CHAPTER I – INTRODUCTION

1.1. Background

There are many styles in 2D and 3D animation. There are also combination styles between 2D and 3D animation styles. Cel Shading is one of the combination styles. It is applied at 3D animation with a traditional touch from 2D animation styles. Ink splatter and calligraphic strokes are kind of design elements which could make dramatic looks in graphic design or animation. Both of the styles have one similarity, which are their bold strokes that define every object and make it contrast between each other.

3D cel shaded animation style is unique, because it is a hybrid style between traditional 2D and digital 3D animation style. The gate to make it unique is the renderer of relevant 3D softwares (like Autodesk 3Ds Max, Maya, etc.), where it applies 2D coloring simulation onto 3D object. The final result is 3D object that represented in comical colors.

There are many video games which apply this style and serve it to gamers in different way. Like in Zelda: Ocarina of Time (Game Cube), it uses borderless cel shaded style. But when we see Okami (Play Station 2), this style is served in thick border and Japanese taste.

Knowing the prospect to develop this hybrid style, the author sees that 3D cel shaded animation style could be developed into a new style. A hybrid style that blends cel shaded and ink splatter wrapped in Japanese calligraphic strokes.

1.2. Research Problems

Author found two important questions in this final project, namely:

1. How to bring an exciting and unique new style?
2. How to make the style?

Author will use them for sharpening problems that would describe in this paper.

1.3. Research Objectives

Therefore, the main purpose of this research is to develop a new 3D cel shaded hybrid style that combined with ink splatter then wrapped it in calligraphic strokes. The other purposes are stimulates author's imagination and creativity in technical way; reviving the essence of the cartoon or comics style in 3D animation; exploration and experiment of the software that has been taught in lectures.

1.4. Scope of Analysis

Many gamers and animators are familiar with 3D cel shaded style. But not all of them know how to make that style. Actually, there are many ways to make 3d cell shaded style. It can be done in map compositing. Otherwise it can be done in Autodesk 3Ds Max's Ink 'n Paint material.

Although those methods will be powerful to make cel shaded style, they have a little flaw. In map compositing technique, animators should make each cel shaded material for each object. For example if a character have a hand that contain three texture maps, the animator should make three different texture maps that contain cel

shaded material in each of those texture maps. Therefore, the animator should repeat the map compositing technique's steps for each texture maps that the character has.

Ink 'n Paint material technique also has weakness in rendering. Its render time is quite long. This technique can doubles the render time, compared with default scan line's render time. It is not an effective way to produce 3D cel shaded scene.

Author thinks about how to reduce the production time of making 3D object with cel shaded style. The time means the production time (making cel shaded 3D object) and the render time. Also, author has to think about how to make ink splatter in Autodesk 3Ds Max and combines it with 3D cel shaded then wrapped it in expressive and artistic calligraphic strokes.

1.5. Methodology

The methodology for this research is explained as follows:

2.1 Cel Shading Research

First step in doing this research is exploring how to make low time cost 3D cel shaded style. The technique to make it will be learnt to create master animation.

2.2 Ink Splatter Research

Once the object or character has been created, particles could be added onto itself. The particle contains black ink which would make splatter effect. The particle is added in Autodesk 3Ds Max, not in Adobe After Effect.

2.3 Calligraphic Stroke Effect Research

After the 3D works complete and rendered as image sequence, it will be developed and composited in Adobe After Effect. Then, the final output will be rendered in Adobe After Effect.