

# The Blender Animation Toolkit Outline

## Chapter 1: The Tools

### 1.1 Introduction

- Overview of the series

### 1.2 The Viewport and Timeline

- Setting keys in the viewport
- Manipulating objects
- Viewport animation tools (e.g. breakdowner, push & relax)
- Visual aids (e.g. motion path and ghost)

### 1.3 Keying sets and auto keying

- introduction and basic usage
- user preferences for auto keying

### 1.4 The Dopesheet

- Retiming and editing animations
- Visual aids: (markers, keyframe coloring)

### 1.5 The Action Editor

- Actions: what they are and how they work
- Managing actions

### 1.6 The Graph Editor

- Applying fine polish to the animation curves
- Interpolation and handle types

### 1.7 The Non Linear Action editor (NLA)

- Using the NLA editor to blend and loop actions
- Limitations

### 1.8 The pose library

- Introduction and basic usage
- Various use cases (character expressions, etc.)

### 1.9 Rendering a preview

- OpenGL previews - the best settings
- How to make a good preview for getting critique

### **1.10.1 The Flex Rig - making your own characters**

- How to make your own characters
- How to save them
- How to use them in a scene

### **1.10.2 The Flex Rig - Animation Controls**

- A tour of the animation controls

## **Chapter 2: Character animation**

### **2.1 Body animation**

#### **2.1.1 Poses**

- Getting good character from your poses
- The importance of balance

#### **2.1.2 IK vs FK**

- What they are and when to use them
- IK/FK snapping manually

#### **2.1.3 Quaternion Rotation**

- Demystifying 4 dimensional rotations

#### **2.1.4 Posing Tips**

- Some tips on good character posing and what to avoid

### **2.2 Facial animation: lip sync**

#### **2.2.1 using audio in Blender**

#### **2.2.2 the phoneme method**

- Using the pose library
- Fast, but low quality

#### **2.2.3 the relative shapes method**

- More polished, more versatile

#### **2.2.4 Lip Sync With Relative Shapes**

#### **2.2.5 Lip Sync Tongue**

#### **2.2.6 Lip Sync Polish**

### **2.3 Facial animation: Eyes**

- Head follow : advantages, shortcomings
- Different types of blink

## **Chapter 3: A Physical Acting Shot**

*(A physical acting shot with 2 characters and a prop)*

- 3.1 File/directory organization
- 3.2 Character analysis and storyboarding
- 3.3 Layout and scene setup
- 3.4 Nathan's workflow
- 3.5 Shooting video reference
- 3.6 Planning/pose sketching
- 3.7 Blocking: Poses
- 3.8 Blocking: Timing
- 3.9 Blocking: Detail
- 3.10 Getting Critiques
- 3.11 Finishing

## **Chapter 4: A Dialogue Shot**

*(A dialogue shot with lip sync)*

- 4.1 Beorn's workflow
- 4.2 Storyboarding
- 4.3 Layout and scene setup
- 4.4 Reference footage and sketches
- 4.5 Blocking - first pass
- 4.6 Blocking - second pass
- 4.7 Getting feedback
- 4.8 Splining
- 4.9 Polish