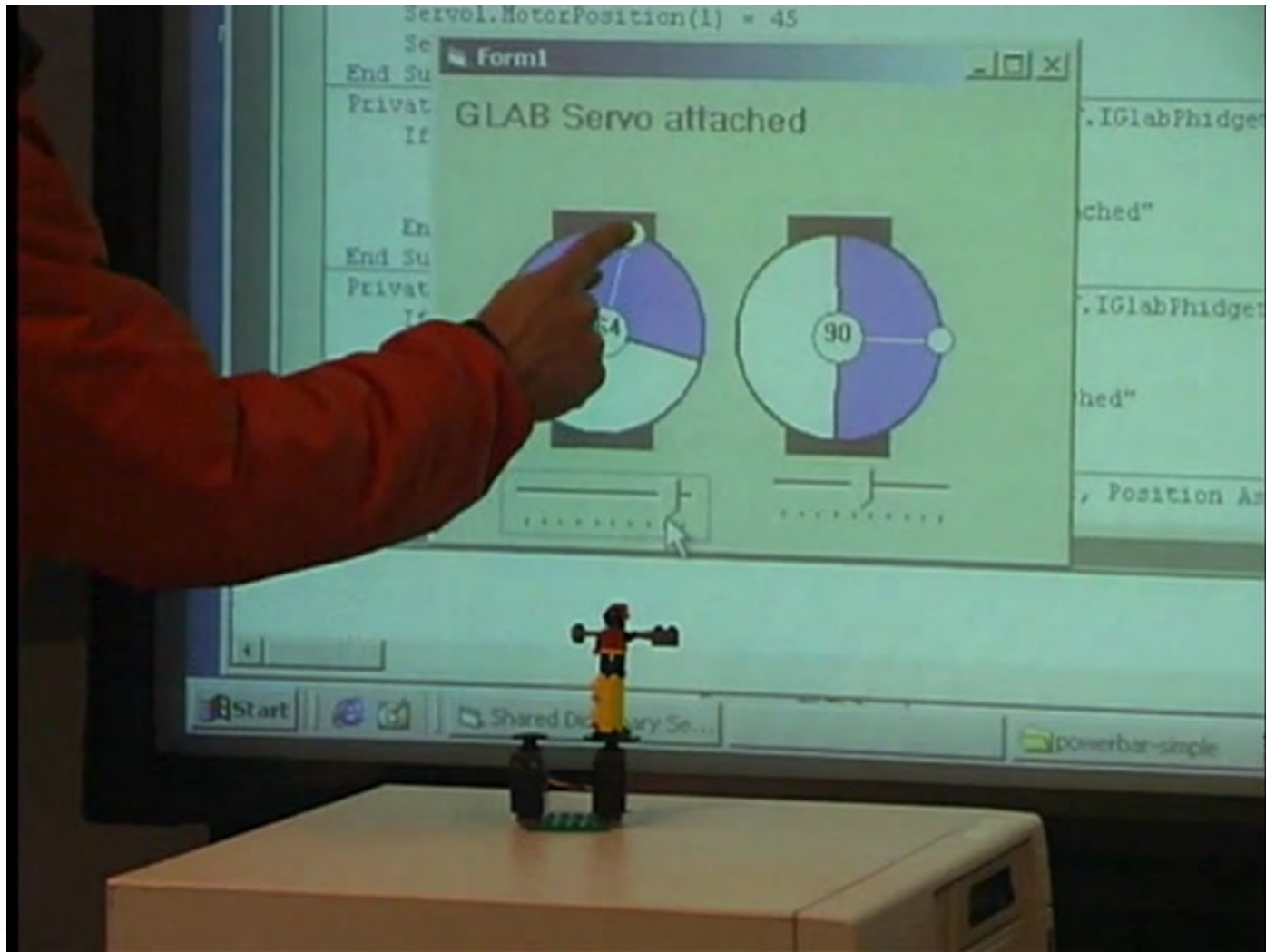




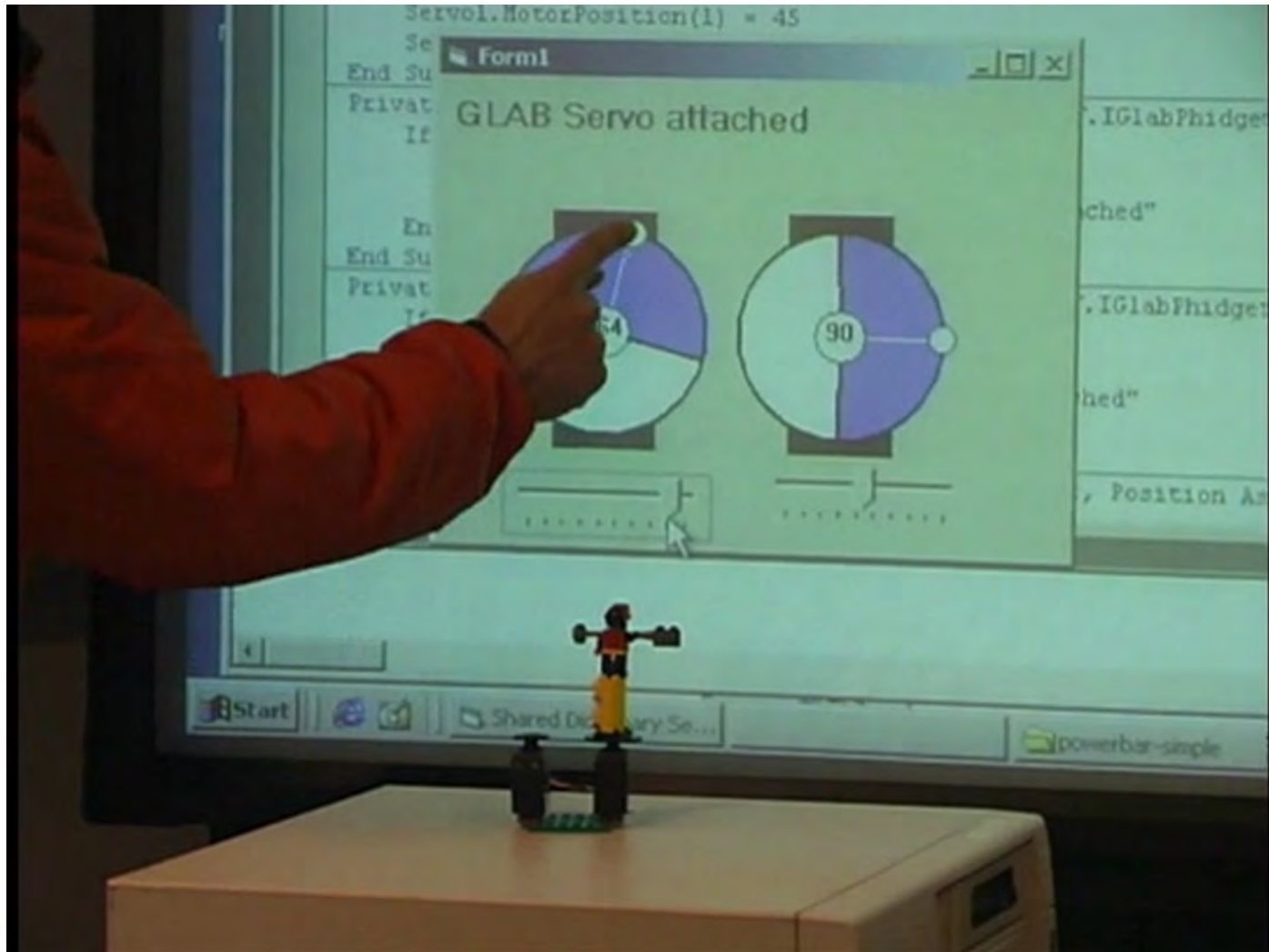
# SUEDE (2000)



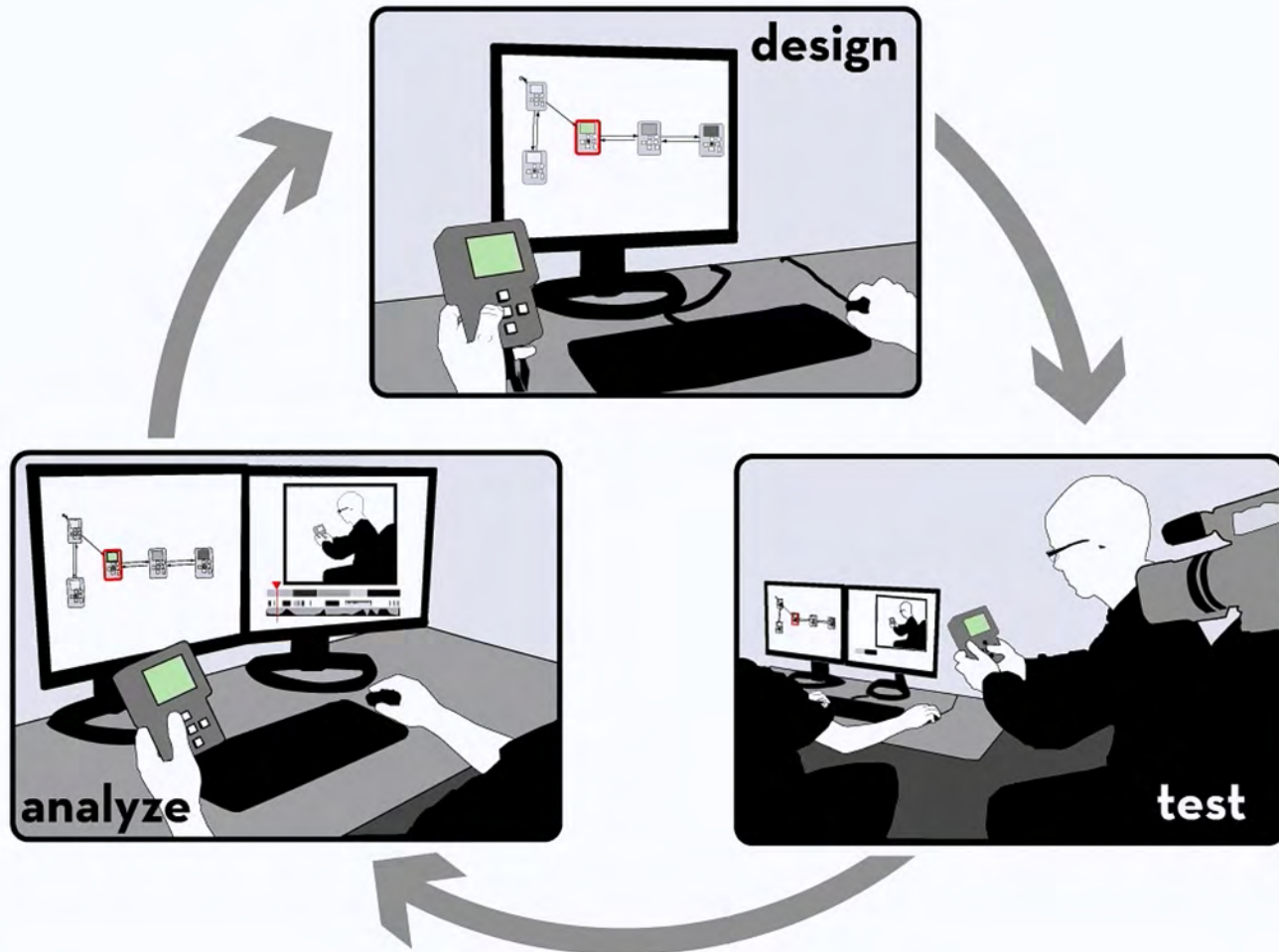
# Phidgets (2001)



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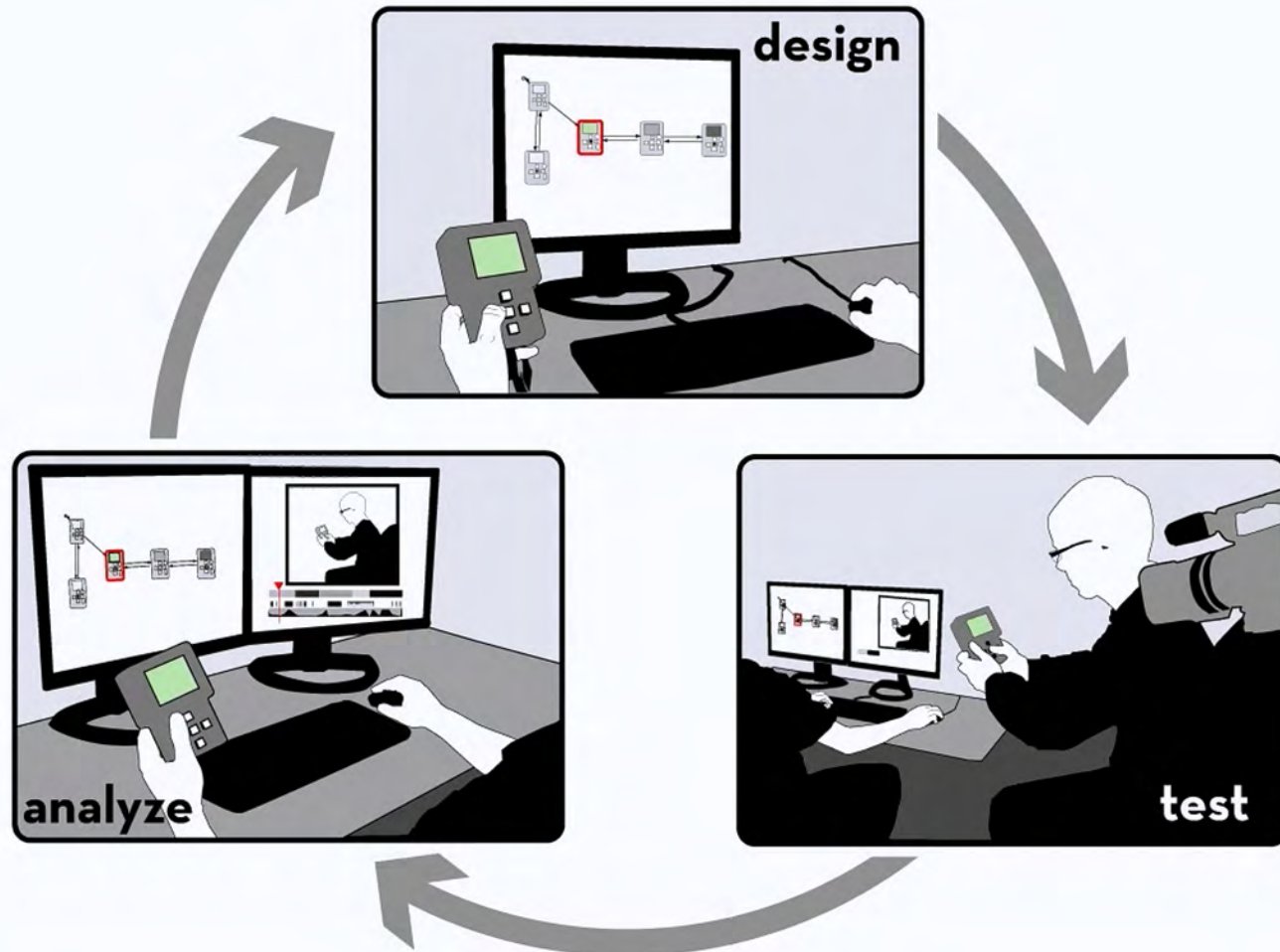


# d.Tools (2006)



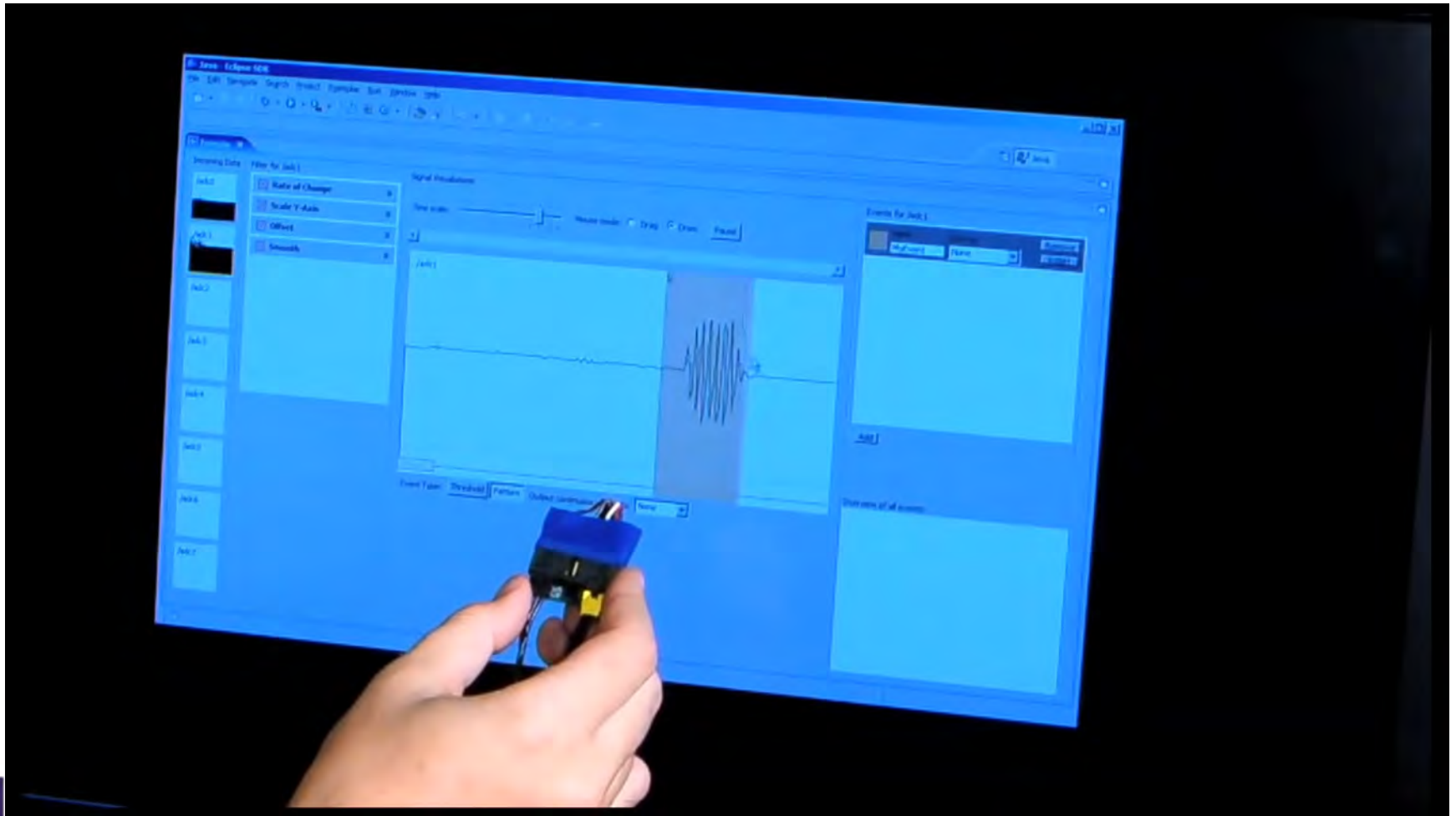


# d.Tools (2006)

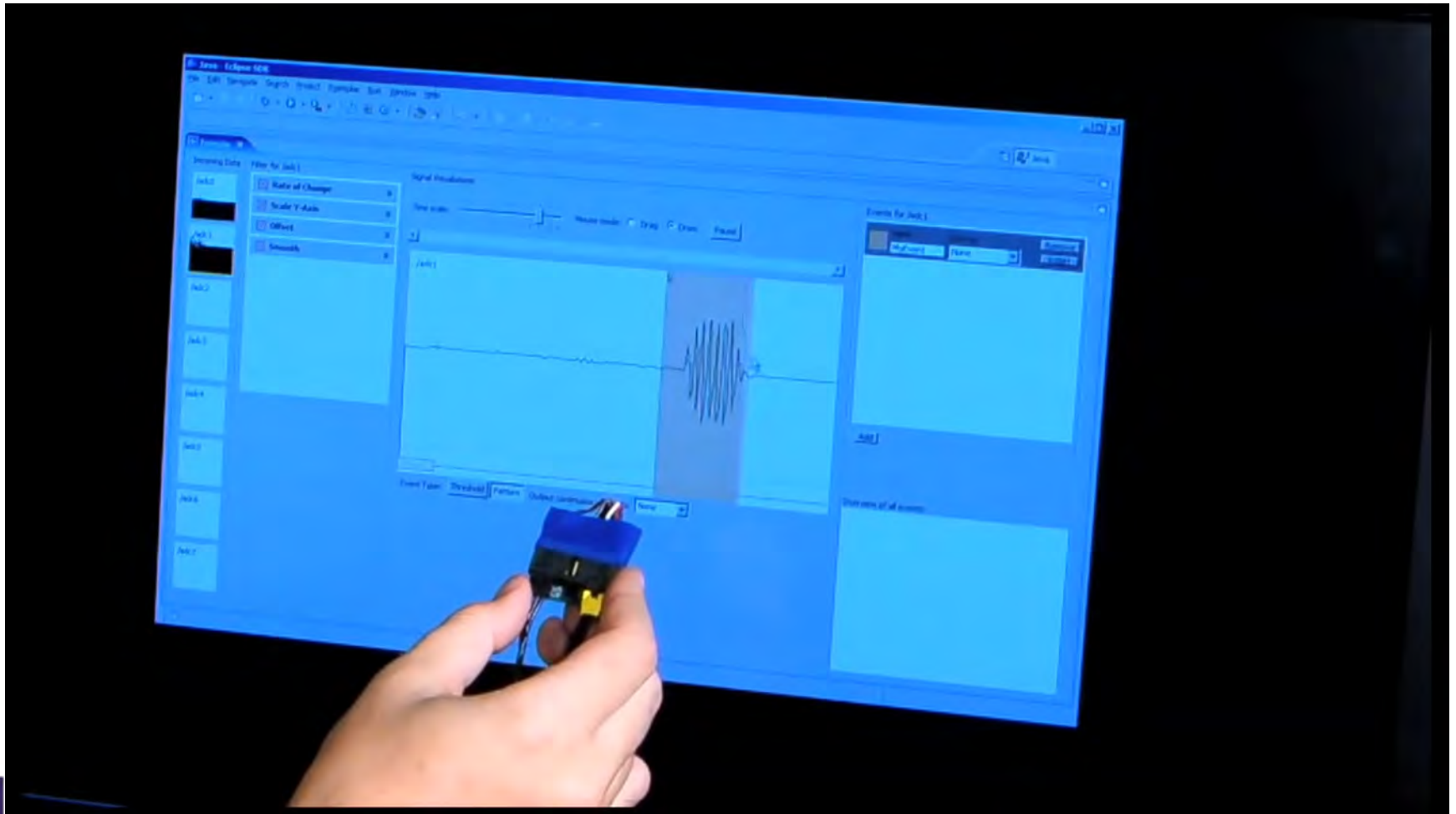




# Exemplar (2007)



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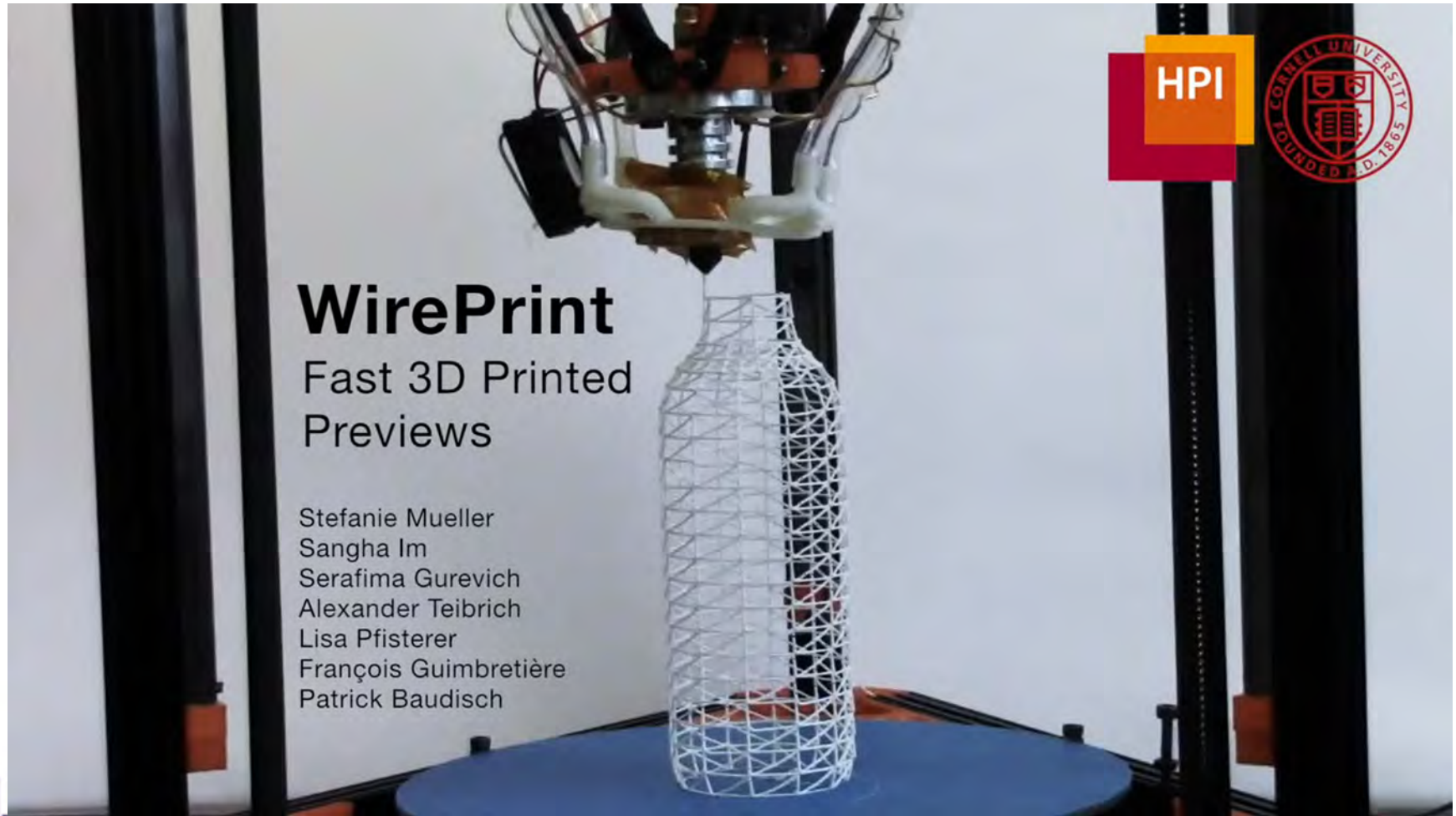


# Constructable (2012)



**coñstructable**  
interactive lasercutting

# WirePrint (2014)



HPI



## WirePrint Fast 3D Printed Previews

Stefanie Mueller  
Sangha Im  
Serafima Gurevich  
Alexander Teibrich  
Lisa Pfisterer  
François Guimbretière  
Patrick Baudisch



# faBrickation (2014)



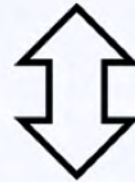
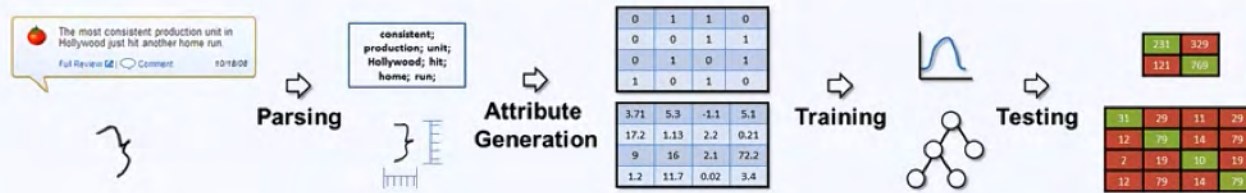
## faBrickation

Stefanie Mueller, Tobias Mohr, Kerstin Guenther,  
Johannes Frohnhofen, Patrick Baudisch

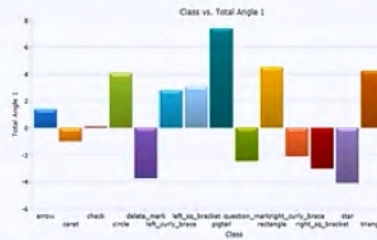
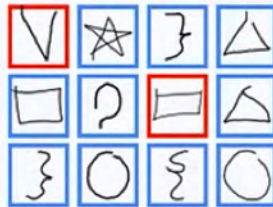


# Gestalt (2010)

## Implementation



## Analysis



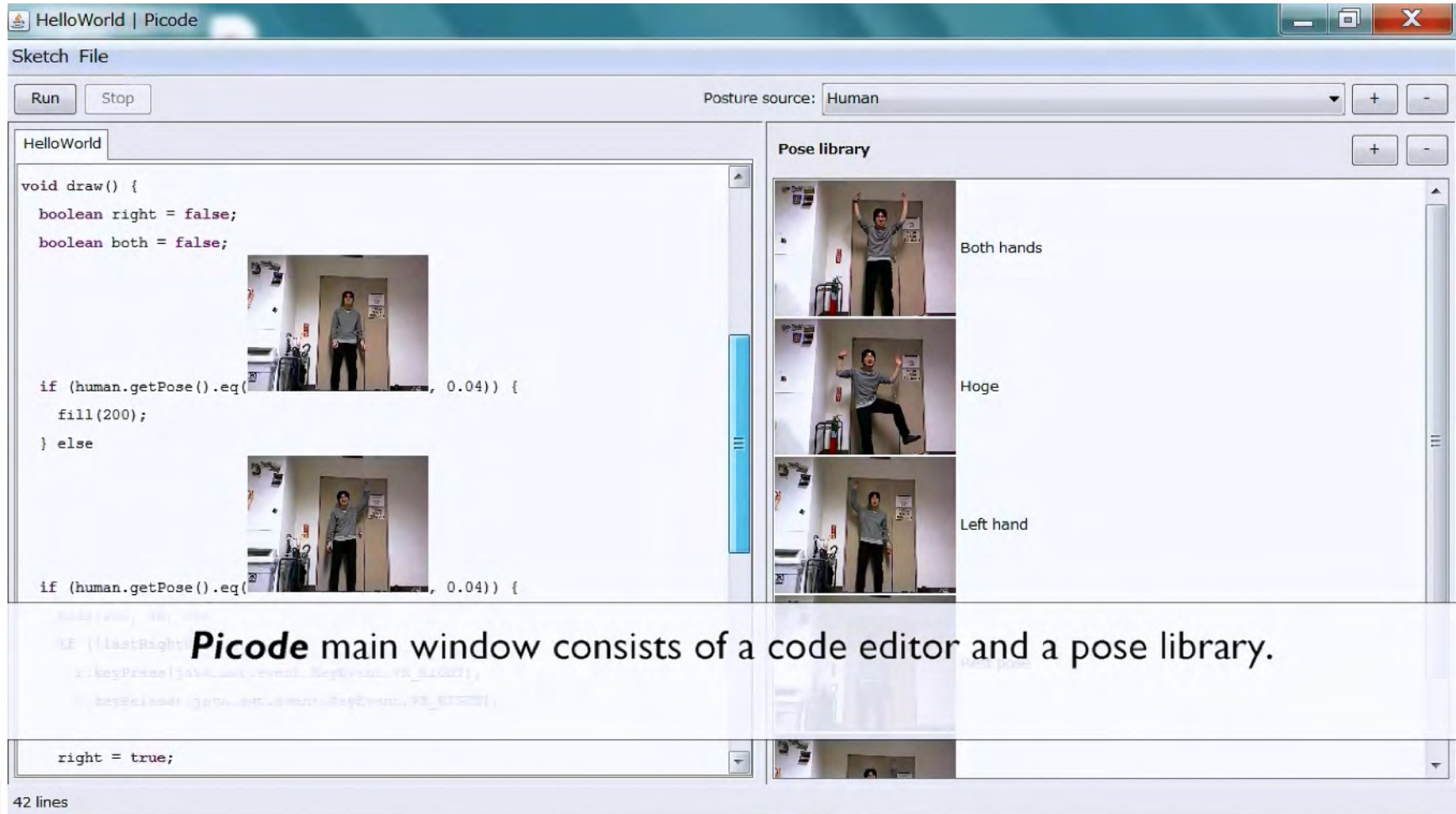
31	29	11	29
12	79	14	79
2	19	10	19
12	79	14	79

# DejaVu (2012)

The screenshot displays the SharpDevelop IDE with the following components:

- Code Editor (Window1.xaml.cs):** Shows C# code for KinectDress.Window1. The `OnKinectFramesReady` method calculates `distanceAverage` and checks for a `rightSwipe` gesture. It includes comments for gesture recognition and depth processing.
- DejaVu Canvas:** A hand-drawn diagram on the left shows a stick figure with a box around its head and an arrow pointing to a video frame. The video frame, labeled "Color input", shows a person in a hallway. A box on the right displays the value `2.934` for `distanceAverage`.
- DejaVu Timeline:** A playback interface for "Session 3" (88 frames, 5.44s). It shows a sequence of frames with timestamps: #66 (2.40s), #68 (2.46s), #70 (2.52s), #72 (2.91s), #74 (3.20s), #76 (3.55s), and #78 (3.87s). The "Color" track shows the video frames, and the "distanceAverage" track shows the corresponding values.
- Status Bar:** Indicates "Build finished successfully." and shows coordinates "In 90 col 19 ch 10".

# Picode (2013)



**Picode** main window consists of a code editor and a pose library.

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