



Databrae

Inexpensive, direct, high speed item
access without RFID

Daniel Messer

Cyberpunk Librarian

Hello, I'm Dan

I am a professional systems librarian

- I've been working in libraries for 30 years
 - 17 of those years in Circulation
- I've worked with Polaris since it was in beta
- I wrote a book on how to use the PolarisTransactions database
- I created a free and open source repository of Polaris SQL queries
- I co-wrote an article that made the cover of Computers in Libraries
- My podcast has been praised by American Libraries and Book Riot

I am not crazy.
Pinky promise

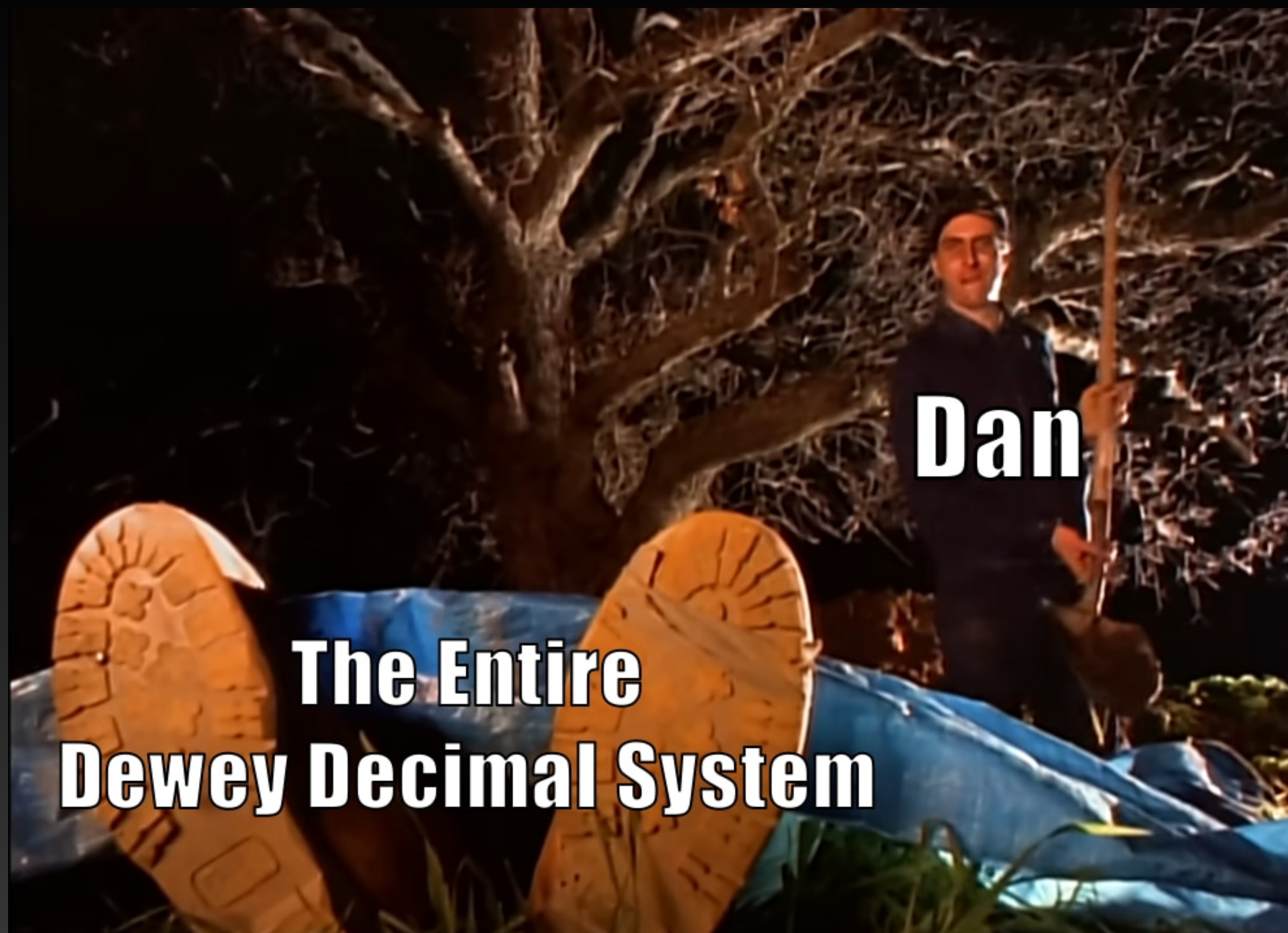
Hello, I'm the Cyberpunk Librarian

I am powered by Adderall and punk rock

- Shadow librarian
- Anarchivist
- Spoken at Defcon (Thank you, Derek!)
- And if you know me, you know I have... opinions on library related things

MARC Sucks

We will not even mention BIBFRAME



Dan

**The Entire
Dewey Decimal System**



Okay, *I may* be crazy
But I just might be the lunatic you're looking for

RFID Is a Waste of Money*

***For many, but not all, libraries**

RFID

I'm not mad, I'm just disappointed

- You need special equipment, which is expensive
- You need to buy rolls of RFID tags, which are expensive
- You need to programme each and every tag, which is ~~expensive~~ time consuming
- You need to do special things to make it work with your ILS
- All so you can sit five books down on your RFID pad
 - And it will dutifully check in four of them

RFID

The bang, the buck, and the bust

- Automated Materials Handling equipment
 - Check in and sorting machines
 - Tote manifesting systems
- What is your collection size?
- What's your yearly circ count?
 - Are either, or both, of those data points a six digit figure that starts with a number higher than 5?
- You're not getting your money's worth

RFID Wands

Behold the ultimate in parallelogram technology!



RFID Wands, Continued

Similar design but feels better in the hand



RFID Wands... and Furthermore

The “best parts”

- No-reads and misread
- Weird software
- All of your RFID tags need to be in good working order
- All for the low, low price of
 - “OH MY GOD IT COSTS *HOW MUCH?!*”



Sometimes You Need to Hard Reset a Jetpack

The Verizon WiFi kind, not the cool kind we were promised by sci-fi

- My WiFi hotspot stopped working
- Tried everything I could do
 - Turning it off and on again
 - Pulling the battery
- Had to get on a call, with Verizon, and they had to smash it over the air
- I had to pull the battery again
- And that's where the idea came from

Okay Fine, What's Your Idea?

We can have nice things

- Libraries are stuck on barcodes
 - Or the barcodes are stuck on our items, something like that
- But we're using the wrong one and it's in the wrong place

**1D Barcode
(Codabar)**

**And the savages
put it over the title**



**On the
front cover**

Eschew 1D

Embrace 2D



Data Matrix Code

A Giant Square?

Well yes, but no

- The battery for this Jetpack had a data matrix code on it
 - And it was *tiny*
- As it happens, I have a barcode scanner than can read it
 - Don't look at me like that
 - A systems librarian needs his toys
- It read the code
 - First time, no problem

That's when it hit me

And you've been looking at the solution this whole time

The code belongs on the spine

Specifically, on the spine label

- Funny thing about data matrix codes
 - You can scan them from any direction
- And when you scan the code, your scanner... beeps
 - So you know you scanned that code
- You don't need to touch the item, just scan the spines
- It works directly with your ILS
 - You're just scanning the item barcode
- It's actually faster and more accurate than RFID*

Databrae

Because things need names

- Data Matrix code
- On the spine
- What's in a spine?
 - Vertebrae
- **Databrae**
 - It's a horrible name, but I've grown fond of it

You know what's cheaper than RFID?

Databrae

- Don't need special equipment
- Don't need special tags with an antenna in them
 - You need spine labels
 - You're already using spine labels
- You may need to upgrade your barcode scanner

Required Equipment

That you probably already have

- Equipment needed
 - Spine label printer or label sheets
 - Barcode scanner that can read 2D codes
 - A web browser (more on this in a second)
 - That's it
- No really, that's it
- You probably have all of this stuff already

But there is one hang up...

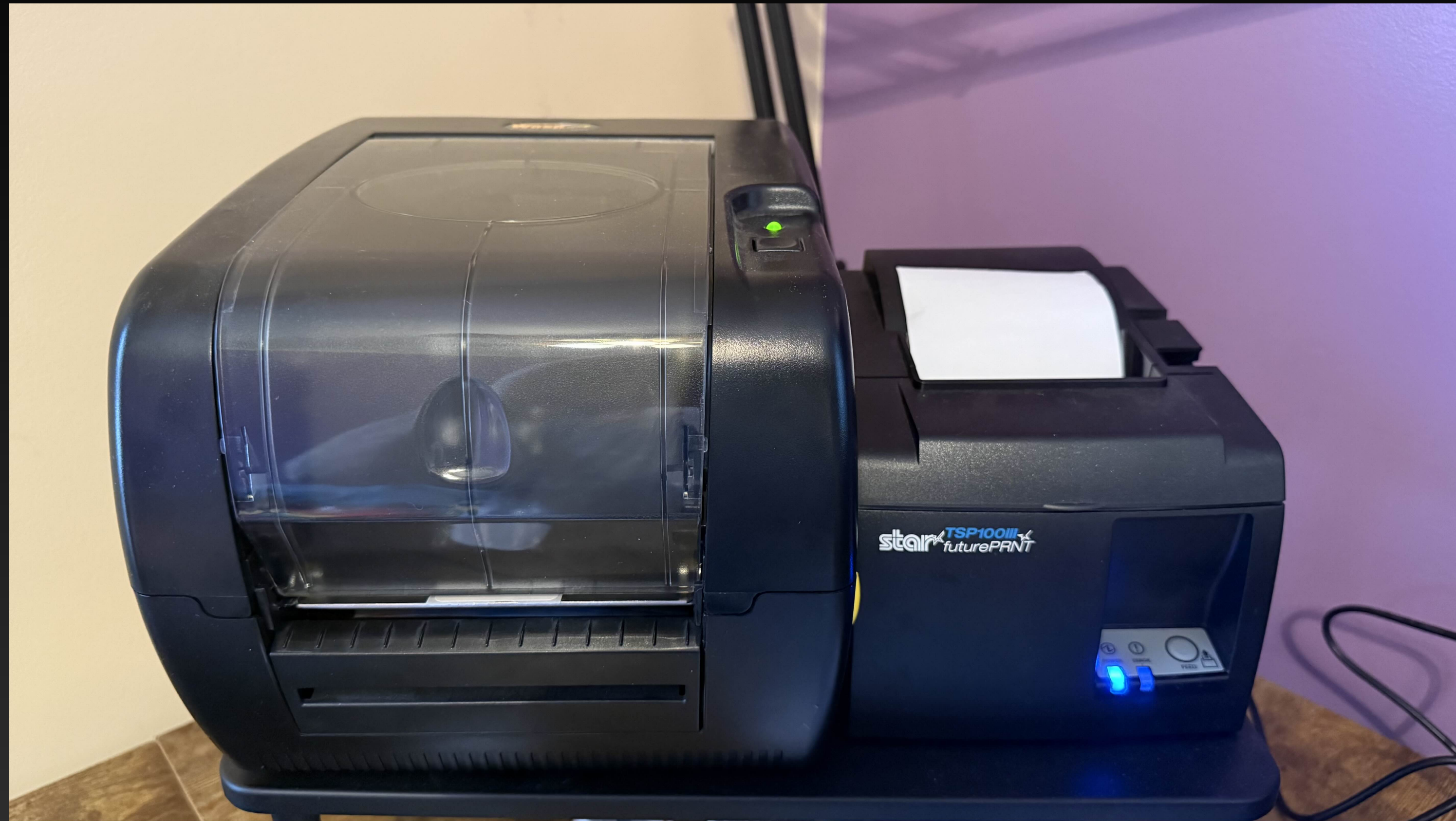
How do you make a spine label with a data matrix code on it?

FOSS to the Rescue

I write code using PHP, profanity, and pale ales

- Needless to say, I had to see if this would work
- But I needed a label printer
 - So I asked on the Discord!

WASP WPL-305



\$80

And now I have a *new* library toy

FOSS to the Rescue

I write code using PHP, profanity, and pale ales

- Needless to say, I had to see if this would work
- But I needed a label printer
 - So I asked on the Discord!
- Opened up an IDE
- Opened up an IPA

Databrae - Label Generator

Create spine labels with tracking barcodes.

Single Label

Data 1

e.g., QA76.73.P224

Data 2

e.g., 2025

Data 3

e.g., v.2

Data 4

e.g., Copy 1

Barcode (alphanumeric)

e.g., 1230004231819

Preview Single Label

Or Import CSV...

Data Matrix prints as SVG at 0.30 in height.

Import CSV (data1,data2,data3,data4,barcode)

Choose CSV file

Browse...

No file selected.

Upload & Preview Labels

Reset

Delimiters (comma, tab, semicolon) auto-detected. Headers must match exactly.

Template (Demco 1.5" x 1.0")

Page width (in)

8.5

Page height (in)

11

Margin top (in)

0.5

Margin right (in)

0.5

Margin bottom (in)

0.5

Margin left (in)

0.5

Columns

5

Rows

8

Label width (in)

1.5

Label height (in)

1

Horizontal gap (in)

0.125

Vertical gap (in)

0.125

Barcode height (in)

0.3

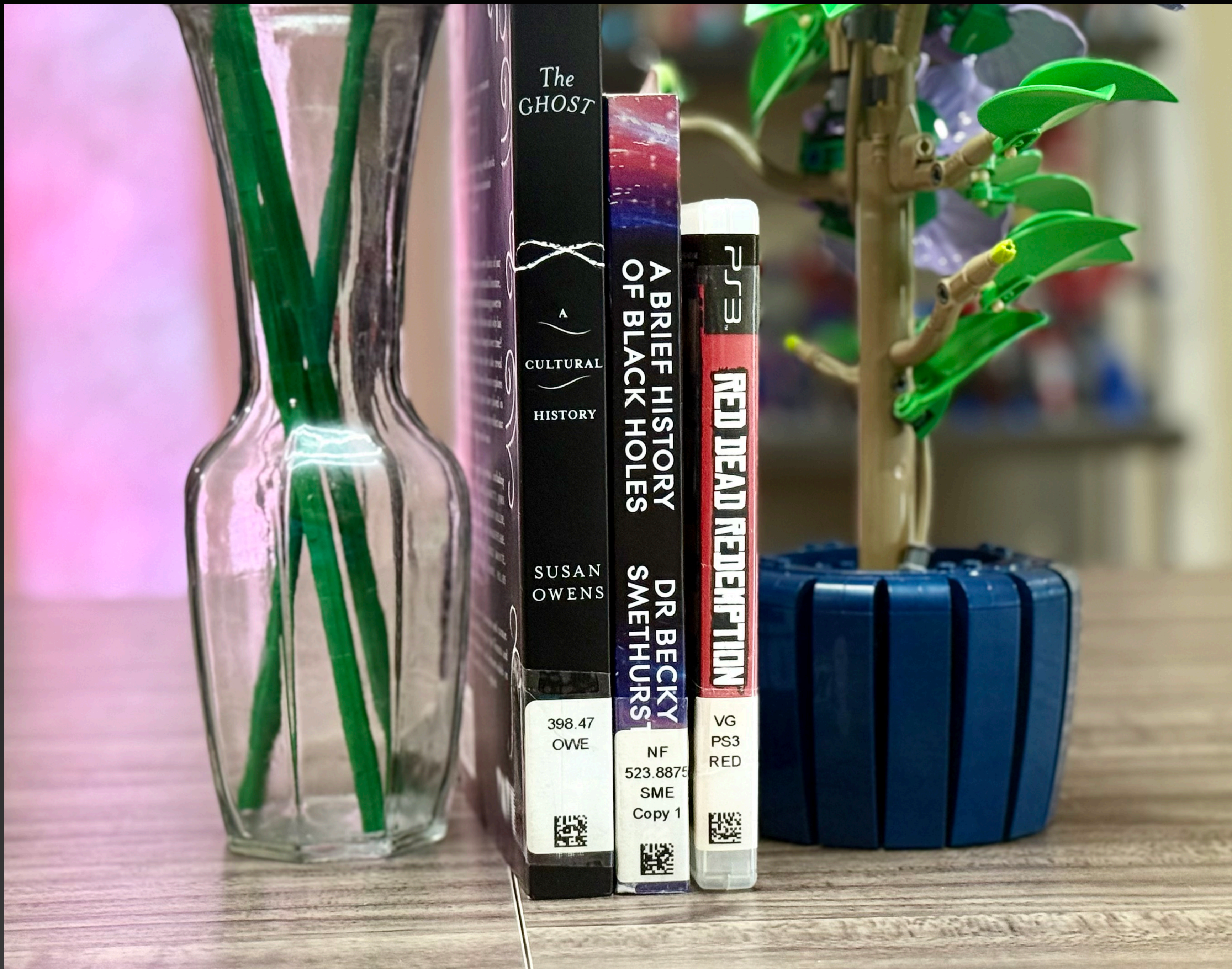
Font size (in)

0.12

☒ Show label outlines (for alignment/test prints)

Apply Template Settings

Print



Interested?
Then I have a link for you



cyberpunklibrarian.com/iug2026