

Recap week 2-3

- Started out to load a geomatics wasm module (the cityjson validator) to force myself to see what is immediately needed to make the software functional and useful from a geomatics perspective
- This lead me to an adventure of importing "d.ts" header files, and the challenge of making the Flow type-save.

Resulted in:

- module loading improvements.
 - No more hacky js regex operations
 - now loads 'd.ts' header files, and based on that determines what to do
 - It progressed enough that we can even start loading wasm modules
 - All std libraries are now converted to typescript projects. As long as the typescript modules export **pure, root level functions**, the std libraries can contain any and all logic. Same counts for Wasm.
- The flow is now type save in theory.
 - new modular type system which allows for Objects, references, nested types, lists, lists within list, Objects within lists within lists, etc.
 - cables now wont connect between two incompatible types.
- Refactors
 - Introduced the concept of 'Shim' objects throughout the code. Shims are wrappers around some aspect of 'normal' computer programming. Right now, there is a TypeShim, FunctionShim, ModuleShim. These help a lot when reasoning about the Flow. I can go into various implementation details.

Plan for week 3-4

- ☐ The question of Object Oriented Programming -> Pure Functional Programming.
 - ☐ *Should* we convert it automatically?
 - IF YES:
 - ☐ *How* to convert automatically?
 - IF NO: We could always just force people to write a pure function wrapper library around an existing codebase.
- ☐ Improve Input & Output
 - The next thing we REALLY need is a major 'widget' improvement. We want special types of input, and special types of output (visualizers)
- ☐ week 4 / 5: Add Geon Engine as STD

- We need some base types like vectors, meshes, and whatnot, and some basic functions to do meaningful things with these objects
- ☐ what to do with js TypedArray's ? these will be crucial for all geoprocessing, and translation between Wasm / processing on the one hand, and Js / Visuals on the other
- ☐ week 4 / 5: What to do with Flow management in the flowchart (especially the loop and if statement)
- After these things, Phase 2 and Phase 3 are sort of done (I want to shorten Phase 3). We can start Phase 1.

Notes During meeting

Questions regarding the recap?

Questions regarding the plan?

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For next week

- [JF] : Move the meeting to monday / friday maybe? I would love that

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