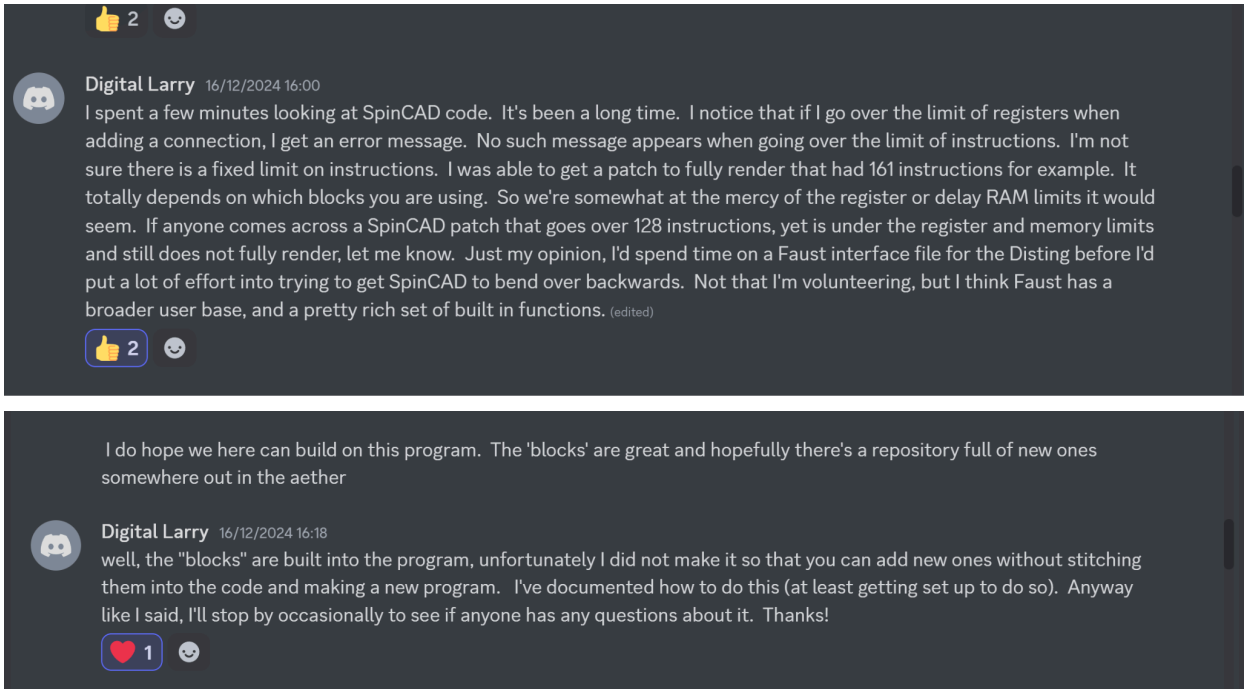

2
Digital Larry 16/12/2024 16:00
I spent a few minutes looking at SpinCAD code. It's been a long time. I notice that if I go over the limit of registers when adding a connection, I get an error message. No such message appears when going over the limit of instructions. I'm not sure there is a fixed limit on instructions. I was able to get a patch to fully render that had 161 instructions for example. It totally depends on which blocks you are using. So we're somewhat at the mercy of the register or delay RAM limits it would seem. If anyone comes across a SpinCAD patch that goes over 128 instructions, yet is under the register and memory limits and still does not fully render, let me know. Just my opinion, I'd spend time on a Faust interface file for the Disting before I'd put a lot of effort into trying to get SpinCAD to bend over backwards. Not that I'm volunteering, but I think Faust has a broader user base, and a pretty rich set of built in functions. (edited)
2

I do hope we here can build on this program. The 'blocks' are great and hopefully there's a repository full of new ones somewhere out in the aether
Digital Larry 16/12/2024 16:18
well, the "blocks" are built into the program, unfortunately I did not make it so that you can add new ones without stitching them into the code and making a new program. I've documented how to do this (at least getting set up to do so). Anyway like I said, I'll stop by occasionally to see if anyone has any questions about it. Thanks!
1

@J. Paradox Hey guys, quickly tested the updated 3pots tonight, this time setting the output of the source before (Rings) to -6db, giving ...

McNoodles Yesterday at 10:02

madbean now works. As for the Audiofab 3-4-5, it seems OK in spincad and VCV so it's likely one for Os. - although, I'll convert them to stereo or summed today. Let's see if that fixes it 🙂

keep the feedback coming, i'll fix what I can..

in the meantime, here's one i've been toying with. If only I could,
A - add more Pots in SpinCad and
B - automate the allpass in Chirp (edited)

👍 1

haven't tested 3pot yet so beware 🤘

J. Paradox Yesterday at 10:48

Thanks 🙌 I'll be back to my testing lab after Xmas. Merry Xmas to y'all ! 🎄

@McNoodles madbean now works. As for the Audiofab 3-4-5, it seems OK in spincad and VCV so it's likely one for Os. - although, I'll co...

Digital Larry Yesterday at 15:39

A - add more Pots in SpinCad - I did look into the code, may give it a try today, as to how to remove the limitation on registers. Pots on FV-1 are just fixed address registers. Some of this I imagine could be handled by careful editing of the SPN file after generation by the 3-pot script. IOW use the existing pots for all different things, generate the code and then replace "pot0" in those locations by whatever it is that you agree will be an additional pot. Yeah you'd have to read/understand the SPN code a little but the blocks are commented as to their boundaries at least. (edited)

❤️ 1

Digital Larry Yesterday at 15:47

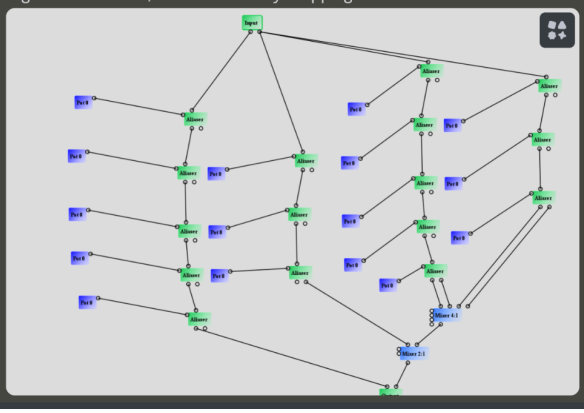
B - automate the allpass in Chirp - this could be handled in the translation to C. As it stands, the chirp uses the 2-instruction allpass structure which has the AP coefficient a constant. But you could have this structure translated into C code which would treat the coefficient as a variable. Then you'd have to figure out how to modulate that, so again some SPN surgery would be in order. I guess I never really thought about it, but the "phase shifter" most likely uses a modulatable all-pass structure, which is nowhere near as efficient as the fixed ones, but it might provide inspiration for a modulatable all-pass. (edited)

❤️ 1

Message "Testing for these.... [3POT PROGRAMS]("

Digital Larry Today at 17:35

@McNoodles I think I have just succeeded in removing register allocation limitations from SpinCAD in addition to instructions. I'm somewhat reluctant to add things which are "Special" for the Disting FV-1 code convertor and I don't feel like managing a fork or branch of it either. I'll mess with this a bit and then post a "beta" release at Github. I should have done this removal of register limit already, since I talk about "manual optimization" but the reality is that any SpinCAD program that tried to use more registers than were available would stop rendering once the register count went over 32. The next part is going to involve some cooperation with @os if you want to leverage this. He told me that his current model supports the FV-1's actual register count of 32. So that would have to be modified and it's probably not unlimited. As regards memory usage, I don't think it's going to be possible to expand the delay RAM effectively because a fair number of programs that use it do explicit memory addressing. That said, I think that the conversion script, if clever enough, could assign the full 32k of delay RAM to each block within a patch that needed any delay RAM. Without getting even more clever this could wind up wasting RAM that was allocated and yet never accessed. But, there you go. First step was to remove the register limitations, which I tested by dropping in 16 aliasers. This uses 706 FV-1 instructions and 98 registers. (edited)



@Digital Larry @McNoodles I think I have just succeeded in removing register allocation limitations from SpinCAD in addition to instructions. I'm somewhat reluc...

McNoodles Today at 17:59

Hey Larry, I've copied your messages to a file for when @os gets back from Christmas break - It might get lost here and it's in a language I don't fully understand!.

I didn't expect you to go out of your way to remove those limits, though, that's very good of you - maybe there's altruism in there after all!! 🧐

Thanks @Digital Larry , I'll keep an eye out for any updates to SpinCAD.

Have a fantastic Christmas break if we don't hear from you. I'm about to go and build horrible effects!!

Digital Larry Today at 17:59

okay, thanks

❤️ 1

you too. btw if you want to try to use more "pots" then I think you'd have to work out how that would be handled on the translated C code. I could see adding a "Disting pot" module that would e.g. allow 8 more pots and would assign them names like POT3 - POT10. Spin Assembler would gag on that but hopefully the conversion program could handle it appropriately.

McNoodles Today at 18:15

I've no idea what Os will want to do but I'm (and others are) very taken with SpinCAD and a potential fork we could host. The New Year will reveal more but again, Thanks so much for your advice and insight ...and the altruism you've shown.
Fingers crossed for an Expert Sleepers/SpinCAD expansion 🎄

Digital Larry Today at 17:59
okay, thanks

❤️ 1

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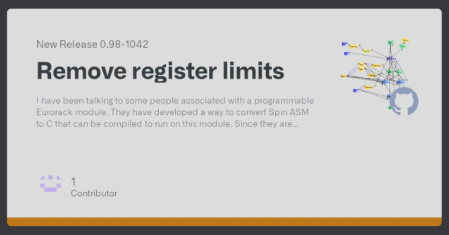
Digital Larry Today at 19:33
OK here is the new "draft" release of SpinCAD with no limits on instructions or registers. Delay RAM is limited to 32768 locations as before. Let me know if you find anything weird. https://github.com/HolyCityAudio/SpinCAD-Designer/releases/tag/0.98-1042

GitHub
Release Remove register limits · HolyCityAudio/SpinCAD-Designer
I have been talking to some people associated with a programmable Eurorack module. They have developed a way to convert Spin ASM to C that can be compiled to run on this module. Since they are co...



❤️ 1

disting-nt › New v1.5 beta.

McNoodles Today at 19:54
While I have you @Digital Larry , I notice a pot can throughput a signal. Can I assume that pot data is Control voltage?

Digital Larry Today at 19:54
OK the simulator doesn't work if registers > 32. I can probably expand it but it will help to agree as to how far to go.
Yes, Pots just put out an 11-bit number that can be used for anything
Interpreted as from 0 - 1
To narrow the range, run a pot through a scale/offset
In the real FV-1 the pot inputs are low pass filtered so their response is slightly laggy

McNoodles Today at 20:00
I'm thinking I can create complex LFOs (or VCOs) that could control other modules. ...as long as I can scale the thing.... Now watch as I trash ££££ worth of Eurorack 🫠 (edited)

> @Digital Larry OK the simulator doesn't work if registers > 32. I can probably expand it but it will help to agree as to how far to go.

McNoodles Today at 20:01
was the previous register setting 32?

Digital Larry Today at 20:02
the FV-1 supports 32 general purpose registers

McNoodles Today at 20:02
right.

Digital Larry Today at 20:03
There are a couple blocks, "oscillator" and "new oscillator" that do not use the HW LFOs. I don't remember the details at the moment.

McNoodles Today at 20:05
I think Os said registers and RAM were fixed in threepot. probably nothing we can do until he chimes in

Digital Larry Today at 20:05
yep.