Materials List for: Creating Objects and Object Categories for Studying Perception and Perceptual Learning

Karin Hauffen^{1,2,3}, Eugene Bart⁴, Mark Brady⁵, Daniel Kersten⁶, Jay Hegdé^{1,2,3}

¹Brain and Behavior Discovery Institute, Georgia Health Sciences University

²Vision Discovery Institute, Georgia Health Sciences University

³Department of Opthalmology, Georgia Health Sciences University

⁴Intelligent Systems Laboratory, Palo Alto Research Center

⁵Pattern Recognition Systems, Palo Alto Research Center

⁶Department of Psychology, University of Minnesota

Correspondence to: Jay Hegdé at jay@hegde.us

URL: https://www.jove.com/video/3358 DOI: doi:10.3791/3358

Materials

| Name | Company | Catalog Number | Comments |
|---|--|----------------|--|
| Digital Embryo Workshop (DEW) | Mark Brady and Dan Gu | | This user-friendly, menu-driven tool can be downloaded free of charge as Download 1 from http:// www.hegde.us/DigitalEmbryos. Currently available only for Windows. |
| Digital embryo tools for Cygwin | Jay Hegdé and Karin Hauffen | | This is a loose collection of not-so-user-friendly programs. They are designed to be run from the command-line interface of the Cygwin Linux emulator for Windows. These programs can be downloaded as Download 2 from http:// www.hegde.us/DigitalEmbryos. The Cygwin interface itself can be downloaded free of charge from www.cygwin.com. |
| Autodesk 3ds Max, Montreal, Quebec, Canada | Autodesk Media and Entertainment | 3DS Max | This is a 3-D modeling, animation and rendering toolkit with a flexible plugin architecture and a built- in scripting language. Available for most of the current operating systems. |
| MATLAB | Mathworks Inc., Natick, MA, USA | MATLAB | This is a numerical computing environment and programming language with many useful add-on features. Available for most of the current operating systems. |
| R statistical toolkit | R Project for Statistical Computing | R | Can be downloaded free of charge from http://www.r-project.org/. Available for most of the current operating systems. |
| OpenGL | Khronos Group | OpenGL | This cross-language, cross- platform graphical toolkit can be downloaded free of charge from www.opengl.org. |
| V-Flash Personal Printer | 3D Systems Inc., Rock Hill, SC, USA | V-Flash | This is a good value for all 3-D printing applications described in this report. The print materials are also vended by 3D Systems, Inc. Less expensive models are |

| | | | available in open source form from RepRap (rapmanusa.com) and MakerGear. More expensive models (> \$30 K) are available from Objet Geometries, 3DS Systems, Z-Corp, Dimension Printing etc. |
|-------------------------------------|-------------------------------|-------------------|---|
| TurboSquid.com | TurboSquid Inc., New York, LA | (various objects) | Various virtual 3-D objects can be downloaded from this site free of charge or for a fee. |
| Table 1. Table Of Specific Toolkits | And Equipment. | • | 2 |