

Daily Log

Monday January 27

I fixed a bug, cleaned up some code, and added a red outline to selected bodies.

Wednesday January 29

I added basic acceleration graphing in the same way as I did with the mechanics sim. The opacity of older velocities decreases so the brightest one is the current one, and it only saves the last 25 frames. Graphing the acceleration of an orbiting body looks like radar. I also refactored the gui library wrapper and moved more stuff from the sidepanel to the top gui bar.

Friday January r1

Honestly the acceleration graph is super boring and it's practically the same as an FBD. Adding FBDs would also increase the complexity of the graphing systems a lot. Instead, I decided to just polish the UI a bunch. I made the top bar a lot more important, so that now the sidepanel is only used with selected entities. I think it's a lot simpler and easy to understand now. I also added a slight radius around the mouse so that you don't have to click exactly on a body to select it. The last thing I added was a help menu.

Timeline

Date	Goal	Met
Today minus 2 weeks	Import/export scenes	Yes
Today minus 1 weeks	Polish GUI	I think it's nice now
Today	FBDs	Acceleration graphs but no FBDs
Today plus 1 week	Start wave lab sim	Probably just getting the ECS stuff down
Today plus 2 weeks	Working wave simulation	Waves should work but limited access to different emitters etc.

Reflection

In narrative style, talk about your work this week. Successes, failures, changes to timeline, goals. This should also include concrete data, e.g. snippets of code, screenshots, output, analysis, graphs, etc.

I think I'm done with the gravity sim for now. I thought FBDs would be interesting but now I realize that they'd basically all be the same. I still want to add them to the mechanics sim though, although I'll have to fix simultaneous collisions there first. The GUI is fairly nice to use now, and I've added a few keyboard shortcuts. There are still some things that are a bit annoying, but they'd take a while to fix and they're just supplemental. I'm looking forwards to starting the wave lab sim. I think it will be fairly simple but I'm not sure how to group wavelets into waves, or if that's even necessary. I have written up a rough plan though. I've also decided to complexity rewrite the mechanics sim in my freetime because I want to.