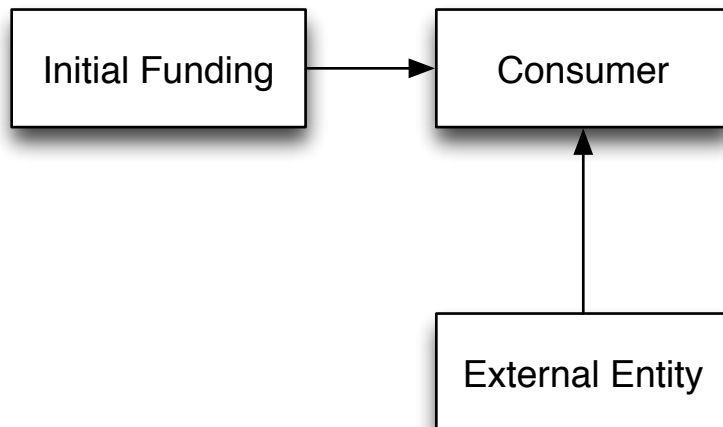


Prepaid Service Setup

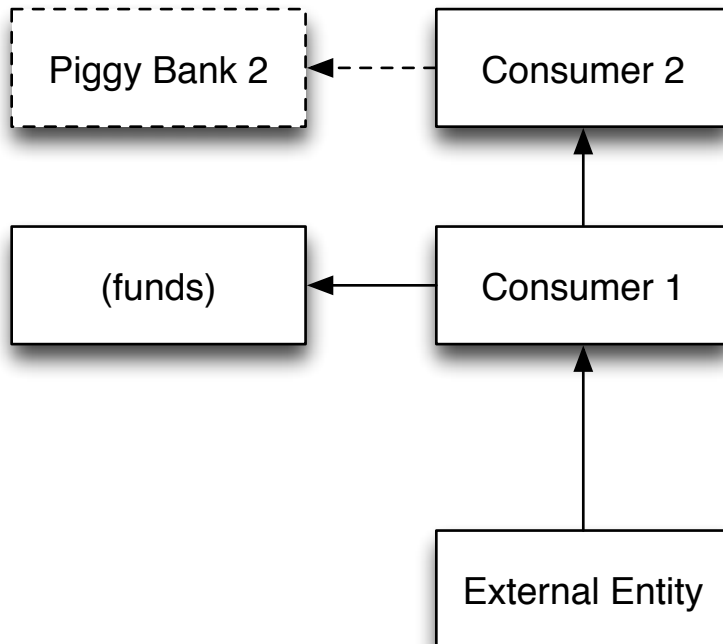


An external entity, part of some non-billing system, wants to be billed for. The most common case, here, is a standard Pobox account. This also applies to domain registration and Listbox tier plans.

This also applies to current-style account plans; they are not metered, but prepaid, with the Consumer object having a different rate and initial funding size each cycle

1. When created, the entity tells the billing system to create a Consumer object for it.
2. The newly-created Consumer object posts a charge to the ledger's open invoice.
3. At some point, the open invoice is closed and sent to the user.
4. When the invoice is paid, the funds from the customer are converted into a Credit, then applied to the invoice, then transferred to the consumer as its initial funding. (Most consumers will never be refunded.)
5. At regular intervals, the Consumer object transfers its funds to the journal, indicating that it has used up some of the funds the credit had provided. These charges are internal, and are not displayed on customer invoices.

Prepaid Service Renewal



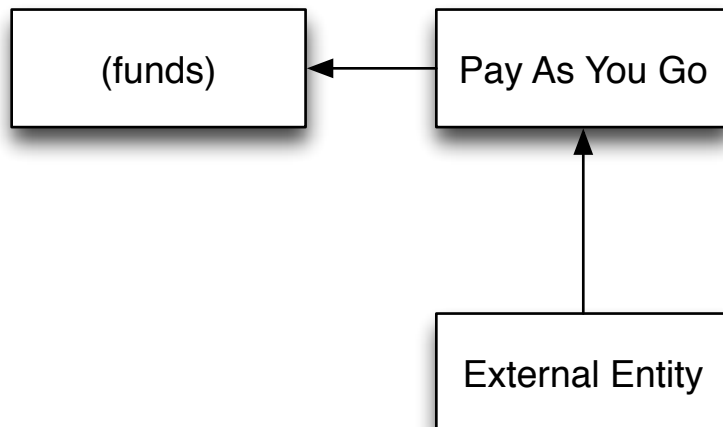
1. Consumer 1 regularly receives events that cause it to check how much longer its funds on hand will last. When it's "not long enough," it issues as "spawn my replacement event."

2. The replacement for Consumer 1 is Consumer 2. It is (probably) for an identical time period and rate, but Consumer 1 may have some properties that cause its replacement to differ in some way.

3. Consumer 2 posts a charge to the ledger for its full amount. When paid, Consumer 2 gets the credit transferred to it via the invoice and is targeted by Consumer 2. Consumer 2 sits inert, waiting.

4. When Consumer 1 is expired, it will look to see whether it has a replacement. If so, it will fire the "allow replacement to take over" event. If not, it will (possibly after some delay) fire the "expired without replacement event" which can do things like cause the external entity to be deactivated.

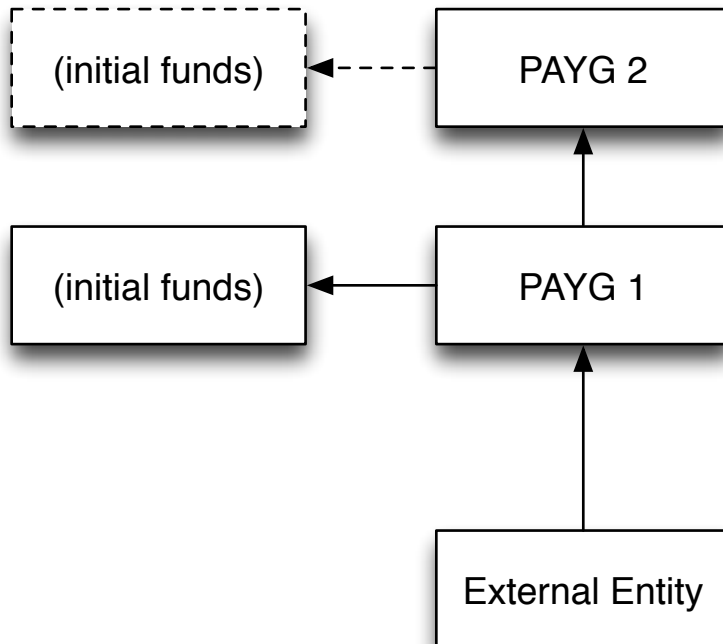
Pay as You Go Service Setup



An external entity, part of some non-billing system, wants to be billed for. The most common case, here, is a new-style metered mailing list for a Convio-style account.

- 1.** When created, the entity tells the billing system to create a PAYG object for it.
- 2.** The user requests "buy delivery credit" and chooses an amount.
- 3.** The PAYG object is instructed to issue an invoice-immediately charge to the ledger for the desired amount. The amount is also used to decide the rate schedule to be used when the PAYG charges the funds.
- 4.** The user makes a payment. The payment turns into a credit, is applied to the invoice, then transferred to the consumer.
- 5.** As needed, the consumer transfers its funds away to the journal, indicating how it was used up.

Pay as You Go Service Renewal



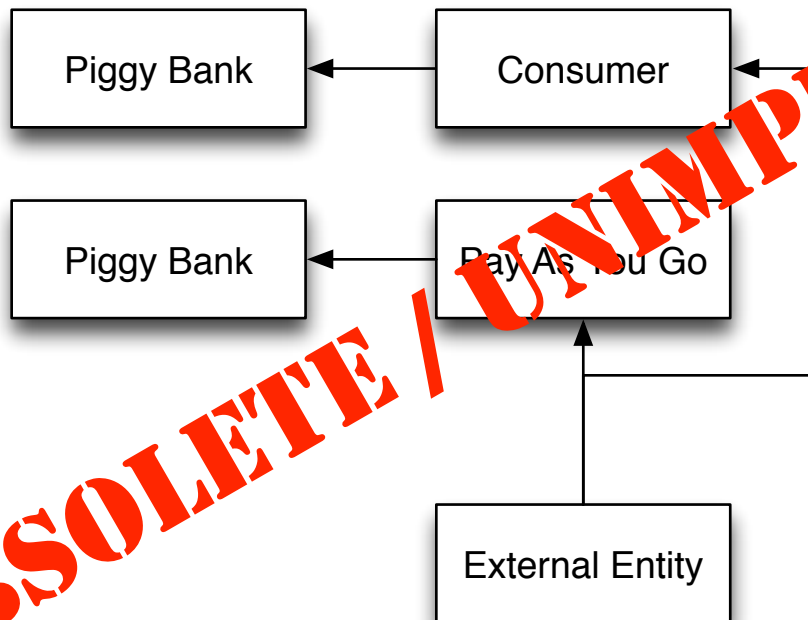
1. PAYG 1 regularly receives events that cause it to check how much longer its funds on hand will last. When it's "not long enough," it issues as "spawn my replacement event."

2. The replacement for PAYG 1 is PAYG 2. It will request payment, as PAYG 1 did when being set up. When payment is made fund PAYG 2, the amount paid will tell PAYG 2 how to pick its rate schedule.

3. When paid, the funds are transferred credit to invoice to PAYG 2. PAYG 2 sits in wait.

4. When PAYG 1 expires, it will look to see whether it has a replacement. If so, it will fire the "allow replacement to take over" event. If not, it will (possibly after some delay) fire the "expired without replacement event" which can do things like cause the external entity to be deactivated.

Hybrid Payment Types



Listbox bulk plans could have two kinds of charges: a per-service-period flat fee and a metered pool against which deliveries are charged.

This is easy to model. We create a Consumer object for the yearly fee, and it follows the normal rules for Consumer objects. We also create a PAYG object with its own piggy bank. If the user uses up his delivery credits in a year, he can pay for a new PAYG setup without having to pay the annual surcharge.