EzBench, a tool to help you benchmark and bisect the Graphics Stack's performance

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Summary

- Introduction
- 2 Benchmarking
- 3 EzBench

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Current situation

- Complex games/benchmarks are becoming available on Linux;
- Drivers are getting more complex as performance improves;
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- ⇒ Need to benchmark all the platforms and games of interest.

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- 2 Benchmarking
 - Pitfalls
 - Automating benchmarking
- 3 EzBench

Who needs it?

Benchmarking

Different needs for benchmarking

• Developers: Run multiple experiments and compare them;

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Different needs for benchmarking

- Developers: Run multiple experiments and compare them;
- QA: Continuous Integration, performance bug reports.

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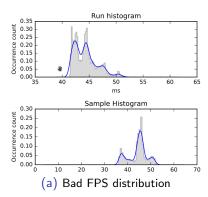
- Intra- and inter-runs variance depends on the benchmarks;
- Hitting the power budget, a thermal limit or GPU reset;
- Being able to reproduce the different test results;
- Not using the expected libraries;

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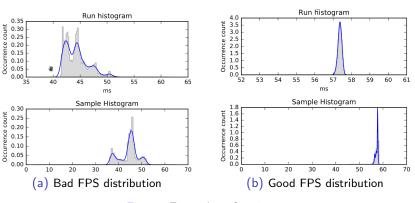


Figure: Examples of variance

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- Understand performance results and act upon them.

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- Requires package-kit for system libraries.

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 - Overview
 - Architecture and features
 - Demo
 - Backup slides

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EzBench - Overview

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Authors

- Authors: Martin Peres (Intel) & Chris Wilson (Intel);
- Licence: MIT;
- Url: http://cgit.freedesktop.org/~mperes/ezbench/

EzBench - Components

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- stats/compare_reports.py: visualisation.

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Demo

EzBench - Demo time!

Demo time and questions!



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- Provides python bindings to acquire data and parse reports;
- Be crash-resistant by storing the expected goal and comparing it to the current state;
- Collect the environment information and diff it:
- Detect the variance and peformance changes;
- Automatically schedule more work to improve the report.

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- Support sending emails to the authors of perf changes.