

Thesis

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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/c3DsketchingCapabilities.htm>
 I Love Sketch / Everybody Loves Sketch
<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.greymine.org/papers/EG2013-STAR.pdf>
 Interaction with 3-D environments using Multitouch Screens http://www.researchgate.net/publication/270888888_TouchScreens

2.6 Touch Based User Interfaces

Dual touch: a two-handed interface for pen-based PDAs <http://vp5qw4uf5x.scholar.serialssolutions.com/?si=handled+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_Interface_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

4 Input

4.1 Pen

4.2 Touch

4.3 Gesture

5 Splines

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

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