CMSI 371-01

Computer Graphics

Spring 2016

Assignment 0308 Feedback

Outcomes that eventually cover both 2D and 3D continue to max out at **|** for now because this assignment remains in 2D.

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*Notes while running (high-priority notes are marked with ***):*

- No problems trying out your filters, although I'm not sure that a scene that turns mostly black would be my idea of "Psychedelic" **:)**
- As for primitives, you've got some excessive looping going on there. Things show up eventually, but it shouldn't take that long. I'll see what I can find in the code.

Code review (refer to http://lmucs.github.io/hacking-guidelines/ for code-review abbreviations):

1. No code issues with your filters, though I am having some trouble getting my head around the `psychedelic` filter. I'm not able to visualize the way the colors are combining. Still, the final effect is somewhat recognizable so I'll assume you knew what you were doing! (*2c*, *3c*)
2. For the primitives, I appreciate the strategy of largely adopting the structure of the rectangle gradient to the circle. The code is not as compact as it could be, but I can appreciate the symmetry. (+*2c*, *4b*)
3. *** What *doesn't* work out is the way the new implementation doesn't really take advantage of the octant anymore. That's why things seem so slow: *the code is filling the entire circle for every vertex of the octant*. That is the root of the problem. If you look at the new `plotCirclePoints`, you'll notice that it completely ignores the `x` and `y` arguments. But that's the key—the code *shouldn't* ignore those arguments, instead *only filling the region "covered" by that vertex*. Otherwise, why bother calling `plotCirclePoints` at all? (*2d*, *4a*)

1a — **+**

2c (max **|**) — **|**

2d — **/** …Significant inefficiency with chosen gradient circle implementation, plus missing the point of `plotCirclePoints` in the first place.

3c — **+**

4a — **|** …Yeah, the delay really is that significant.

4b — **|** …The mirrored rectangle code was not really necessary and makes the code longer than it has to be, plus it obscured the bigger issue of unnecessarily repetitious circle-filling.

4c — **+**

4d — **+**

4e — Excellent commit frequency and descriptiveness of messages. (**+**)

4f — Submitted on time. (**+**)