

Manifesting Polaris

Streamlining courier with FOSS and 3P

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Hello...

- I'm Dan and I like white letters on a dark background
- Celebrating 23 years of library madness
- 13 years with MCLD in Phoenix, AZ
- 17 years in public library circulation

Let's talk about circ...

- Library circulation is warehousing
- Anyone telling you differently is trying to sell you something



Bertrand Russell on library circulation

Work is of two kinds: first, altering the position of matter at or near the earth's surface relatively to other such matter; second, telling other people to do so.

Back to the warehousing

- Storing and distribution
- Taking things in and shipping things out
- Multiple library branches = courier shipments

Stop... Courier time

- At one of our branches, courier can be an all day process
- Morning shipment
- Afternoon shipment
- Prepping tomorrow's shipment
- At other branches, courier simply takes hours

The courier process

- For us, there are two parts to the courier system
- **Courier, Part One:** Shipping
- **Courier, Part Two:** ~~The Revenge~~ Receiving

The process: Shipping

- Better now with combined hold pick-up slips
- Items go into various bins marked for various branches
- Bins are closed up, zip-tied, and shipped out
- In one year, SERL shipped 9,433 bins with 273,557 items

The process: Receiving

- Bins arrive and Pages open them
- Holds are sorted to one set of carts
- In-transits to another set of carts
- Holds are taken to desks, including the front desk, for check in and sorting for eventual shelving by Pages
- In-transits checked in by hand or self-check-in machine, then sorted for shelving
- In the same year, SERL received 8,098 bins with 234,842 items

The problem is the process

- 112% increase in courier shipments in 10 years
- Larger branches with high circ and lots of requests can take all day to finish a shipment
- SERL sometimes finishes the shipment at the end of the day, just in time to start again tomorrow
- Too many steps and items are touched too many times

So what do?

- Research: What do the big library systems do?
- Answer: Tote manifesting
- Follow up: Great... so, uh...

What's tote manifesting?

- Back to warehousing - specifically distribution centres
- Bins = Totes
- Create a list of contents and work from that list, not from the items in the bin
- List = Manifest

Fantastic!

- Can we buy one?

No



Fine, I'll make my own

- I am a coder. I write code.
- I am *not* a software developer.
- But I do know how to write horrible, ugly, badly formatted, but *ultimately working* code.
- I ❤️ Free and Open Source Software (FOSS)

Workflow

- Needs to create a list based upon items in a bin
- Track that bin and the items within it
- Be able to process items in that bin through Polaris (Check in)
- **Prototype:** Written in AutoHotkey
- Utilized Staff Client ability to process check in

Let's build a thing

- Needs to be FOSS
- Needs to work directly with Polaris
- Browser-based, because client programmes are for people with time
- Database driven
- May as well use SIP
- Needs to be created in something I know
- Which brings us to...

The 3P Approach™ ®© patent pending

- Polaris
- Python
- PHP

Workflow - Outgoing

- Scan items into a webform
- Scan the unique code on the bin
- That's it
- Yes this is an extra scan but...
- It's very quick
- It happens on the easier half of courier
- And this little time investment pays off later

Workflow - Incoming

- Scan the bin code into the system
- Processing time ~1 second per item in the bin
- Start emptying the bin
- Put holds on one cart and in-transits on another
- When it's finished, these items are now checked in
- They're done

No seriously, they're done

- Sort the holds and put them on them on a pick up shelf
- Sort the in-transits for shelving
- Do the next bin, then the next one, then the next one
- Do an entire bin full of items, from scanning the bin to having shelf ready items on the cart...
- In less than 1.5 minutes per bin

The devil, you say

- Actually, yes... That's where the system gets its name
- It's a helluva problem
- And the devil is in the details
- Besides, I had to give it some kind of name...

Maniphestopheles



Simple tote manifesting for Polaris ILS

Where we are now

- We can do one of two things:
- Deploy a test run of Maniphestopheles to a few branches
- Roll out Leap
- Leap first, then Maniphestopheles
- Initial testing has been incredibly positive
- Staff are excited
- Branches could go from spending all day on courier to getting everything done in a couple of hours, using less staff

Wanna try it?

- Shweet!
- It's free
- It runs on free software
- And it doesn't need a massive server stack
- Incidental expenses: barcodes, scanners, etc.

You'll need:

- A LAMP server (Linux, Apache, MariaDB, and PHP)
- I use Xubuntu in a virtual machine
- Python 3
- Your SIP server info
- And a bit of experience using all of this stuff

Git it

- Currently available on a private, but open, git server
cyberpunklibrarian.com/maniphestopheles
- Or just see me after the talk and I'll email you a link
- And yes, I will help you with questions about set up, usage, and the whole thing



Thank you! Any questions?

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