Mini Project

Using iceoryx2 for low-latency worker communication in Timely Dataflow

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Timely Dataflow
Rust

Uses attached timestamps for progress tracking

Runs on pool of, e.g., worker threads/processes

Abstractions for worker communication

Uses TCP for inter-process updates

iceoryx2
Rust

Zero-copy IPC

Lock-free safety

Dynamic messaging

Pub–sub, blackboard (shared), request–response

QoS

Goal

Explore TD's communications API (+ limitations?)

Implement iceoryx2 as modular communication strategy

Evaluate latency improvements and compare against existing communication strategies (TCP)

■ Issues: copying, multiple processes