Shot Detection Survey and Analysis for Long Form Video Game Streams
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1 Abstract

Shot Boundary Detection, or simply Shot Detection, is a fundamental part of research in the broader field of video analytics, used for essential video analysis tasks such as video indexing and content-based video retrieval. For professional video game live streamers, who create hours of continuous content with significant downtime, identifying cuts in their streams is an important first step for automatically generating condensed stream highlights. In this project, I have summarized the nomenclature and methodologies established in the academic canon for Shot Detection research, implemented a sample of the most common approaches, Colour Histogram comparison and Edge Change Ratio using Canny Edge Detection, and compared their effectiveness when used on video game live stream content, as well as establishing methodological challenges to this new content form.

2 Acknowledgements

Thank you to my project supervisor Professor Prosenjit Bose for his help and direction throughout this project.

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3 Motivation

3.1 Why Shot Detection?

With the proliferation of internet connectivity in recent years, there has been a massive increase in the volume of video on the internet. With this growth, an industry built around the creation, hosting and sharing of video content grew as well, with YouTube alone having an annual revenue of over US$15 billion dollars [1]. Portable devices increase the accessibility for the creation and uploading of video content, and the combination of the massive social network surrounding content creation, and the massive entertainment

3.2

4 Methodology

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

5 Results

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References

[1] Nick Statt. "youtube is a $15 billion-a-year business, google reveals for the first time". *The Verge*, Feb 2020.