

Name: Arjun Dass

Course: CS-537 Interactive computer Graphics

Due Date: March 29, 2017

Video: Digital Humans: Crossing the Uncanny Valley in UE4 | GDC 2016 Event Coverage | Unreal Engine

The video describes how Epic game's Unreal Engine was able to achieve amazing facial animations and simulations of emotions in a character in real time. They used motion sensors in appropriate amount of lightning to capture perfects emotions like talking, blinking and eye movements. They used 3Lateral's pipeline for data processing for tracking features in textures to bring out emotions in a character. They also focused on blood flow using their pipeline to create more accurate expressions. After building the blend shapes using their pipeline and sensors, the core component called the Rig logic interprets the interface, which can be on face, based on animation preference. Rig logic ensures that you can actually share animation between characters. The unreal engine provides characters with necessary physics to control the animations Epic used skin photo reference to achieve photo realism. Unreal engine achieved real time CGI with the help of photo reference and Rig logic.

The content of the video was very interesting and indulging. Epic games surely changed the way CGI's were meant to be developed. The video was successful in explaining its new technology everywhere, with necessary description and derivations. All the speakers were able to properly describe their contribution to the project. The thing that I like the most was that every narrator explained their work with the help of proper animations and descriptions.

This is an area of my interest. The video amazed me with the fact how real time CGI can be achieved with almost realistic emotions and movements. The photo reference technology is an extra ordinary technology and should be used by every animation company for proper and live-like facial details.

The overall idea and technology used in the video was nice and evolutionary. The video described how proper real time animations can be achieved. The speakers

were also able to explain each and every fact they used in achieving so in a very descriptive manner. Epic Games have surely attained something revolutionary with their real-time CGI.