

# LLVM-Based IR for Distributed Dynamic Dataflow Runtime

## I. ADDITIONS TO CURRENT ASSEMBLY FORMAT

- Support for Locales: Arbitrary static locale set instead of just rectangles, dynamic localeset when not indicated.
- Data blocksize if indicated; static data distribution: Affinity of statically divided parts of arrays onto CRs ; dynamic data distribution: Cyclic, BlockCyclic, Block, Random, Recursive Bisection.
- Code distribution: CR affinity to segments of code
- Support for block based offset for HyperOps

## II. JIT REQUIREMENTS

- Support for clDeviceInfo and response format
- Support to patch the binary with additional mapping information: Data, Code and HyperOp affinity
- Support to compute start addresses for code segments and partitioned data structures and move them to their locales