WebGPU vs Pixel Streaming:

A View From Afar

Daniel Burger¹

¹Middlesex University London* public@danielburger.online

7. February 2021

Abstract

Two completely new technologies to develop modern graphics-focused software are on the rise. WebGPU is the successor to WebGL and offers remarkable performance improvements. However, pixel streaming goes in a completely different direction and is actively used by the gaming industry.

In this article, we go into the near future and look at a hypothetical 3D application's top-level architecture and argue the pros and cons of WebGPU vs pixel streaming from a developer's perspective.

^{*}In collaboration with SAE Institute Zürich.

Table of Contents

| List of Figures | II |
|------------------|-----|
| List of Tables | III |
| List of Listings | IV |
| 1 Introduction | 1 |
| References | 2 |

List of Figures

List of Tables

List of Listings

1 Introduction

On the 17th of June 2015, Brendan Eich—the inventor of JavaScript—and the teams behind Mozilla, Chrome, Edge and WebKit presented a new browser standard: WebAssembly, a portable and highly efficient byte-code compilation target for high-level languages such as C++ and Rust (?).

References