Phylanx Meeting

March 22, 2018

* Tianyi, Bibek, Rod, Cheick, Steve, Parsa, Shahrzad, Hartmut, Stefan, Chris, Kevin, Monil, Kate, Katy
* Chris
  + Spent time on Blaze
    - Had to do some refactoring
    - Different aspects of Blaze have changed dramatically
    - Five more test suites to clean up
    - Matrix multiply is complete
  + I am looking at three people confirmed to joining us at the meeting
    - Possibly a fourth
* APEX
  + Kevin
    - Merge request has been merged in
      * Primary difference- APEX creates an annotated thread on each thread creation
    - Vampir window did not see any concurrency going on
      * Hartmut- This is expected as the algorithms do not have parallelism in them and the problem size is too small for Blaze to perform parallelization
    - Buildbot is failing all over the place
      * Init. issues
        + We should be able to fix this with a CMake dependency
  + Monil
    - Learning about APEX
    - Will be helping out Bibek with Parcel coalescing
      * ICPP deadline is due at the end of March
* Ravel
  + Kate
    - Kevin added the GUIDs
      * I have created a Gantt chart which incorporates this information
    - Kevin- I would like to combine the AST and the Gantt chart
      * Kate- We are looking at three different dimensions
  + Katy
    - Stuck in limbo with builds failing
    - Worked on the slider
      * Still have some unexpected behavior
    - Have a Jupyter notebook which I hope to show on Friday
      * Hartmut- Looking forward to it!
* Tiling
  + Successfully ran some things inside of Python (PhyFun re-named to Phylanx)
  + I can I access the execution tree
    - Chris- I would \*love\* to access the execution tree via Phylanx
  + Held interviews today with two candidates
    - We have a promising candidate
* Primitives & Algorithms
  + Bibek
    - Bibek-
      * Added gradient primitive
        + Still need to clean it up a bit
    - Parsa-
      * Working on enabling ranges in Phylanx
    - Shahrzad
      * Performed performance analysis on ALS
        + Python runs faster

Larger the problem size the more Phylanx catches up

* + - * + Hartmut- We think that this is thread creation overhead

We are working to decide direct versus normal actions at runtime

* Python
  + Rod-
    - Made Numpy Functions automatically map to Phylanx primitives inside of Phylanx decorators
    - Chris- Can we have a seminar on primitive development
      * Hartmut- sure
* Hartmut-
  + We are preparing an HPX release for tomorrow
    - It is a culmination of a year of work
    - It is also the 10th anniversary of HPX!
  + I am working in the direct vs. normal launching
* Next Meeting: Thursday April 5th at 3:30pmET/2:30pmCT/12:30pmPT Webex
  + We will skip next week’s meeting for vacations and Spring Break