

Proyecto de Titulación

Presentacion de avances (?)

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Motivation

- ▶ None.

Introduction/Motivation

- ▶ Hardware-accelerated similarity search indices on the Adapteva Parallella-16 reconfigurable computing machine

Problem

- ▶ Currently we already hit the atomical scale on transistor technology.
- ▶ Focuses on research are pointing towards heterogeneous architectures rather than homogeneous ones.
- ▶ There is work on using FPGAs as reconfigurable computing solutions, but there are no work related on metric space indexing.

Methodology

- ▶ We're gonna develop several prototypes for accelerators to test on our FPGA target.
- ▶ We're gonna compare the results against a plain C (and memory coalescent/safe) implementation of an permutation index.
- ▶ Profit.

Solution

- ▶ Leverage a study on which techniques can be applied to an hybrid FS-PL solution in order to accelerate the processes involved on a metric space indexing and searching.
- ▶ Implement such changes to our index
- ▶ Repeat.

Current status

- ▶ Rescheduling everything because of a WHOLE SEMESTER HIATUS.
- ▶ We're gonna implement a new upgrade for the algorithm, a segment-sorting variation for a network-sort.
- ▶ Check it out here
https://github.com/KukyNekoi/fpga_index_accelerator