Phylanx Meeting Notes

December 14, 2017

* Adrian, Bibek, Ali, Rod, Connor, Parsa, Shahrzad, Chris, Hartmut, Kate, Kevin, Monil, Stefan, Steve
* New Meeting Format: Algorithms & Primitives, Python Bindings, Tiling, APEX, and Ravel
* Chris-
  + Completed row storage for Morton Space linker
    - Don’t see column based taking much more work
  + Looking into the Tree transducer
  + Talked with the contracting folks
    - Should have contacts with lawyers soon
    - Kevin- I am seeing traffic about this
      * Kate- me too
      * Hartmut-
  + Vendor opportunity
* Algorithms & Primitives
  + SIMD
    - Trying to test the implementation
    - Perf Counters
    - Implementing HDF5 reader
    - LRA Study
      * Lots of copying
* Python Bindings
  + Working on two approaches:
    - Decorators for Parsing
      * Have an example which prints a string
        + Decorators manipulate the string
    - Treat Python as a DSL
      * May not work with notebooks
      * Looking to see how this plays with conditionals
  + Steve- Phylanx is not running for me
    - Hartmut- Please create a ticket
* Tiling-
  + Stefan-
    - Teaching is over!
    - Uploading stuff to my brain
  + Hartmut-
    - Stefan meet Connor
      * Connor will be our translator between us
* APEX-
  + Kevin-
    - I was sick this week
    - Hartmut- Have you seen my ticket
      * Keven- Yes
        + I was thinking about something like this
        + Perhaps a new function
  + Monil-
    - Troubles with Spartan
      * Not able to get LR working with new data set
      * Contacted author
        + Still did not work
      * Observation:
        + Spartan was a one-time project
        + Not well documented
        + Kevin- I think we can only say that Spartan is dead
        + We can only compare ourselves to TensorFlow
        + Hartmut- We need to performance runs
  + Tomorrow is the last funded day of his work on this project
  + Phylanx is passing all of our tests in Buildbot
    - Except for the Intel compiler crash
* Ravel
  + Thanks to Ali we have a webserver setup on
    - Weird linking problems between OTF2 and Jason
* Python
  + We are working to figure out how to map the Python AST onto the Phylanx AST
  + Directly generate ASTs from the Python Code
* Performance counters
  + Counts how many times a primitive was called
  + Total execution time of each primitive was run
  + Currently we have two evaluation methods
    - Direction actions and plain actions
    - Should help us optimize at runtime
      * Grainsize control
  + Kevin- Hartmut mentioned tying back to the source code
    - Hartmut- yes I would like to be able to see where in the code a call is made
* Next Meeting: Thursday December 21st at 3pmCT/2pmCT/1pmMT/12pmPT via Webex
  + Plan to meet after the Holiday’s on Thursday January 11th