

Introduction to Maya 2016

Chapter 1 Introduction to Computer Graphics and 3D

A Preview of the CG Process

The CG Production

Workflow Digital Images

Chapter 2 Jumping into Basic Animation Headfirst

You Put the U in User Interface

Project: The Solar System

Creating a Project

The Production Process: Creating and Animating the

Objects Hierarchy and Maya Object Structure

The Solar System, Resumed

Outputting Your Work: Playblasting

Chapter 3 The Autodesk Maya 2016 Interface

Navigating in Maya

Exploring the Maya Layout

Building a Decorative Box

Mapping the Box's Reference Planes with

Hypershade Organizing Workflow with the Layer

Editor Modeling the Decorative Box

Editing the Decorative Box Model Using the Shelf

Continuing the Decorative Box Model

Finishing the Decorative Box Model

Chapter 4 Beginning Polygonal Modeling

Planning Your Model

Polygon Basics

Poly Editing Tools

Putting the Tools to Use: Making a Cartoon

Hand Creating Areas of Detail on a Poly Mesh

Modeling a Catapult

Chapter 5 Modeling with NURBS Surfaces and Deformers

NURBS for Organic Curves
Using NURBS Surfacing to Create
Polygons Converting a NURBS Model to
Polygons Using Artisan to Sculpt NURBS
Creating a Pair of Glass Candle Holders
Modeling with Simple Deformers
The Lattice Deformer
Animating Through a Lattice

Chapter 6 Practical Experience!

Evaluating the Toy Plane
Building the Landing pontoons
Oh, What a Body! Modeling the Body of the Plane
The Rear Stabilizers
You Spin Me Right Round—The Engine and
Propeller The Plane's Wings
Assembling the Plane

Chapter 7 Autodesk® Maya® Shading and Texturing

Maya Shading
Shader Types
Shader Attributes
Shading and Texturing the Toy Plane
Textures and Surfaces
Textures and UVs for the Red Wagon
Photo-Real Mapping: The Decorative
Box Toon Shading
For Further Study

Chapter 8 Introduction to Animation

Keyframe Animation: Bouncing a
Ball Throwing an Axe
Replacing an Object
Animating Flying Text
Animating the Catapult

Chapter 9 More Animation!

Skeletons and Kinematics

Skeletons: The Hand

Inverse Kinematics

Basic Relationships: Constraints

Basic Relationships: Set-Driven

Keys Rigging the Locomotive

Creating a Simple Character Rig

For Further Study

Chapter 10 Autodesk Maya Lighting

Basic Lighting Concepts

Maya Lights

Light Linking

Adding Shadows

Raytracing Soft Shadows

Mental ray Lighting

Mental ray Physical Sun and Sky

Lighting Effects

Assembling and Lighting a Scene

Further Lighting Practice

Tips for Using and Animating

Lights

Chapter 11 Autodesk® Maya® Rendering

Rendering Setup

Previewing Your Render: The Render

View Window

Setting the Default Renderer

Reflections and Refractions

Using Cameras

Motion Blur

Batch Rendering

Rendering the Wine Bottle

Mental ray for Maya

Render Layers

Final Gather

Ambient Occlusion

HDRI

Displacement Mapping the Decorative

Box Rendering the Scene with mental ray

Chapter 12 Autodesk® Maya® Dynamics and Effects

An Overview of Maya Dynamics

Rigid Bodies

Rigid Body Dynamics: Shoot the

Catapult! nParticle Dynamics

Emitting nParticles

Animating a Particle Effect:

Locomotive Steam

Introduction to Paint Effects

Getting Started with nCloth

Customizing Maya

Additional Topic – Creating Content for Games and VR using Maya and Photoshop

Understanding concept art for contours, texture, and shadow

detail Modeling modular elements

Creating the low-poly-count elements

Building assets for virtual reality

Creating efficient models

Exporting the right file formats for VR

Understanding