Phylanx Meeting Notes

February 8, 2018

* Adrian, Kate, Stefan, Parsa, Bibek, Rod, Hartmut, Chris, Monil
* Chris
  + For the past week I have been meeting with customers
    - Pleased with our customers
  + Meet with genomics people
    - Want to increase the size of the data
  + Pasqual responded about tree transducers
    - Said that his work may not transfer to our domain
    - Refactoring tree transducers
  + Put together 3 algorithms in NumPy
    - Hartmut- This should provide us with a great test case
    - We are going for scalability
  + Contracts
    - Hartmut- We have a few questions on our desk and thin
    - Kate- we are converging
* Ravel
  + We have been looking at HPX Docker image
  + Katy-
    - Able to integrate expression tree with Jupyter
  + Starting to think about how to create the trees
  + Parsa has merged some changes which print out CSV data
  + We have LRA-CSV running
    - Hartmut- you can run LRA-CSV-Instrumented
* APEX
  + Didn’t get have a chance to talk to Kevin
* Tiling
  + Been busy with the Math department
* Algorithms and Primitives
  + Parsa
    - Finished most of the performance counters
    - Created a PhySL interpreter
  + Ali-
    - Almost finished with HiFive
      * Needs to complete some final tests
  + Shahrzad
    - Working on the element-wise comparison
      * Pull request
    - Will continue working on “and”, “or”, and “!”
  + Bibek
    - Merged Diag. primitive
    - Fixed issue with LRA example
      * Turned this example into a test
    - Working to align slicing primitive with the NumPy API
* Python Bindings
  + Steve has as completed a pull request
    - Slice in 1D
  + Trying out using the “with” statement in Python
    - Instead of decorators
  + Steve created a singularity image of Phylanx
* Hartmut-
  + With the completion of the primitives we can get detailed information from the expression engine
  + Created a brute force tree transformation
  + I added logging facilities to the execution engine which can print the results of each expression evaluated
    - This will spit out a lot of information
    - Could be used to generate OTF2 traces
* Docker Files
  + Kate- we are trying to visualize the expression tree in a Jupyter notebook
  + Steve- I have created a Singularity image with Phylanx
  + Issues MPI and Singularity
    - You have to match the compiled version of MPI on the node with the version in the Singularity container to use it properly
* Project Meeting
  + We will try to schedule it April 19th and 20th
* Goals
  + Ravel
    - Interactive tree working in a Jupyter notebook with new data
  + APEX
    - Communicating this meeting to Kevin
  + Tiling
    - Understand LRA algorithm
    - Try to figure out tiling
  + Algorithms and Primitives
    - Add features to slicing
    - “And”, “or”, and “!” primitives
    - HiFive primitive
    - Work on some of the algorithms
  + Python Bindings
    - Create an OpenScope file from the Python AST
    - Start on Python Slicing
* Next Meeting: Thursday February 15th at 3:30pmET/2:30pmCT/1:30pmMt/12:30pmPT