Log Report

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I'll start off by saying HOLY SHIT WHAT A NIGHT. I know you wanted this to be worked on for a while, but I wasn't able to get my head in the game properly for most of it, then I got sick. Fun times, but I'm glad I was able to get this in!

11/9 – 122472

- First Pass
    - First look and brainstorming
    - Minor changes
    - No speed increase

11/18 – 124503

- Work begins
    - Started writing paper
    - Working through first steps
    - Tinkering with storage
    - Watching the system work
    - No speed increase

11/18 – 124589

- Changed all mention of double to float
    - All data is now a float if it was a double
    - All functions that were doubles are floats
    - Minor increase in speed. Maybe 1ms (in Debug w/ GUI)

11/19 – 124658

- Transferred Particle data into a Particle + ColdParticle list
    - Less used data was stored in cold while major variables were in Particle
        - EX: Life was stored in particle
    - Updated entire program to work with new node list structure
    - Slight increase in speed. ~3-5ms (in Debug w/ GUI)

11/19 – 124666

- Iterator removed. Replaced with new Hot/cold list
    - Curr_Row, Diff_Row and the like were all removed. They are redundant and slowed the code.
- ScaleMatrix is always 0, ignore those calculations.

- Cleaned up cold node to not have the above variables.
- Total speed is now 2x from the original (in release w/o GUI)

11/19 – 124670

- Removed Buffer List generation.
- 3-5ms faster (debug)

11/19 – 124679

- Cleaned up some buffer list loops I missed earlier
- ~1-2ms faster (debug w/ GUI)

11/19 – 124708

- Added RVO
- Added SIMD
- Removed some variables from the ParticleEmitter constructor.
- This addition was MASSIVE
- 5x total speed increase in release (w/o GUI)

11/19 – 124711

- Small changes
- PDF update
- Starting Log report

11/19 – 124712

- Accidentally only submitted the PDF.

11/19 – Whatever number is last

- Log Report submitted
- Analysis Submitted

11/19 – Whatever is after that one

- PDF updated with log and analysis

11/19 – Ok but totally the last one

- Fixed leaks causing debug and release to break at the end of a particle cycle.
- Fixed GUI display. Now prints correctly.