Thesis

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Contents

1 Introduction

2 Related Work

2.1 2-D Drawing

Illustrator http://www.adobe.com/products/illustrator.html

Mischief https://www.madewithmischief.com/

2.2 3-D Modeling in CAD

Rhino

AutoCAD

Maya / 3DMAX

2.3 3-D Sketching in CAD

SolidWorks

http://help.solidworks.com/2014/English/SolidWorks/sldworks/c$_3D_Sketching_Capabilities.htm$

ILoveSketch / EverybodyLovesSketch

http://www.ilovesketch.com/

2.4 Other Work in 3-D Sketching

Augmented Reality In-Situ 3D Sketching of Physical Objects http://creativemachines.cornell.edu/papers/IU

Hyve 3D http://www.hybridlab.umontreal.ca/documents/37-siggraph2014.pdf

Gravity http://gravitysketch.com/

Sketch http://graphics.cs.brown.edu/research/sketch/

Polyes Q1 Pen http://technabob.com/blog/2014/12/29/polyes-q1-3d-sketching-pen/

2.5 3-D Media Interaction

Gestures vs. Postures: 'Gestural' Touch Interaction in 3D Environments http://tobias.isenberg.cc/personal/

A Survey of Interaction Techniques for Interactive 3D Environments http://www.grey-eminence.org/papers/EG2013-STAR.pdf

Interaction with 3-D environments using Multitouch Screens http://www.researchgate.net/publication/2$Touch_Screens$

2.6 Touch Based User Interfaces

Dual touch: a two-handed interface for pen-based PDAs http://vp5qw4uf5x.scholar.serialssolutions.com/?si handed+interface+for+pen-based+PDAsid=doi:10.1145/354401.354774

2.7 Pen Based User Interfaces

Pen Based Interaction http://www.academia.edu/2236260/Pen-based$_Interaction_-_Next_Generation_User_Int$
$DINF - 15756$

Pen-based User Interface http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=arnumber=1349146

Experimental Analysis of Mode Switching Techniques in Pen-based User Interfaces http://research.microsoft.com/en-us/um/people/kenh/papers/p226-li.pdf

2.8 Splines

Curve Global Interpolation http://www.cs.mtu.edu/ shene/COURSES/cs3621/NOTES/INT-APP/CURVE-INT-global.html

Smooth Spline Through Prescribed Points https://www.particleincell.com/2012/bezier-splines/

Spline Interpolation http://scaledinnovation.com/analytics/splines/aboutSplines.html

3 The Design Process

3.1 Conceptual Design

3.2 Computer Aided Design

3.3 Computer Aided, Early Phase Design

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4.2 Touch

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5 Splines

Curve Global Interpolation http://www.cs.mtu.edu/ shene/COURSES/cs3621/NOTES/INT-APP/CURVE-INT-global.html

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