Coupon Stacking

and the

Digital Coupon POS Process

The objective of this document is to describe how paper and digital coupons are currently being processed on a point of sale (POS) system in an attempt to describe how to prevent "coupon stacking" and other forms of fraud. Specifically this document will touch on:

- Coupon Stacking (Electronic and Paper)
- Complementary Coupon/Offers
- Basics Reward Processing
- Family Code Validation (Company Code Validation)
- Value Code Rewards Issuance
- UPC Validation
- Electronic Reward Issuance
- The Issues
- The Answer

Definitions:

Coupon Stacking:

Coupon Stacking occurs when more than one, of the exact same coupon/offer, are used for purchasing a single product at the POS. This is unintended and considered a form of fraud.

For Example: 2 or more coupons for "$2.00 off Pampers" diapers are redeemed against a single purchase of a single package of Pampers diapers
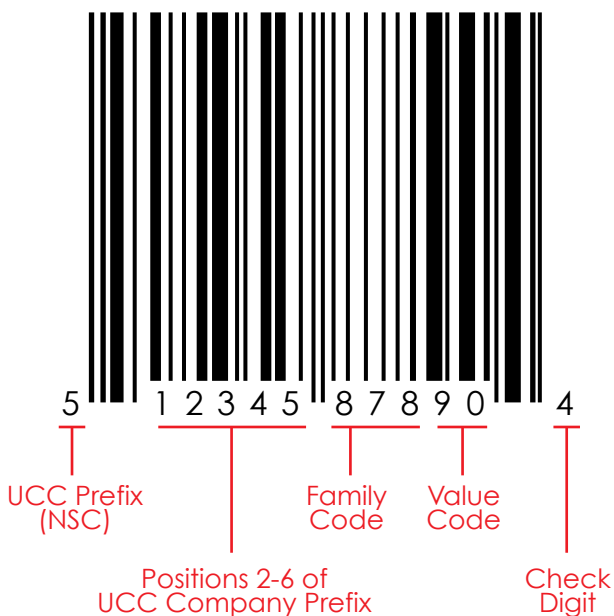
Complementary Coupon/Offers:

Complement Offers occur when more than one offer exists, from a mix of or single sourcing agents. They are intended to drive the purchase of a single product, or sub-product category. These are intended, and not considered fraud.

Example of a complementary offer from a combination of sourcing agents:

A user has the following coupons: $0.25 off a Can of Campbell's Soup, AND
3pts for the same Can of Campbell's Soup (toward Labels for Education), AND
spend $50.00, get 5000 additional fuel pts.

UCC Coupon Code
(Not to Scale)

5   1 2 3 4 5   8 7 8   9 0   4

UCC Prefix
(NSC)

Family
Code

Value
Code

Positions 2-6 of
UCC Company Prefix

Check
Digit

EAN In-store
Coupon Code
(Not to Scale)

9   9   1 2 3 4 5   6 7 8   9 0 9

EAN.UCC
Prefix

Family
Code

Value
Code

EAN.UCC
Company Prefix

Check
Digit

The three digits following the UCC Company Prefix are the Family Code. This number, combined with the UCC Company Prefix is assigned to each item record in the Retailer's POS System in order to validate a paper coupon.

The Manufacturer is responsible for assigning a Family Code to the list of their products (UPCs) that they want to have discounted with this manufacturer's coupon, and then communicate the Family Codes assignments to Retailers. These Family code assignments can change every promotion cycle.

The Retailer is responsible for maintaining and updating the assignment of the Family Codes to the Product UPCs in their POS System item tables on a weekly basis.

Example. In this case, If Company 12345 (e.g., P&G, Unilever, L'Oreal) has 200 items, that they want to qualify for this discount, they must provide the list of the UPCs for all of the 200 item to the retailers and tell the retailers to go into their POS System item file database and change the Family Code value for all of these 200 items to "878". This way when the item is scanned at the POS Terminal, the POS system will log (and count) that an item from Company 12345 Family Code 878 has been scanned. Then when this coupon is scanned, the POS system "validates" that an item has been scanned. The POS system does not record the actual UPC of the item matched, nor the face value. It is just a flag that states it is valid to provide the discount.

Regardless, this method **only** works if the Retailer has turned on the capability to do Family Code Validation in their POS System and maintains the Family Code relationships (Family Code Validation only occurs in approximately 45% of the time in the United States). Otherwise, the system will default to only validating that a product was purchased by only matching on the Company Prefix (which is actually the Manufacturer's ID).

In the electronic era, where the UCC Coupon Code is just being digitized and pushed to the POS System via a bluetooth interface, or a digitized barcode on a mobile phone being scanned at the POS, this has the potential of being "fraud at the speed of light". Because there is no Human Intervention to validate what is written on the face of the coupon or to determine the coupon is a valid offer (because the Coupon Codes are being sent directly to the POS electronically). Multiple products can "bind" against the Company Code (or Family Codes) and provide the consumer with the Offer reward automatically.

Bottom Line: Electronic barcode generation is the least accurate way to validate purchase requirements prior to providing a reward. Because it is very easy to make this 12 digit coupon code and provide it to the POS scanner or interface.

Value Code Rewards issuance:

When the UCC Coupon Code is being processed (either via paper or electronic), the reward mechanism is hard coded into the POS System Logic and is triggered by the "Value Code" on the coupon, after the Company Prefix has been validated. This happens every time a UCC Coupon Code is processed. So if you scan a UCC Coupon Code more than once, it will validate and play the reward more than once.

For Example: If a consumer had 5 paper coupons for $2.00 off pampers, but only purchased Pampers diapers, Dawn dish soap, Bounce Dryer Sheets, Bounty Paper Towels, and Downy Fabric Softener (All P&G products with the same company prefix), all 5 $2.00 off pampers coupons would play when scanned even though you only purchased 1 package of Pampers. This will also happen if the consumer scans the same electronic barcode, on their phone, 5 times.

The only way to stop this is form of misredemption fraud happening is for the cashier to realize that the consumer is scanning diaper coupons, and notice they only purchased the one package. In most instances the cashier just scans the stack of coupons provided by the customer, or lets the consumer scan their phone, and relies on the POS to tell them if there is an issue or not.

UPC Validation:

In a few other electronic couponing systems (primarily those where the POS system supports an "in-store promotion engine") the capability exists to always validate the actual product UPC being scanned at the POS, prior to providing the related Offer's Reward.

This is a more accurate way to insure a purchase occurs that matches the Offer's requirements. UPC Validation does not prevent any type of coupon stacking. It just means that a single offer is validated against a list of specific UPCs in the requirement list and not the family code or company prefix embedded in the UCC Coupon Code.

Electronic Rewards issuance:

In these electronic coupon systems (specifically "load to card" systems), where the UPC is validated, the reward is processed via one or more linked item record, or an alternative pricing field in the item record file in the POS Database. In this approach, by default, all the rewards (linked items) play, or none play. Therefore you get Coupon Stacking if you allow for Complementary Offers.

Activating the linked item records or alternative pricing mechanism, is done when an "offer code" is presented or passed to the POS System (swiping a loyalty card, typing in the offer code, or scanning the offer code from a mobile phone). Anytime one of the required items is scanned the links are followed and the reward will play automatically. So if the consumer

purchases 5 items then they get their linked rewards 5 times, even if they only produced the offer code once.

It is worth further noting that if an offer code is type or scanned in at the POS to link to a reward. It can be done for anyone.

> For example: If a consumer is standing in line waiting to check out and notices that the customer in front of them got 25% off Sony Camera by showing the cashier offer code 67890, they can say "wait, what is that offer code? Do that for me" and the clerk can type in the same offer code 67890 when they check out. Before you know it, the cashier has the offer code (or coupon) on a yellow post-it stuck to the cash register offering it to everyone that purchases a Sony Camera (or worse any Sony Product).

> There are hundreds of web site that consumer can go to that show offer codes. These offer codes have no way of being tied to a consumer or controlled for distribution and can cost the retailer unintended losses of gross margin and net profit.

In either case, nothing on the POS Systems determines how many times the Value Code or Offer Codes can be played. This is another form of fraud. Coupons can be played multiple times in a single transaction.

The Issue:

There are a lot of issues with the old school paper coupon process (using the UCC Coupon Codes, or EAN In-Store Coupon Codes). These issues have produced 8 - 12% fraud in the industry over the last few years. These issues only get worse when companies are talking about digitizing those UCC Codes and passing them directly to the POS System without any human intervention for additional validation.

Couponing and Vouchers become even more complicated when companies try to force an in-store promotion system to accommodate manufactures electronic coupons.

1. There are multiple disparate mechanism for validating the requirements and issuing rewards at the POS.
2. There is nothing to prevent the consumer from using multiple methods (Paper Coupons, electronic UCC Code, or load-to-card") at the same time.
3. The Retail POS System was not designed for, nor does it have rules to enforce reward conflict.

The Answer

Preventing Fraud and ensuring that electronic Manufacturer Coupons, Points Vouchers, and Retailer Offers (and other alternative currencies) provide the correct discounts to the consumer, and works the way they are intended, is part of an end-to-end coupon process and cannot be the sole responsibility of the POS System.

The end-to-end process should include an integrated approach for *creating, distributing, tracking, authenticating, validating, authorizing, redeeming, settling, disbursing, accounting and reporting* on electronic currencies for fraud prevention and arbitration. Reference: "End-to-end Digital Coupon Process and Functional Overview" or the "Joint Industry Coupon Committee Voluntary Guidelines for Digital Coupons" for details

The process starts with the ability to Create an Offer that goes through a rigorous Authorization & Managed Distribution process such that it can be authenticated and validated at the Point of Sale in Real-time before issuing a reward. This approach prevents fraudulent "Promissory Notes" (UCC Coupons Codes, Offer Codes, or Paper Vouchers) being created and redeemed at the POS.

Then each "Promissory Notes" should be uniquely serial numbered when issued to the consumer. (Note that UCC Coupon Codes, and Offer Codes are not uniquely associated to a consumer or instance issued and can be replicated easily.)

Finally the individually unique promissory notes should be authenticated, and validated in-real time, at the POS prior to issuing a reward. This validation should be done by a mechanism on the POS whose sole responsible is validating and authenticating these types of promissory notes. This mechanism should authenticate the promissory note, validate that all the requirements have been met, and determine if there are any conflicts with other promissory notes (paper or electronic), prior to issuing the reward. Each promissory note should then be marked as redeemed in real time so they cannot be redeemed more than once.

If the end-to-end process is approached in this manner, then the in-store promotion system (if they exist on the POS) can provide discounts as intended, paper coupons can co-exist with electronic, and there will be a massive reduction in fraud.