

Fundraising: Under the Hood

A Brief Introduction to
Wikimedia's Donation Pipeline

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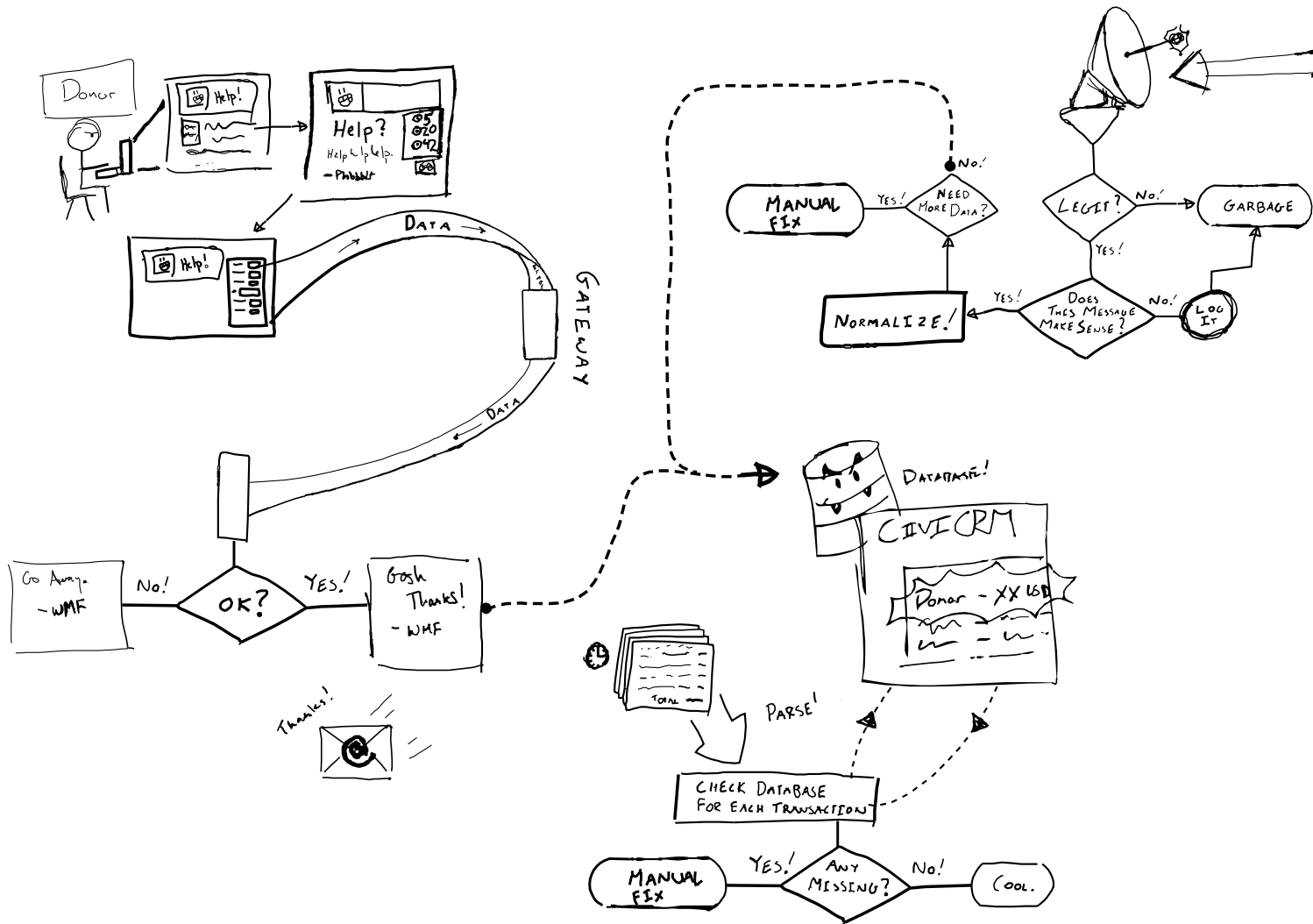


What It Isn't

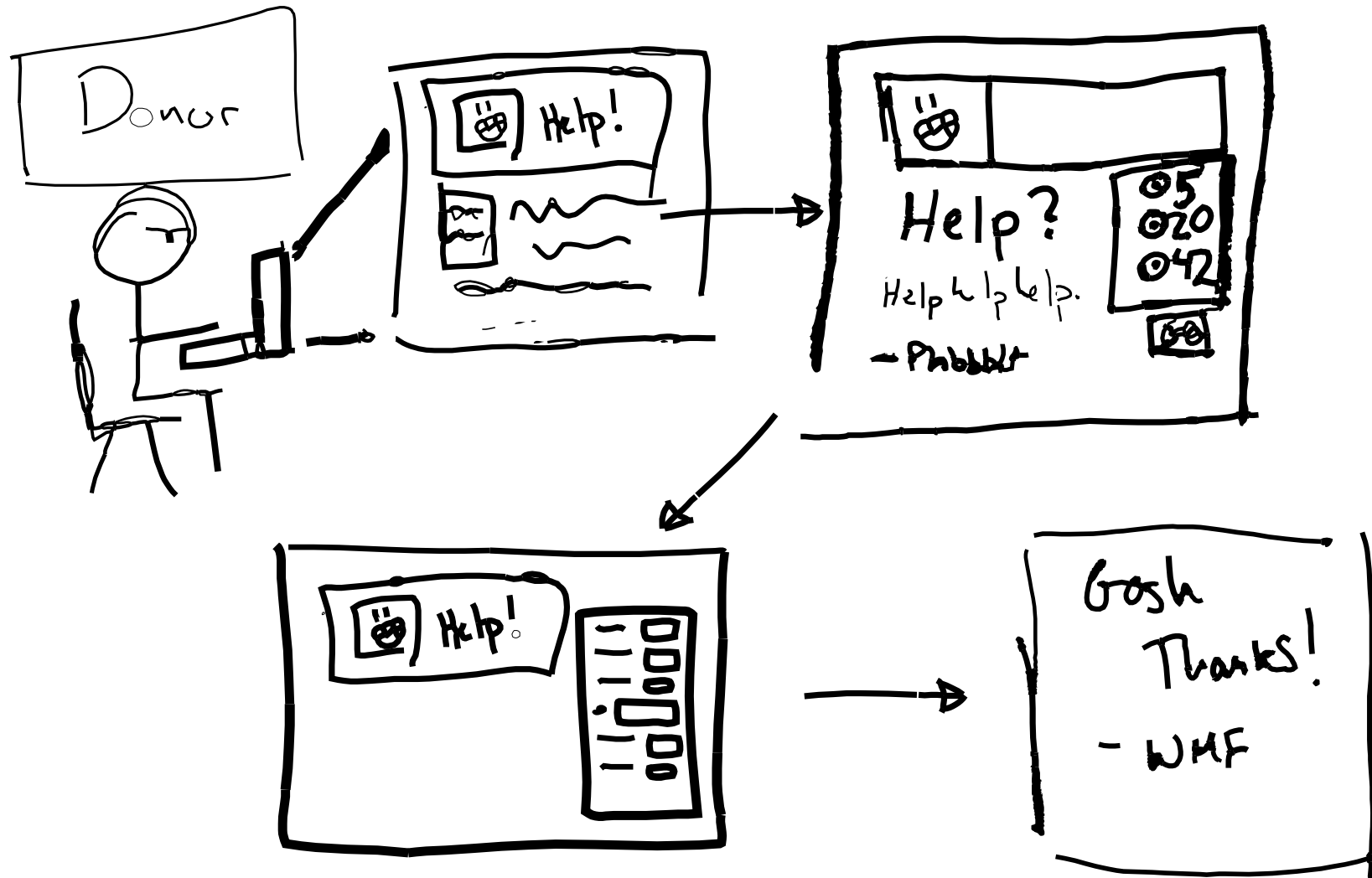


...even if we'd like it to seem this way.

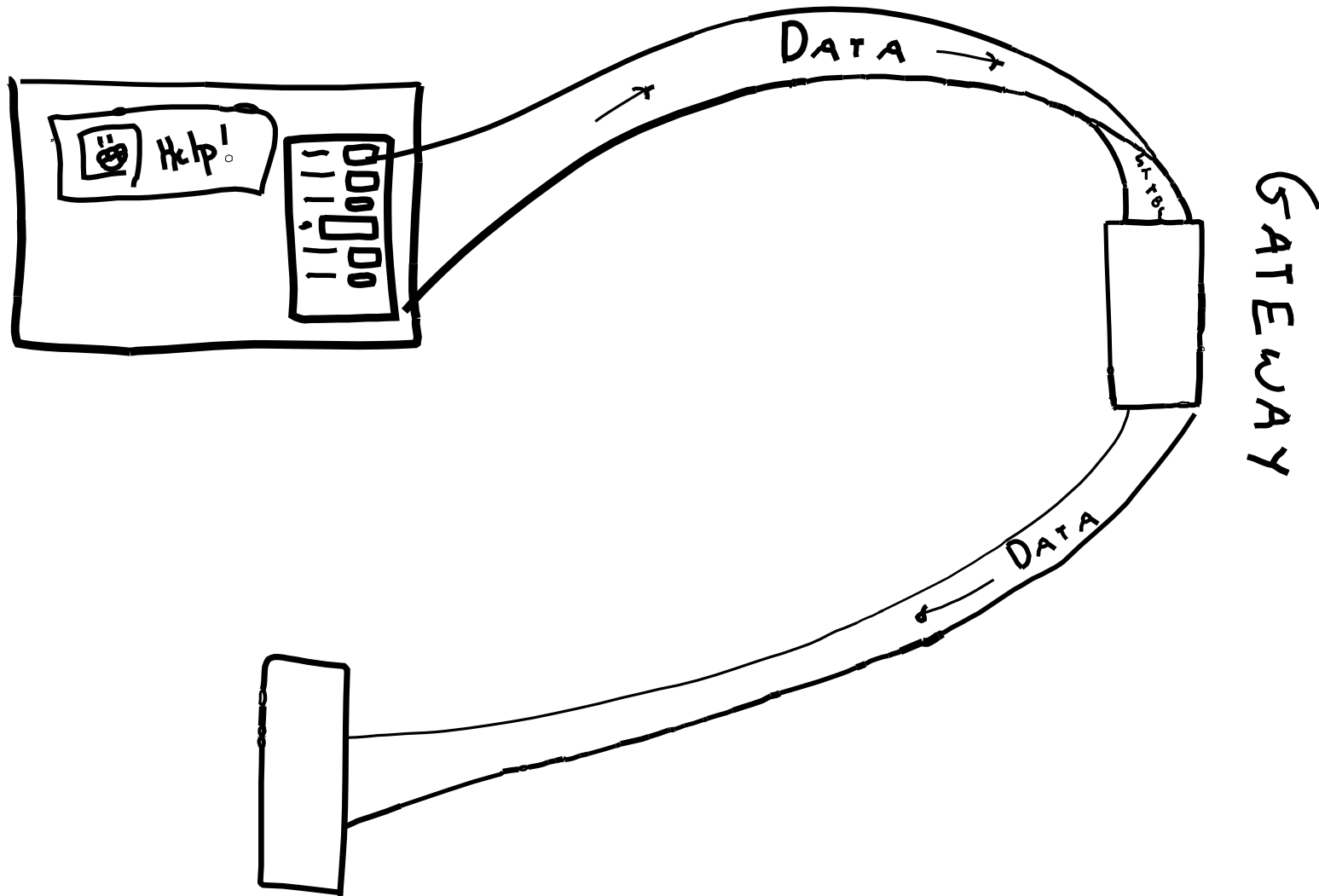
Oversimplified Diagram



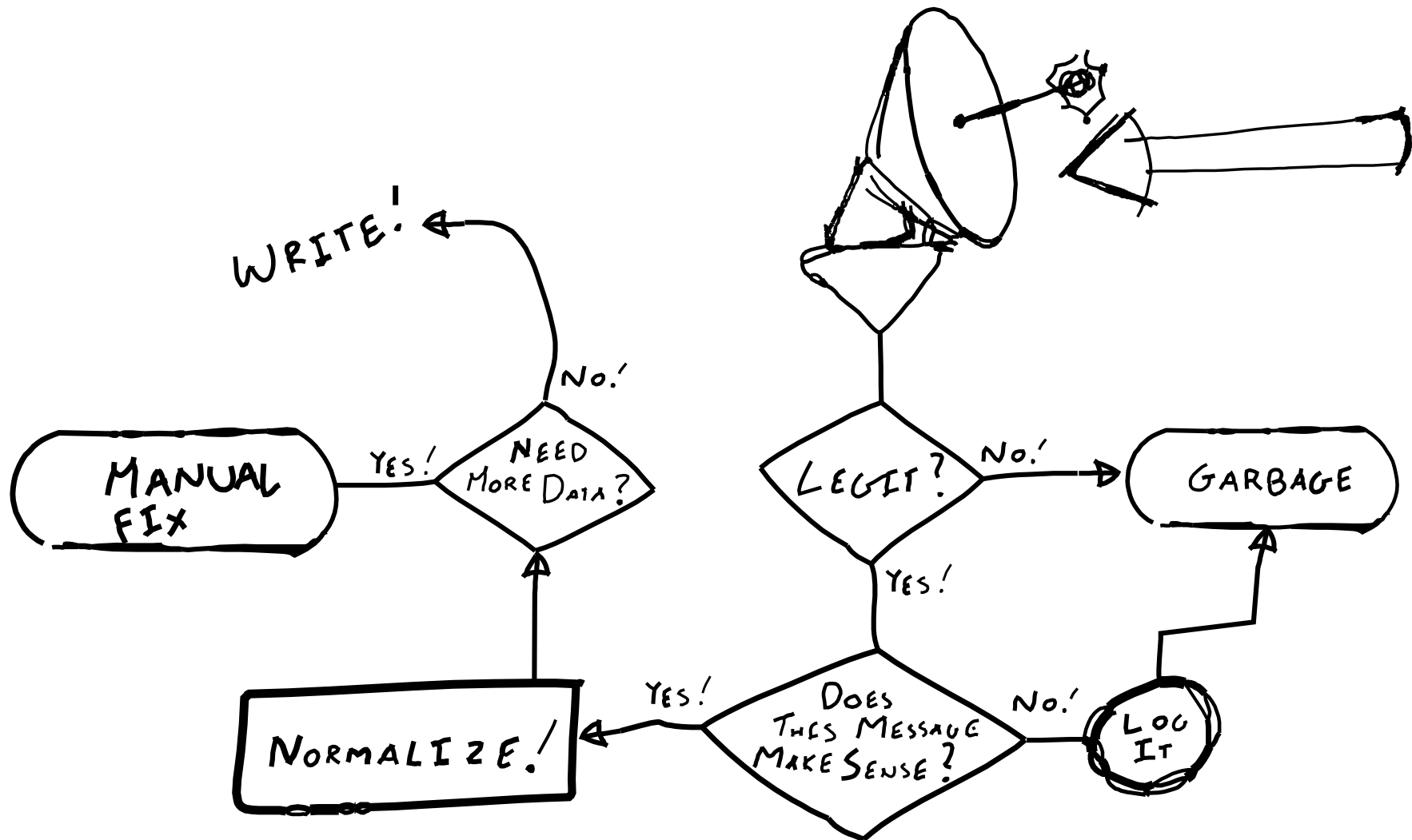
Oversimplified Diagram: Payments Forms



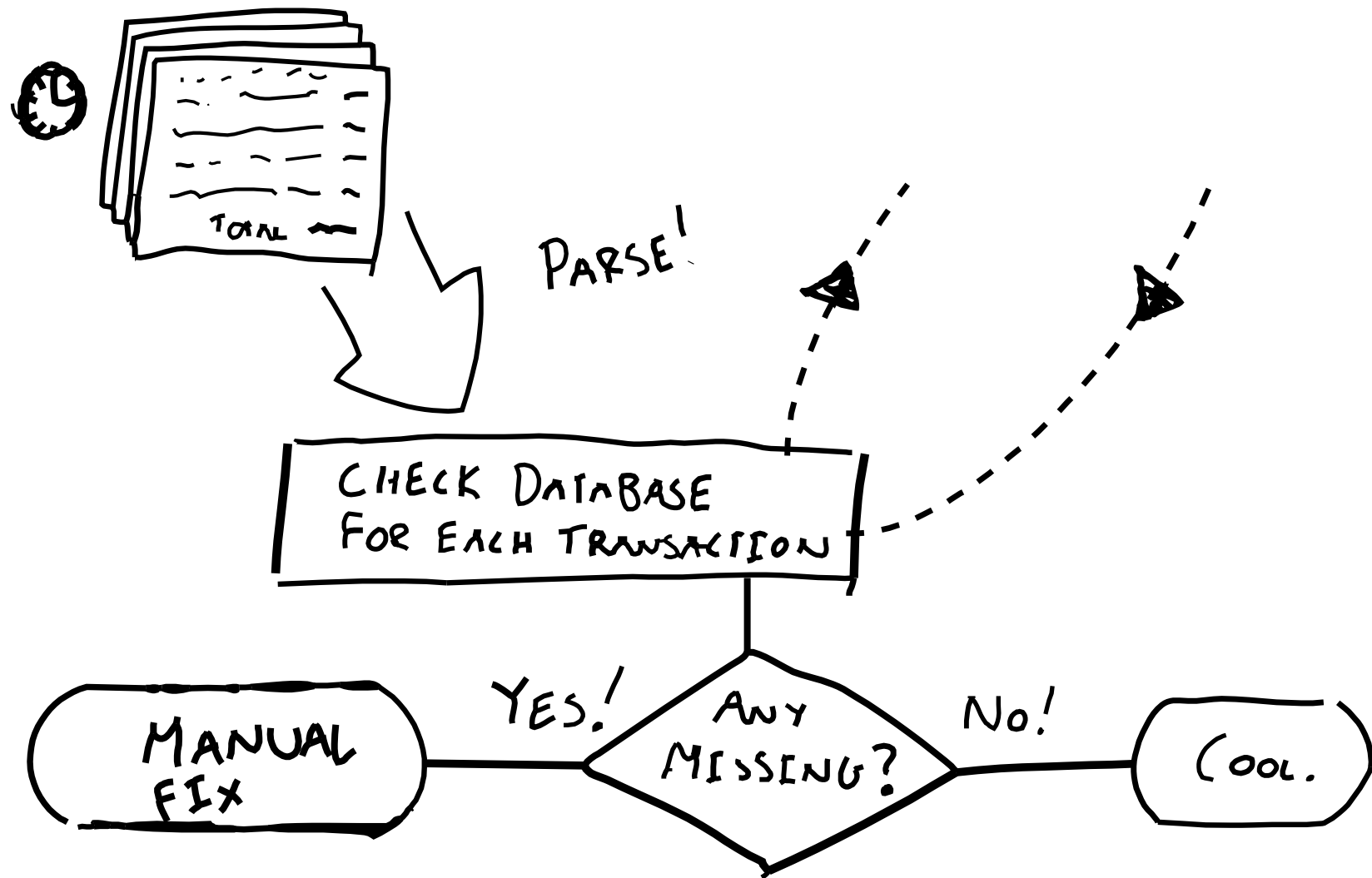
Oversimplified Diagram: Payment Gateway



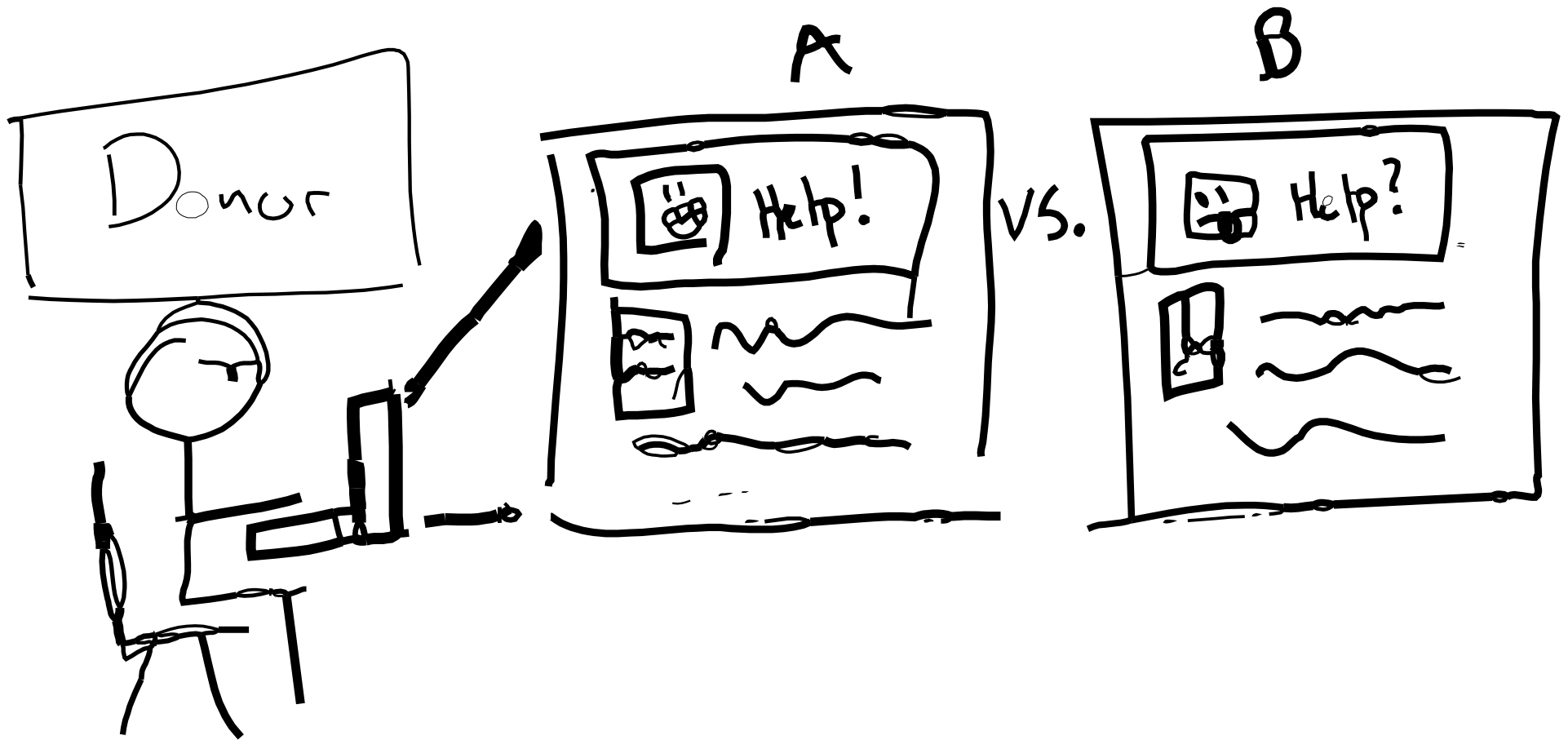
Oversimplified Diagram: Payment Listener



Oversimplified Diagram: Auditing



A/B Testing



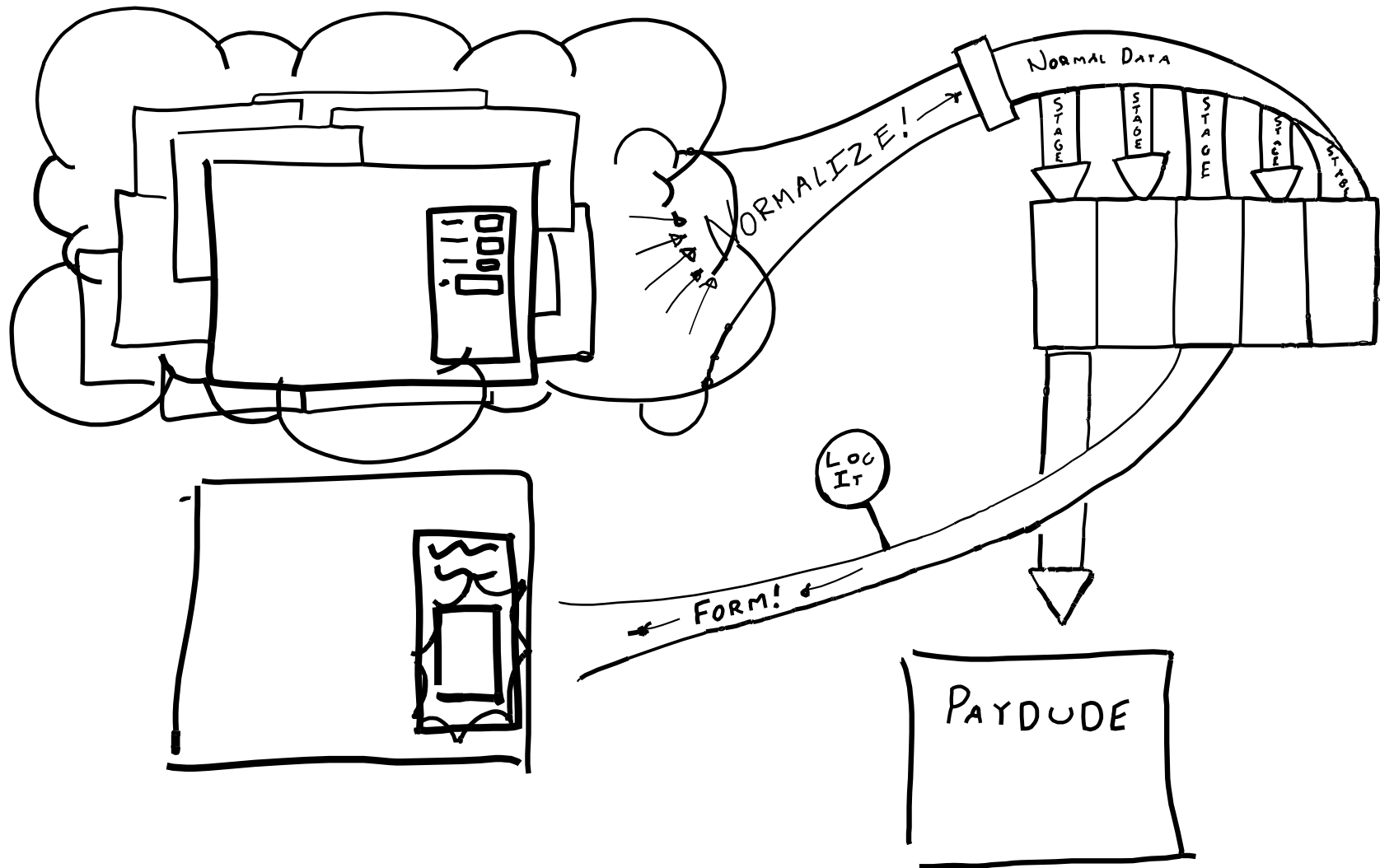
One Kabillion Forms

- We also A/B test the form workflow.
- Forms must be translated into different languages
- Forms need to be carefully localized for both valid (and popular) regional payment types, and standard form elements for any given region.

Parallel Gateways

- Despite what they might try to tell you in their marketing campaigns, no single payment gateway can provide true global coverage.
- In the event that a payment gateway goes down unexpectedly, we have the option to fail over to a different gateway and continue to collect payments

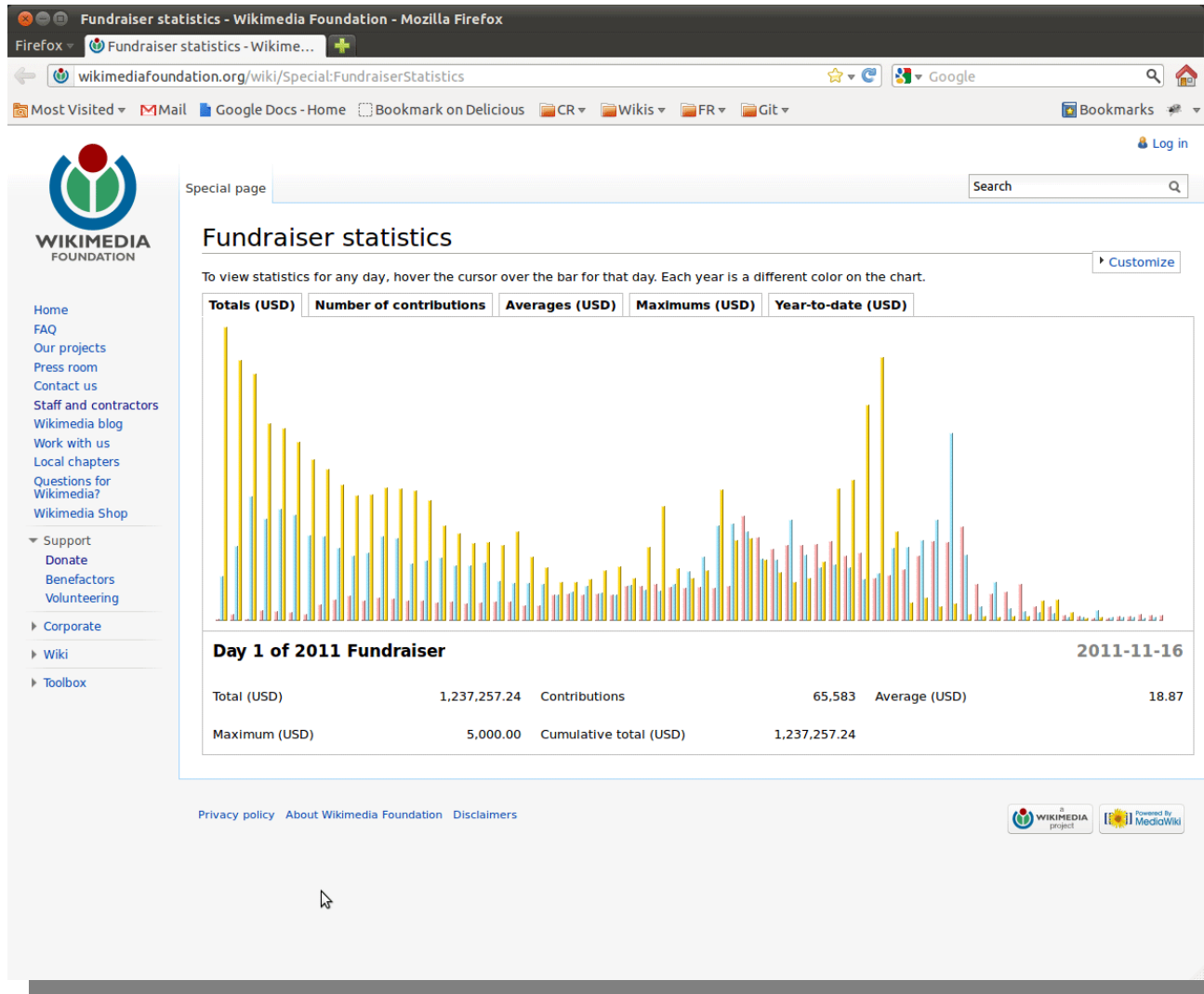
Many Forms and Parallel Gateways



The Fraud Problem

- Credit Card fraudsters use our donation system to test stolen cards before they use them elsewhere.
- While most payment gateways have their own fraud detection, it is not consistent between gateways.
- Many gateways' anti-fraud rules make perfect sense for their typical clients, but would block many legitimate donations to the WMF.

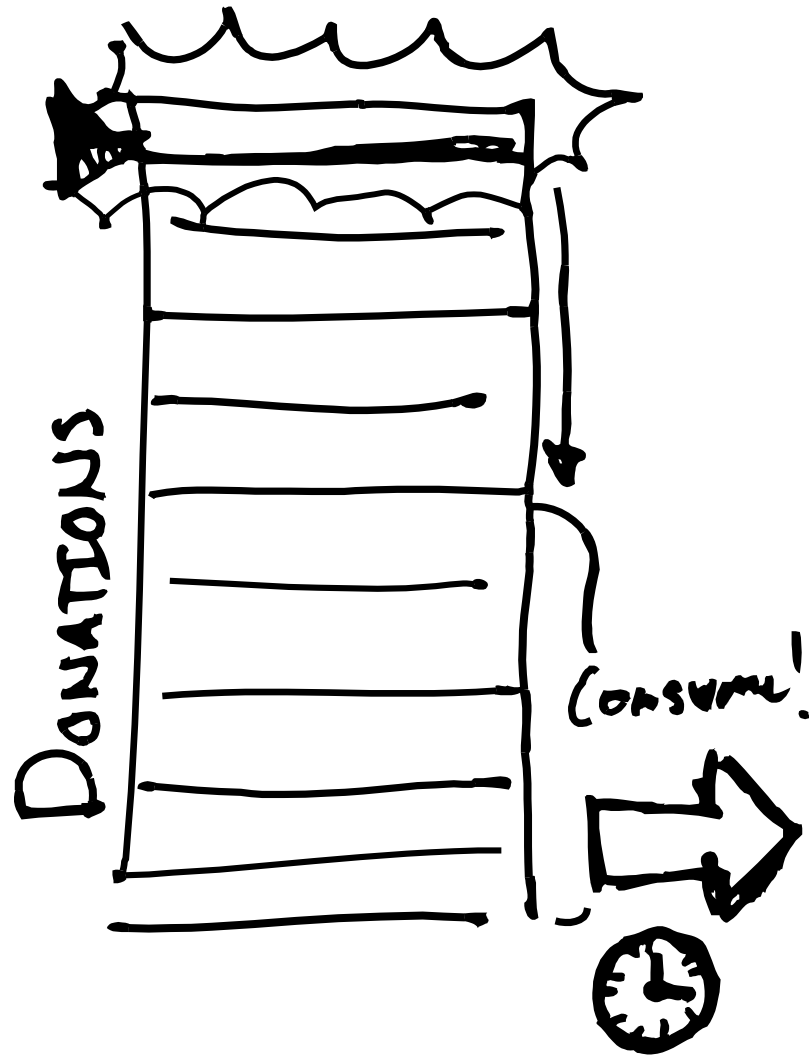
Sudden High Load



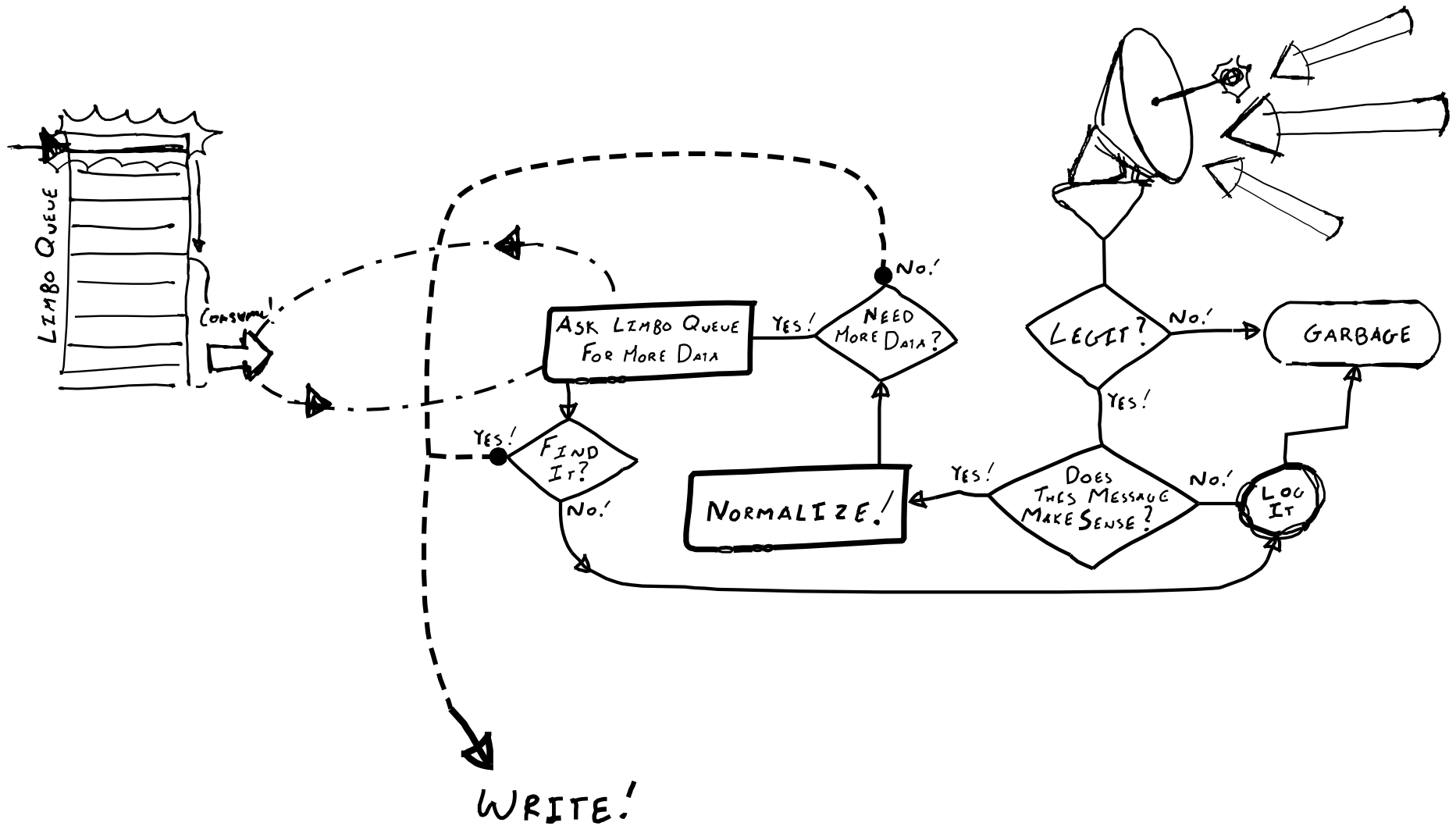
Message Queueing

- Move processing load from front-facing payments servers, to internal machines.
- Use various queues as both a bridge between internal systems, and a buffer where we can quickly store data while waiting for resources to become available.

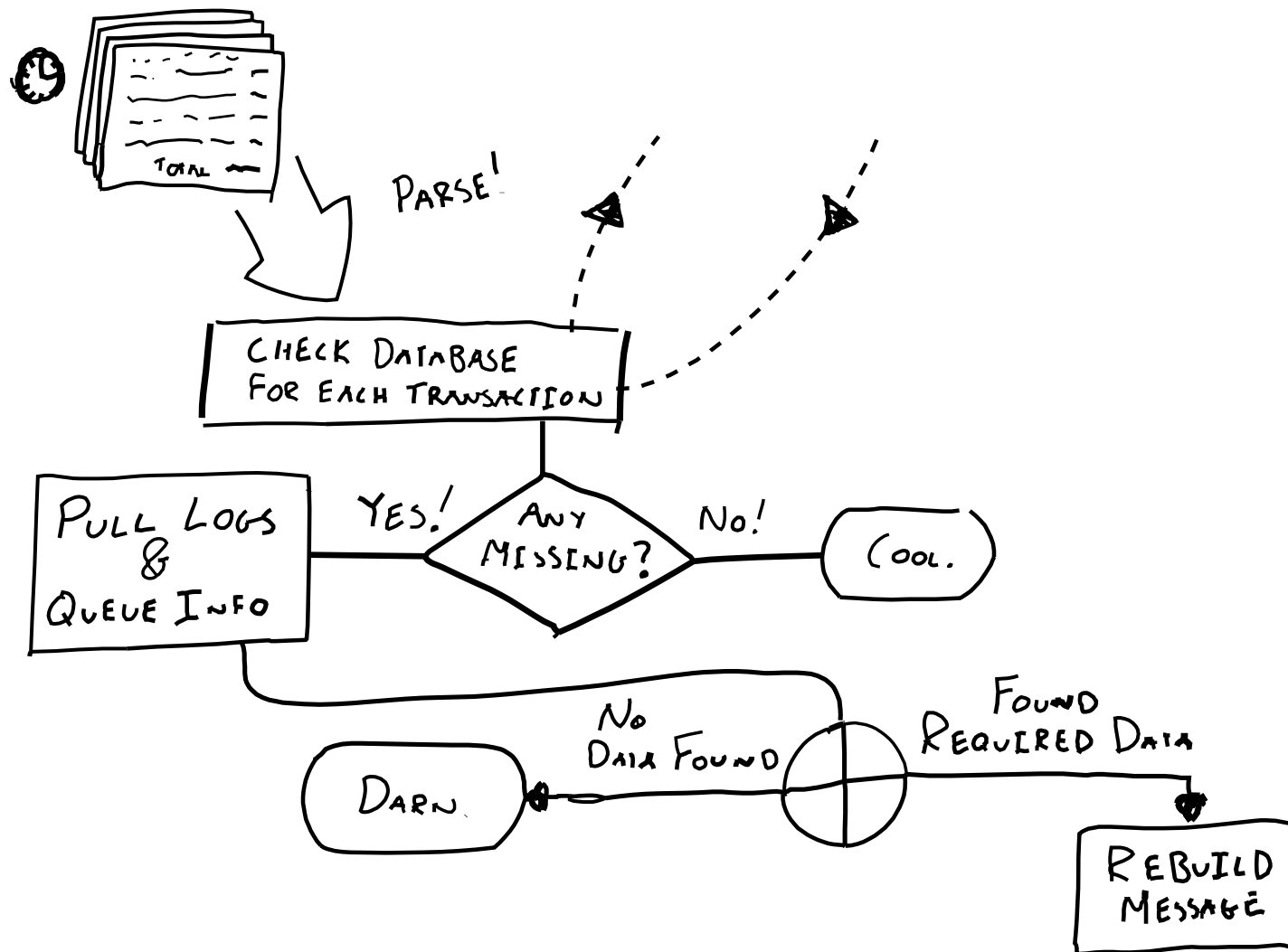
Queue Consumer



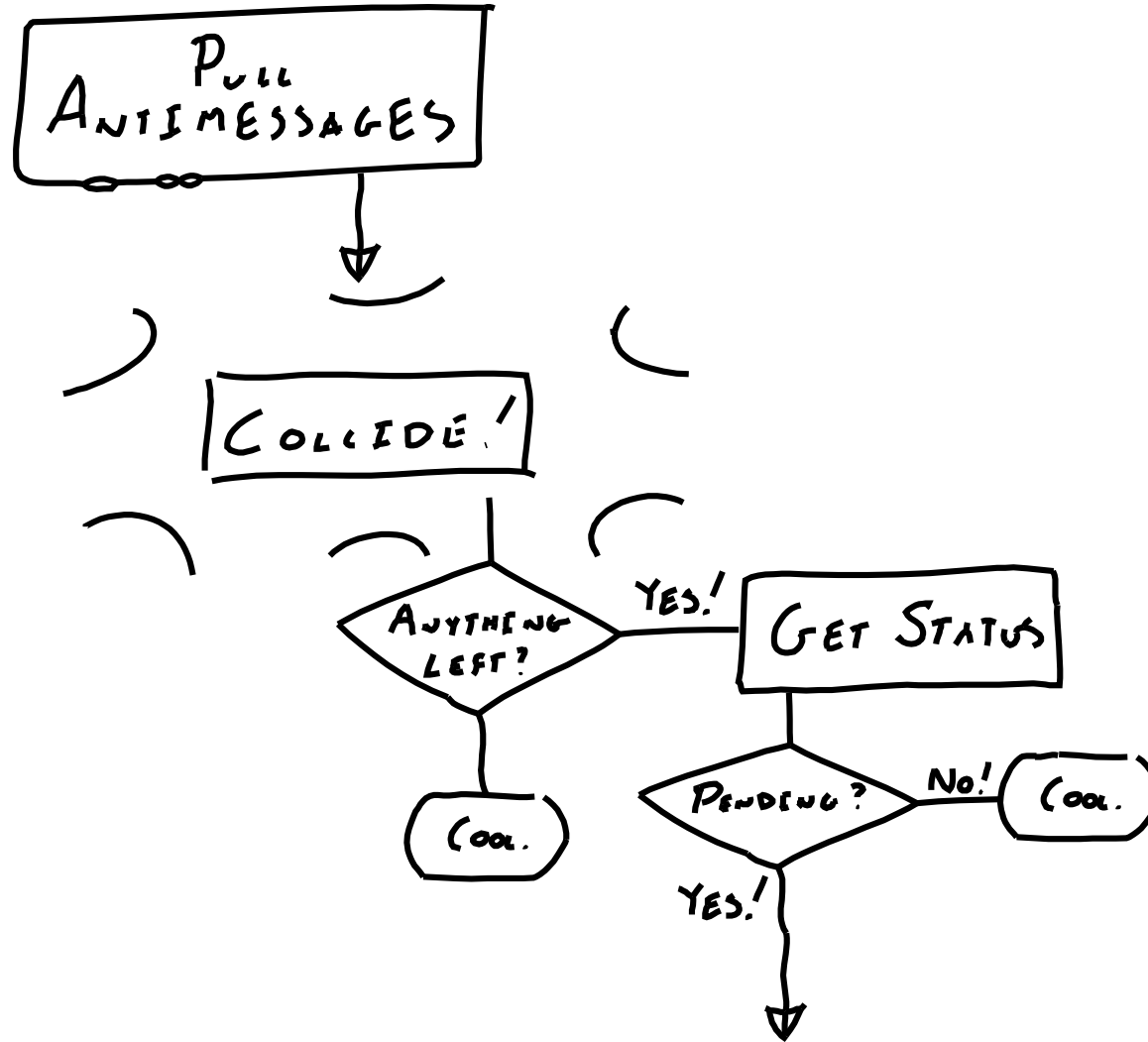
Payment Listener Modifications



Auditing Modifications



Orphan Rectifier



Thank You!

Any questions?

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