

Digital Coupon Management Standard Specification

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Introduction

This document is a GS1 normative specification that defines version 1.0 of the Digital Coupon Management standard.

This version 1.0 specification provides business partners with a common basis for creating a secure and reliable management process for managing digital coupons.

The specification was developed within the GS1 Global Standards Management Process by a Mission Specific Working Group¹ for Digital Coupon Management.

1. Scope

This standard applies to digital coupons linked to the purchase of specific products or services.

The GS1 Standard defines:

- 1. Rules on implementing a secure process for digital coupon management.
- 2. Rules on the use of identification standards in the digital coupon management process.
- Rules on the way to exchange data in the digital coupon management process.

2. References

Normative references:

- [ISODir2] ISO/IEC Directives part 2; Rules for the structure and drafting of International Standards – 6th edition, 2011
- [GS1 GenSpecs] GS1 General Specifications version 12, 2012
- [GSCN_Coupons] GS1 General Specifications Change Notice, Digital Coupons, GS1 2012
- [BMS_Shared] GS1 Business Message Standard (BMS), Shared Common Library version 3.0, 2011
- [GS1_System] GS1 System Architecture version 1.0, GS1 2012

Non-normative references:

 [BRAD_DCM] GS1 Business Requirements Analysis Document (BRAD), Digital Coupon Management – version 1.0 GS1 2012

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¹ GS1 uses this term for project groups, in order to distinguish them from standing committees.



3. Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1. General Business Terms

Trade Item

In the context of this standard a Trade Item is defined as a product available for sale at a retail outlet or at an online store.

Purchase Transaction

A Purchase Transaction is the event of buying one or more products and or services by a particular consumer from a particular retailer at a particular point in time.

Loyalty Program

A structured marketing effort aiming to reward, and therefore encourage, loyal buying behaviour with a specific company or group of companies.

Loyalty System

System in support of a loyalty program, enabling the management of customer relation data such as consumer loyalty accounts.

Customer Account

A Customer Account is a component of a loyalty system holding customer relation data for a specific customer.

3.2. General Coupon Management Terms

Coupon

Where throughout this document the short term 'coupon' is used it refers to the term Digital Coupon as defined below.

Paper coupon

A Paper Coupon is a physical ticket or document that can be exchanged for a financial discount or for loyalty points when making a purchase.

Digital Coupon

A Digital Coupon is an electronic presentation, that is distributed and presented without manifesting as "paper" or in other hard-copy form, and that can be exchanged for a financial discount or for loyalty points when making a purchase.

Mobile Coupon

Mobile coupons are a type of digital coupon received and/or presented via consumer mobile devices.

Digital Coupon Instance

A Digital Coupon Instance is an individual digital coupon issued to a particular offer user.



Coupon Offer

A Coupon Offer represents the conditions agreed upon between the business process partners (offer issuer, offer issuer clearing agent, offer distributor and offer awarder, offer validator and offer awarder clearing agent) for a specific series of coupons regarding the distribution, validation, redemption and settlement.

Coupon Offer Terms and Conditions

Legal statement by which the offer issuer communicates to the offer user the rules and legal aspects related to the coupon offer.

Acquisition Counts

The total number of coupon instances that have been acquired by offer users for a specific coupon offer.

Acceptance Period

The period within which the Offer Awarder indicates willingness to participate in the coupon offer.

Publication Period

The period within which the Offer Distributor informs the Offer Users of the Coupon Offer.

Acquisition Period

Period within which an Offer User may be required to indicate willingness to participate in a specific Coupon Offer by obtaining a Digital Coupon.

Validity Window

The total time window within which the Offer User is entitled to redeem the digital coupon, as defined by the Offer Start Date and Offer Expiration Date.

Redemption Period

The time period(s) within the validity period, for example a daily 1 hour period, that the Offer User can use a Digital Coupon in a purchase transaction. This could be more than one period during the validity period.

Figure 1 - Relation between coupon management periods (example)

Publication period						
Acquisition period						
	Validity window					
	Redemption period		Redemption period		Redemption period	



3.3. Business Process Roles

Figure 2 Digital Coupon Management – Business Process Roles



These roles can be assumed by different parties, and also one party may play multiple roles.

3.3.1. Primary Roles

Offer Issuer

Party issuing the coupons, bearing the commercial and financial responsibility for the coupons.

Offer Awarder

Party responsible for the redemption of the coupon.

Offer User

Customer using the coupon when making a purchase, and ultimately receiving the reward.

3.3.2. Supporting Roles

Offer Distributor

Party responsible for the distribution of the coupons to the consumers on behalf of the Offer Issuer.

Offer Validator

Party assisting the Offer Awarder in the validation of the coupons by offering a centralized service.

Offer Awarder Clearing Agent

Party responsible for the financial clearance of redeemed coupons on behalf of the Offer Awarder.

Offer Issuer Clearing Agent

Party responsible for the financial clearance of redeemed coupons on behalf of the Offer Issuer.

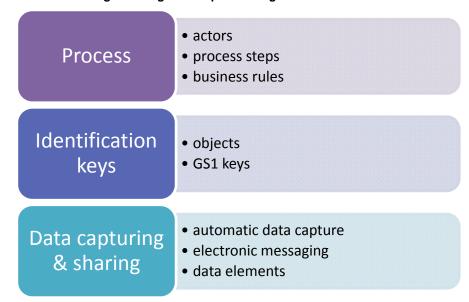


4. Digital Coupon Management Framework

The Digital Coupon Management standard consists of three building blocks:

- 1. Digital coupon management process, defined in chapter 5.
- 2. Identification keys, defined in chapter 6.
- 3. Data capturing and sharing, defined in chapter 7.

Figure 3 Digital Coupon Management Framework





5. Digital Coupon Management Process

5.1. Introduction

The Digital Coupon Management Process is an eleven step process aiming to manage the full lifecycle of a digital coupon offer.

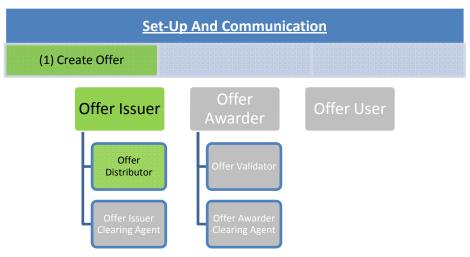
Set-Up And Communication (1) Create Offer (2) Notify of Offer (3) Accept Offer **Discovery and Acquisition** (4) Publish Offer (5) Acquire Coupon **Presentment** (6) Present and Read Coupon **Validation and Redemption** (7) Validate Coupon (8) Redeem Coupon **Reporting and Financial Settlement** (9) Report on Coupon (11) Clearing of Redeemed (10) Update Coupon Status Redemption Coupons

Figure 4 Digital Coupon Management Process



5.2. Step 1 – Create Offer

Figure 5 Process Step 1 - Create Offer



5.2.1. Definition

The Offer Issuer creates the initial offer.

5.2.2. Involved parties

- SHALL involve the Offer Issuer.
- MAY involve the Offer Distributor.

5.2.3. Pre-conditions

Not applicable.

5.2.4. Post-conditions

In order to complete this process step the following conditions apply:

- Offer Issuer SHALL have established the Digital Coupon Offer Identification [see chapter 6].
- Offer Issuer SHALL have established the rules around offer distribution, validation, redemption and settlement.
- Offer Issuer SHALL have established the Coupon Offer Terms and Conditions [see chapter 3].

5.2.5. Scenarios (non-normative)

Main scenario:

- 1. Offer Issuer and Offer Distributor start to communicate on a potential offer.
- 2. Offer Issuer creates a (draft) offer.
- 3. Offer Issuer sends the offer set-up information to the Offer Distributor.
- 4. Offer Distributor confirms he has received the set-up information.
- 5. Offer Distributor reviews the offer information and may provide comments.



6. Potentially the Offer Issuer modifies the Offer Set-up and sends an updated version to the Offer Distributor.

5.2.6. Business rules

- If the Offer Distributor is involved in this process step the Offer Issuer SHALL comply with the Offer Set-up message specification [see chapter 7] when communicating the content of the offer.
- Upon receipt of the offer set-up message the Offer Distributor SHALL comply with the Offer Set-up Receipt Acknowledgement message specification [see chapter 7] to confirm the receipt.



5.3. Step 2 - Notify of Offer

Figure 6 Process Step 2 - Notify of Offer



5.3.1. Definition

The Offer Issuer communicates the coupon offer details to the Offer Awarder.

5.3.2. Involved parties

- SHALL involve the Offer Issuer.
- MAY involve the Offer Issuer Clearing Agent.
- SHALL involve the Offer Awarder.
- MAY involve the Offer Awarder Clearing Agent.

5.3.3. Pre-conditions

Offer Issuer SHALL have established the terms for the coupon offer.

5.3.4. Post-conditions

The Offer Awarder and the Offer Awarder Clearing Agent SHALL have received the details on the Coupon Offer.

5.3.5. Scenarios (non-normative)

Main scenario:

- 1. The offer is communicated by the Offer Issuer to the Offer Awarder for acceptance.
- 2. The Offer Awarder acknowledges the receipt of the Offer Notification.

5.3.6. Business rules

The Offer Issuer SHALL comply with the Offer Notification message specification [chapter 7] when communicating the content of the offer to the Offer Awarder.

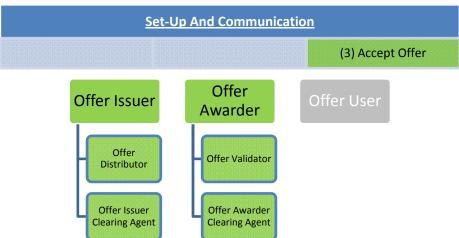


 Upon receipt of the offer notification message The Offer Awarder SHOULD use the Offer Notification Receipt Acknowledgement message specification [see chapter 7] to confirm the receipt.



5.4. Step 3 - Accept Offer

Figure 7 Process Step 3 – Accept Offer



5.4.1. Definition

The Offer Awarder accepts to support the offer at his premises, for example at the Point-of-Sale.

5.4.2. Involved parties

- SHALL involve the Offer Issuer.
- SHALL involve the Offer Awarder.
- MAY involve the Offer Issuer Clearing Agent.
- MAY involve the Offer Awarder Clearing Agent.
- MAY involve the Offer Distributor.
- MAY involve the Offer Validator.

5.4.3. Pre-conditions

The Offer Awarder or the Offer Awarder Clearing Agent SHALL have received the details on the Coupon Offer.

5.4.4. Post-conditions

- The Offer Awarder SHALL have communicated the acceptance or rejection of the coupon offer to the Offer Issuer.
- If involved, Offer Awarder Clearing Agent and Offer Issuer Clearing Agent SHALL have been informed on the acceptance / rejection.
- If involved, Offer Distributor SHALL have been informed of the acceptance / rejection.
- Offer Issuer and Offer Awarder SHALL have agreed on one or more presentment and validation methods to be supported at the Point-of-Sale, including which data elements SHALL be captured during presentment: 1. Coupon Offer ID, 2. Coupon Instance ID, 3. Customer Account ID.



5.4.5. Scenarios (non-normative)

Main scenario:

- 1. Offer Awarder evaluates the business rules for the offer, and if agreed sends a positive response.
- 2. Offer Distributor and Clearing Agent are informed of the acceptance of the offer.
- 3. The Clearing Agent loads the offer to ensure ability to settle.

Alternate scenario: Offer Awarder does not participate:

(This scenario may for example occur when the retailer does not carry the products related to the offer.)

- 1. Offer Awarder informs the Offer Distributor and the Offer Issuer Clearing Agent of the rejection.
- 2. Offer Issuer and Offer Issuer Clearing Agent process the information.

Alternate scenario: Offer Awarder requests modification of the offer:

Offer Awarder may request modification of the offer to substitute for products not included in the initial offer notification. In case the Offer Issuer accepts the request the process will go back to step 1. Otherwise the rejection scenario (above) will be followed.

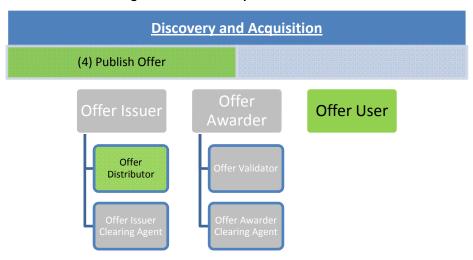
5.4.6. Business rules

- If the Offer Awarder accepts to support the offer he SHALL have made sure that the offer can be validated and redeemed according to the coupon offer conditions.
- The Offer Awarder SHALL comply with the Offer Response message specification [see chapter 7] when communicating the acceptance or rejection of the offer to the Offer Issuer.



5.5. Step 4 - Publish Offer

Figure 8 Process Step 4 - Publish Offer



5.5.1. Definition

The Offer Distributor publishes the offer for access by potential Offer Users.

5.5.2. Involved parties

- SHALL involve the Offer Distributor.
- SHOULD involve potential Offer Users.

5.5.3. Pre-conditions

- The Offer Issuer SHALL have ensured offer acceptance by appropriate Offer Awarders.
- Offer Issuer SHALL have approved the coupon offer for distribution.
- Offer Distributor SHALL have received the distribution rules for the offer.

5.5.4. Post-conditions

- The targeted Offer Users MAY have received a notification of the Coupon Offer.
- The targeted Offer Users SHALL have access to the coupon offer.
- The targeted Offer Users SHALL have access to the terms and conditions of the coupon offer.

5.5.5. Scenarios (non-normative)

Main scenario:

- Offer Distributor publishes the offer according to defined business rules.
- Offer User discovers / is made aware of the offer.

Alternate scenario: Publication fails, for example due to technical failure:

Distribution statistics may need to be updated to reflect failures



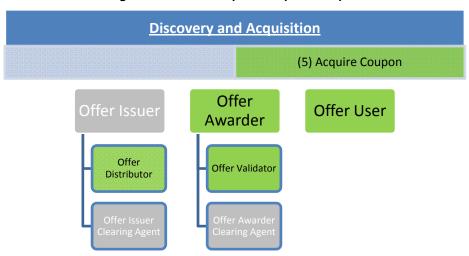
5.5.6. Business rules

The Offer Distributor SHALL comply with the offer publication rules as defined by the Offer Issuer.



5.6. Step 5 – Acquire Coupon

Figure 9 Process Step 5 - Acquire Coupon



5.6.1. Definition

The Offer User acquires a digital coupon.

5.6.2. Involved parties

- SHALL involve the Offer Distributor.
- SHALL involve the Offer User.
- MAY involve the Offer Awarder.
- MAY involve the Offer Validator.

5.6.3. Pre-conditions

- Offer User SHALL have access to the coupon offer.
- The coupon offer SHALL fall within the acquisition period.
- Offer User SHALL be entitled to the offer.

5.6.4. Post-conditions

- The Offer User SHALL have obtained the coupon, or SHALL have been made aware that a coupon has been added to his loyalty account.
- The Offer Distributor SHALL have updated the acquisition counts.
- If agreed in the Coupon Offer set-up, the Offer Distributor SHALL have assigned a unique serialized GCN to the acquired digital coupon instance.
- The Offer Distributor MAY have informed the participating Offer Awarder(s) and Offer Validator(s) of the acquisition.
- The Offer Awarder and Offer Validators MAY have acknowledged that the acquired coupon is now redeemable.



5.6.5. Scenarios (non-normative)

Main scenario:

- Offer User accepts or acquires the coupon.
- Offer User will familiarize himself with the redemption rules.
- Distributor may update the acquisition counts, for example based on the number of opt-ins.
- Relevant actors are notified of the acceptance, where applicable.
- Offer User receives a visual notification of the coupon acquisition, where applicable.

Alternate scenario: Offer User does not accept coupon:

Relevant actors are notified accordingly.

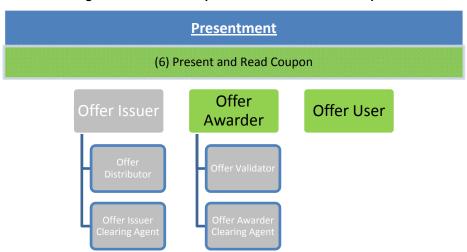
5.6.6. Business rules

- The Offer Distributor SHALL take measures to prevent illegal reproduction of coupons
- The Offer Distributor SHALL take measures to prevent Offer Users illegally acquiring offers not intended for them.
- The Offer Distributor SHALL take measures to prevent Offer Users acquiring more coupons than eligible
- The Offer Distributor SHALL take measures to prevent Offer Users from illegally passing coupons to others.
- The Offer Distributor SHALL comply with the *Digital Coupon Acquisition Notification message* specification [see chapter 7] when communicating the acquisition of a coupon.



5.7. Step 6 – Present and Read Coupon

Figure 10 Process Step 6 - Present and Read Coupon



5.7.1. Definition

The Offer User presents the digital coupon and/or his customer account ID to the Offer Awarder.

5.7.2. Involved parties

- SHALL involve the Offer Awarder.
- SHALL involve the Offer User.

5.7.3. Pre-conditions

- The Offer User SHOULD have acquired a digital coupon.
- The Offer User SHALL have a means to present the coupon, either directly or via his customer account ID.
- The Offer Awarder SHALL be able to read the coupon, either directly or via the customer account ID.

5.7.4. Post-conditions

The Offer Awarder SHALL have obtained the required data for validation of the coupon.

5.7.5. Scenarios (non-normative)

Main scenario - variant 1:

- Offer User presents the coupon
- Offer Awarder reads the coupon data.

Main scenario - variant 2:

- Offer User presents his customer account id
- Offer Awarder retrieves the data required for coupon validation from the loyalty account.



5.7.6. Business rules

Not applicable



5.8. Step 7 – Validate Coupon

Figure 11 Process Step 7 - Validate Coupon



5.8.1. Definition

The Offer Awarder validates whether the digital coupon is authentic and whether the purchase meets the agreed business rules for the digital coupon.

5.8.2. Involved parties

- SHALL involve the Offer Awarder.
- MAY involve the Offer Validator.

5.8.3. Pre-conditions

- The Offer Awarder SHALL have obtained the required data for validation of the coupon.
- Offer Awarder / Offer Validator SHALL have up-to-date redemption information to check whether the presented coupon complies with the redemption rules.
- Offer Awarder / Offer Validator SHALL have access to the related purchase transaction information.

5.8.4. Post-conditions

The Offer Awarder / Offer Validator SHALL have either approved or rejected the coupon for redemption.

5.8.5. Scenarios (non-normative)

Main Scenario - variant 1: Validation of coupon via loyalty system

Offer Awarder, optionally assisted by the Offer Validator, validates the coupon.

Main Scenario – variant 2: Validation of coupon via offer database

Offer Awarder and/or Offer Validator validate the coupon.



Alternate Scenario: Coupon does not validate

If relevant, Offer Validator informs Offer Awarder on the rejection and reason.

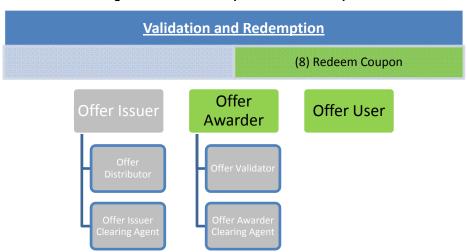
5.8.6. Business rules

- The Offer Awarder or Offer Validator SHALL reject digital coupons that have already been redeemed in an earlier purchase transaction.
- Offer Awarder SHALL allow for the presentation of multiple coupons in the same purchase transaction.
- Offer Awarder SHALL take measures to prevent the processing of the same coupon instance multiple times in the same purchase transaction.
- Offer Awarder SHALL take measures to ensure that once an individual trade item out of the current purchase transaction is used to redeem a digital coupon or paper coupon instance, it is not reused to redeem another digital or paper coupon instance, unless this is allowed in the offer conditions.
- Offer Awarder SHALL take measures to prevent processing illegally obtained coupons.
- Offer Awarder SHALL take measures to prevent till operators from keeping digital coupon redemption values for themselves.



5.9. Step 8 – Redeem Coupon

Figure 12 Process Step 8 - Redeem Coupon



5.9.1. Definition

The Offer Awarder awards the digital coupon to the Offer User and records the redemption information in his system.

5.9.2. Involved parties

- SHALL involve the Offer User.
- SHALL involve the Offer Awarder.

5.9.3. Pre-conditions

The digital coupon that was presented SHALL have been approved for redemption.

5.9.4. Post-conditions

- The Offer User SHALL have either received the monetary value of the coupon during the purchase transaction <u>OR</u> SHALL have received or will receive the loyalty-points value on his customer account.
- The Offer Awarder SHALL have recorded the redemption details.

5.9.5. Scenarios (non-normative)

Main Scenario A: Coupon has a monetary value.

The value is deducted from the total shopping bill. The offer user pays their shopping bill based upon the net impact of the discounted value of the coupon

Main Scenario B: Coupon is for a loyalty points based offer

- The coupons points-value is recorded in the awarders system.
- On a periodical basis, as described in the user terms and conditions of the offer, the pointsvalue will be loaded to the users loyalty account.



Alternate scenario: Coupon does not meet the validation rules and is not awarded:

- The Offer User is notified that coupon is not awarded and may be provided with reasons as to why coupon is not awarded. (this means that the POS may need to provide information on the reason to the cashier)
- The coupon details and rationale for not awarding the offer may be recorded in the awarders systems.
- The shopping bill does not take into account the offer award (i.e. the user pays the full amount).

Alternate scenario: Coupon does not meet the validation rules but is awarded anyway:



Note: This scenario can occur when from a customer service rationale the awarder decides to award the user to prevent disruption at the till.

- The Offer User is notified that the coupon should not be awarded and may be provided with reasons as to why coupon should not be awarded.
- The offer awarder decides to override the validation rules and award the user
- The coupon details and rationale for overriding the offer validation rules are recorded in the awarders systems
- The award value is deducted from the total shopping bill. The user pays the bill based upon the net impact of discounted value of the coupon

Alternate scenario: Technology failure prevents the coupon from being validated:



Note: Note this scenario could occur and from a customer service rationale the awarder decides to award the user to prevent disruption at the till

- The offer awarder decides to award the user
- The coupon details are recorded in the awarders systems
- The award value is deducted from the total shopping bill. The user pays the shopping bill based upon the net impact of discounted value of the coupon

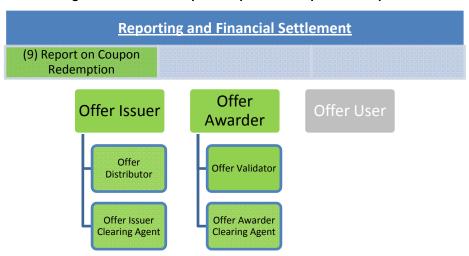
5.9.6. Business rules

The Offer Awarder SHALL comply with the *Digital Coupon Redemption Record specification* [see chapter 7] when recording the redemption.



5.10. Step 9 – Report on Coupon Redemption

Figure 13 Process Step 9 - Report on Coupon Redemption



5.10.1. Definition

The Offer Awarder communicates the redemption information to the Offer Issuer.

5.10.2. Involved parties

- SHALL involve the Offer Issuer.
- SHALL involve the Offer Awarder.
- MAY involve the Offer Issuer Clearing Agent.
- MAY involve the Offer Awarder Clearing Agent.
- MAY involve the Offer Distributor.
- MAY involve the Offer Validator.

5.10.3. Pre-conditions

For real-time notifications:

There SHALL be one or more redeemed coupons not previously communicated.

For periodical reporting:

- There SHALL be an agreement on the earliest and latest report date for the coupon offer.
- There SHALL be an agreement on the reporting intervals.

5.10.4. Post-conditions

- If involved, The Offer Awarder Clearing Agent SHALL have received the redemption report.
- The Offer Issuer and, if involved, the Offer Issuer Clearing Agent SHALL have received the redemption report.
- If involved, the Offer Distributor and Offer Validator SHALL have received the redemption notification.



5.10.5. Scenarios (non-normative)

Main Scenario:

- In real time or near-real time, the Offer Distributor and Offer Validator are notified of coupon redemption occurrence.
- In real time, near-real time or in a batch process as defined by affected actors, the Offer Awarder Clearing Agent is notified of coupon redemption.
- At a pre-defined time, the Offer Issuer Clearing Agent or the Offer Issuer is presented redemption data in batch for settlement, audit and reporting purposes.

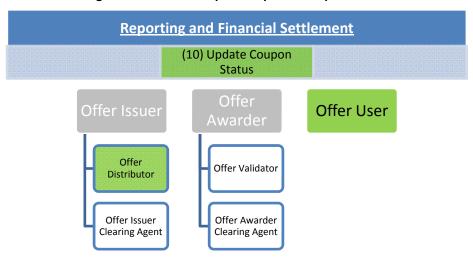
5.10.6. Business rules

- The Redemption Report and Redemption Notification SHALL only contain redeemed coupons that were not reported previously.
- The Redemption Report MAY also be used to explicitly communicate that no new redemptions are present.
- The Offer Awarder SHALL comply with the Digital Coupon Redemption Notification message specification [see chapter 7] for real-time or near-real time communication of coupon redemption to the Offer Distributor and Offer Validator.
- The Offer Awarder or Offer Awarder Clearing Agent SHALL comply with the Digital Coupon Redemption Notification message specification [see chapter 7] for periodical communication of coupon redemption to the Offer Issuer and Offer Issuer Clearing Agent.



5.11. Step 10 – Update Coupon Status

Figure 14 Process Step 10 - Update Coupon Status



5.11.1. Definition

The Offer Distributor updates the status of the redeemed coupon and notifies the Offer User.

5.11.2. Involved parties

- SHALL involve the Offer Distributor.
- SHALL involve the Offer User.

5.11.3. Pre-conditions

The Offer Distributor SHALL have received information on the redemption of the Offer User's coupon.

5.11.4. Post-conditions

 The Offer User SHALL have been notified of the status change of his digital coupon OR the data from which the Offer User can retrieve information about his Coupons and associated status SHALL have been updated

5.11.5. Scenarios (non-normative)

Main Scenario:

- The Offer Distributor checks upon a positive coupon redemption event that the above preconditions for coupon redemption validity notification are met and if this is the case either:
- Updates the Offer User's coupon status on his mobile device and in the offer database accordingly;

OR:

Updates the Offer User's coupon status on his account accordingly.



Coupon offer expires without redemption

No active update of the status is foreseen after expiration. It is assumed that the account application or the coupon application will be able to mark / remove expired coupons.

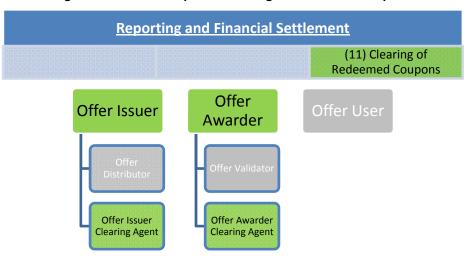
5.11.6. Business rules

 The Offer Distributor SHALL update the coupon status as soon as possible after completion of step 8 Redeem Coupon.



5.12. Step 11 – Clearing of Redeemed Coupons

Figure 15 Process Step 11 - Clearing of Redeemed Coupons



5.12.1. Definition

The Offer Issuer or the Offer Issuer Clearing Agent checks the awarded coupon transmissions and whether the rules were applied, and together with the Offer Awarder or the Offer Awarder Clearing Agent agrees on the coupons to be compensated.

5.12.2. Involved parties

- SHALL involve the Offer Issuer.
- SHALL involve the Offer Awarder.
- MAY involve the Offer Issuer Clearing Agent.
- MAY involve the Offer Awarder Clearing Agent.

5.12.3. Pre-conditions

■ The Offer Issuer or the Offer Issuer Clearing Agent SHALL have received the redemption report from the Offer Awarder or the Offer Awarder Clearing Agent.

5.12.4. Post-conditions

The Offer Awarder SHALL have been notified on the payment that will be made by the Offer Issuer, and of any adjustments.

5.12.5. Scenarios (non-normative)

Main Scenario:

- Based on the redemption report (see step 9) the Offer Awarder or his Clearing Agent sends an invoice to the Offer Issuer or his Clearing Agent.
- The Offer Issuer or his Clearing Agent analyses all available data on redeemed coupons and checks whether the number of redeemed coupons is correct/ plausible and whether all business rules have been followed.



 Offer Issuer or his Clearing Agent prepares payment to the Offer Awarder or his Clearing Agent.

Self-billing:

In this case the Offer Issuer or the Offer Issuer Clearing Agent will prepare the invoice.

Disputes:

In case the Offer Issuer and Offer Awarder disagree on the invoice manual resolution of the issue will be needed. After that a debit or credit note will be issued.

Independent stores:

In cases where stores have independent owners, or are united in buying groups / symbol group / wholesalers, the redeemed coupons may also need to be settled between retail Head Quarters and store(s).

5.12.6. Business rules

- The invoice issuer SHALL avoid duplication of data from multiple transmissions or errors in invoice cut-off dates
- The invoice issuer SHALL avoid missing data due to hand-offs between parties.
- The invoice issuer SHALL avoid submission of incorrect or fraudulent data.

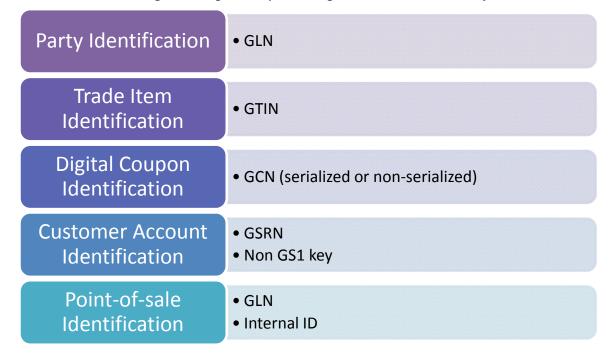


6. Identification Keys

6.1. Introduction

This section describes the rules around the application of identification standards within the Digital Coupon Management standard. These rules are a refinement of the general rules as stated in the GS1 General Specifications [see GS1_Gen_Specs].

Figure 16 Digital Coupon Management - Identification Keys



6.2. Party Identification

All parties involved in the Digital Coupon Management process SHALL be identified using a *Global Location Number (GLN)* [see GS1_Gen_Specs].

6.3. Trade Item Identification

All trade items referred to in the Digital Coupon Management process SHALL be identified using a *Global Trade Item Number (GTIN)* [see GS1_Gen_Specs].

6.4. Digital Coupon Identification

6.4.1. Coupon Offer Identification

Each coupon offer referred to in the Digital Coupon Management process SHALL be identified using a non-serialized *Global Coupon Number* [see GSCN_Coupon].



6.4.2. Coupon Instance Identification

If there is a need to uniquely identify a digital coupon instance it SHALL be identified using a <u>serialized</u> *Global Coupon Number* [see GSCN_Coupon].

6.5. Customer Account Identification

Customer accounts referred to in the Digital Coupon Management process SHALL be identified using either a:

- a Global Service Relation Number (GSRN) [see GS1_Gen_Specs]; OR
- a key according to a non-GS1 identification scheme.

6.6. Point-of-sale Identification

6.6.1. Store Identification

Each store referred to in the Digital Coupon Management process SHALL be identified using either:

- a Global Location Number (GLN) [see GS1_Gen_Specs].; OR
- a non-standard identifier unique across all stores of the Offer Awarder

6.6.2. POS-terminal Identification

Each point-of-sale terminal referred to in the Digital Coupon Management process SHALL be identified using either:

- a Global Location Number (GLN) [see GS1_Gen_Specs].; OR
- a non-standard identifier unique within the store.



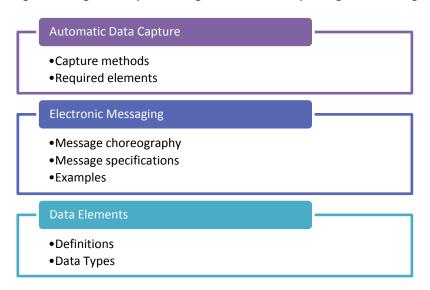
7. Data Capturing & Sharing

7.1. Introduction

The rules on Data Capturing and Sharing have been organized in three parts:

- 1. Automatic data capture
- 2. Electronic messaging
- 3. Data elements

Figure 17 Digital Coupon Management - Data Capturing and Sharing



7.2. Automatic Data Capture

7.2.1. Capture methods

A digital coupon SHALL be communicated to the Offer Awarder at the point-of-sale in one of the following ways:

- 1. By presenting the digital coupon ID(s).
- 2. By presenting a customer account ID, linking to a customer service account that holds the digital coupon(s).

7.2.2. Capture of digital coupon ID(s)

- The digital coupon ID(s) SHALL be presented in a way that enables automatic data capture of the Global Coupon Number(s) at the time of transaction.
- At all times, the non-serialized <u>Global Coupon Number(s)</u> of the presented digital coupon(s) SHALL be captured.
- If agreed in the offer conditions, the <u>serial</u> part of the Global Coupon Number(s) SHALL be captured.



7.2.3. Capture of customer account ID

- The customer account ID SHALL be presented in a way that enables automatic data capture of the Customer Account ID and subsequent automatic retrieval of the Global Coupon Number(s) at the time of transaction.
- At all times, the non-serialized Global Coupon Number(s) SHALL be retrieved.
- If agreed in the offer conditions, the <u>serial</u> part of the Global Coupon Number(s) SHALL be retrieved as well.

7.3. Electronic Messaging

7.3.1. Message choreography

Overview of the information flows, related message specifications and the sending and receiving parties. Please refer to appendix B for a diagram depicting a possible implementation of these information flows.

Seq #	Process step	Information flow	Type of Data Sharing	Sending role	Receiving role(s)
1	1	Offer Set-up	Master data	Offer Issuer	Offer Distributor
2	1	Offer Set-up Receipt Acknowledgement	Master data	Offer Distributor	Offer Issuer
3	2	Offer Notification	Master data	Offer Issuer	Offer Awarder
4	2	Offer Notification Receipt Acknowledgement	Master data	Offer Awarder	Offer Issuer
5	3	Offer Response	Master data	Offer Awarder	Offer Issuer
6	4	offer publication	n/a (B2C)	Offer Distributor	Offer User
7	5	digital coupon acquisition	n/a (B2C)	Offer User	Offer Distributor
8	5	Digital Coupon Acquisition Notification	Real-time event data	Offer Distributor	Offer Awarder(s), Offer Validator(s)
9	5	Digital Coupon Redeemable Acknowledgement	Real-time event data	Offer Awarder(s), Offer Validator(s)	Offer Distributor
10	5	digital coupon acquisition confirmation	n/a (B2C)	Offer Distributor	Offer User
11	6	present coupon	n/a (B2C)	Offer User	Offer Awarder
12	7	Digital Coupon Validation Request	Real-time event data	Offer Awarder	Offer Validator
13	7	Digital Coupon Validation Response	Real-time event data	Offer Validator	Offer Awarder
14	8	redeem coupon	n/a (B2C)	Offer Awarder	Offer User



Seq #	Process step	Information flow	Type of Data Sharing	Sending role	Receiving role(s)
15	8	Digital Coupon Redemption Record	Real-time event data	Offer Awarder	
16	9	Digital Coupon Redemption Notification	Real-time event data	Offer Awarder	Offer Validator, Offer Distributor
17	10	update coupon status	n/a (B2C)	Offer Distributor	Offer User
18	9	Digital Coupon Redemption Report	Transaction data	Offer Awarder Offer Awarder Clearing Agent	Offer Issuer, Offer Issuer Clearing Agent
19	11	Financial settlement	Transaction data	Offer Awarder Offer Awarder Clearing Agent	Offer Issuer Offer Issuer Clearing Agent

Sequence Number & Process Step

The sequence in which the information flow SHOULD be carried out, and the related business process step.

Information flow

For the underlined information flows message specifications have been defined.

Type of Data Sharing

- Master Data: [GS1_System] Attributes of a real-world Entity that are static (unchanging through the life of the entity) or nearly so.
- <u>Transaction Data</u>: [GS1_System] Business documents that are shared bilaterally between trading partners, each document serving to automate a step in a business process involving a business transaction between parties.
- Physical Event Data: [GS1_System] Records of the completion of business process steps in which physical entities are handled. (For the purposes of this document the term Real-time event data is used, and the term physical has been removed.)



Note: Master data exchange may be realized using GS1 eCom or GS1 GDSN standards, transactional data may be realized using GS1 eCom standards, sharing of real-time event data may be realized using the GS1 EPCIS standard.

Sending and Receiving Roles

The parties that are sending and receiving the information.



Important: Please refer to the process description in chapter 5 for the normative description of all the involved roles per process step.

7.3.2. Message Specifications

The next paragraphs describe the normative content for all defined messages (underlined in the message choreography).



Each data element in a message specification has the following information:

Level ID

Number indicating the sequence and hierarchical level of the data element.

Example:

- 3. element A
- 3.1 element B
- 3.2 element C

Means that elements B and C are contained in element A.

Data Element

The name of the data element. The corresponding definitions are listed in paragraph 7.4.1.

Cardinality

- 1..1 = mandatory data element that occurs exactly once.
- 0..1 = optional data element that occurs exactly once.
- 1..* = mandatory element that must occur at a minimum once but may occur multiple times.
- 0..* = optional element that may occur multiple times.

Data Type

The data type of the data element, being either:

- 1. Element group = a grouping of other data elements, data element itself holds no value.
- 2. A data type that is defined as part of this standard, in paragraph 7.4.2.
- 3. A data type that is defined in the BMS Shared Common Library [BMS_Shared].

7.3.2.1. Document Header Details

Generic Document Header details required for master data and transaction data.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details	11	Element group
1.1	Document ID	11	String
1.2	Document Sender GLN	11	GLN
1.3	Document Recipient GLN	11	GLN
1.4	Document Creation Date Time	11	dateTime
1.5	Document Change Date Time	01	dateTime
1.6	Document Change Reason	01	Description200

7.3.3. Message: Offer Set-up

Specification of the data to be exchanged between Offer Issuer and Offer Distributor during offer creation.



Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
2	Offer Issuer GLN	11	GLN
3	Offer Distributor GLN	11	GLN
4	Coupon Offer ID	11	GCN (non-serialized), see 7.4.2
5	Offer Start Date Time	11	DateOptionalTime
6	Offer Expiration Date Time	11	DateOptionalTime
7	Offer Type Code	11	OfferTypeCode, see 7.4.2
8	Offer Distribution Details	01	Element group
8.1	Offer Publication Period	01	Element group
8.1.1	Offer Publication Start Date Time	11	DateOptionalTime
8.1.2	Offer Publication End Date Time	11	DateOptionalTime
8.2	Offer Acquisition Period	0*	Element group
8.2.1	Offer Acquisition Start Date Time	11	DateOptionalTime
8.2.2	Offer Acquisition End Date Time	11	DateOptionalTime
8.3	Maximum number of offer acquisitions	01	positiveInteger
9	Offer Marketing Materials	01	Element group
9.1	Offer Short Description	1*	Description80
9.2	Offer Long Description	0*	Description200
9.3	Offer Artwork	01	Element group
9.3.1	Offer Artwork Type Code	11	OfferArtworkTypeCode, see 7.4.2
9.3.2	File Name	11	String
9.3.3	File Format Name	11	String
9.3.4	File URI	01	String
9.3.5	File Content Description	0*	Description80
9.4	Offer Legal Statement	0*	Description1000
9.5	Offer Brand Name	01	String
9.6	Offer Product Category	0*	Description80
10	Offer Usage Conditions	01	Element group
10.1	Maximum cumulative number of uses	01	positiveInteger
10.2	Maximum number of uses per transaction	01	positiveInteger
11	Offer Financial Settlement Details	01	Element group
11.1	Offer Clearing Instructions	11	Description500
12	Offer Awarder Details	0*	Element group
12.1	Offer Awarder GLN	11	GLN
12.2	Point-of-sale	0*	Element group



Level ID	Data Element	Cardinality	Data Type
12.2.1	Store GLN	01	GLN
12.2.2	Store Internal ID	01	String
12.3	Offer Redemption Period	0*	Element group
12.3.1	Offer Redemption Start Date Time	11	DateOptionalTime
12.3.2	Offer Redemption End Date Time	11	DateOptionalTime
13	Offer Reward	11	Element group
13.1	Reward Type Code	11	RewardTypeCode, see 7.4.2
13.2	Rewarded Monetary Amount	01	Amount
13.3	Offer Reward Loyalty Points	0*	Element group
13.3.1	Loyalty Program Name	11	String
13.3.2	Rewarded Loyalty Points Quantity	11	positiveInteger
13.4	Offer Reward Trade Item	0*	Element group
13.4.1	Rewarded Trade Item GTIN	11	GTIN
13.4.2	Rewarded Trade Item Quantity	11	Quantity
14	Offer Purchase Requirements	11	Element group
14.1	Purchase Requirement Type Code	11	PurchaseRequirementTypeCode, see 7.4.2
14.2	Purchase Requirement Monetary Amount	01	Amount
14.3	Purchase Requirement Trade Item	0*	Element group
14.3.1	Purchase Requirement Trade Item GTIN	11	GTIN
14.3.2	Purchase Requirement Trade Item Quantity	11	Quantity
14.3.3	Purchase Requirement Trade Item Group	01	String

7.3.4. Message: Offer Set-up Receipt Acknowledgement

Specification of the data that needs to be exchanged when confirming that the Offer Set-up message has been received and is under consideration.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
4	Offer Set-up Reference	11	String

7.3.5. Message: Offer Notification

Specification of the data to be exchanged between Offer Issuer and Offer Awarder when proposing a new Coupon Offer.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
2	Offer Issuer GLN	11	GLN



Level ID	Data Element	Cardinality	Data Type
3	Offer Issuer Clearing Agent GLN	01	GLN
4	Offer Awarder GLN	11	GLN
5	Latest Acceptance Date	01	Date
4	Coupon Offer ID	11	GCN (non-serialized) , see 7.4.2
6	Offer Start Date Time	11	DateOptionalTime
7	Offer Expiration Date Time	11	DateOptionalTime
8	Offer Type Code	11	OfferTypeCode, see 7.4.2
9	Offer Usage Conditions	01	Element group
9.1	Maximum cumulative number of uses	01	positiveInteger
9.2	Maximum number of uses per transaction	01	positiveInteger
10	Offer Financial Settlement Details	01	Element group
10.1	Offer Clearing Instructions	11	Description500
11	Offer Awarder Details (grouping)	0*	Element group
11.1	Point-of-sale	0*	Element group
11.1.1	Store GLN	01	GLN
11.1.2	Store Internal ID	01	String
11.2	Offer Redemption Period	0*	Element group
11.2.1	Offer Redemption Start Date Time	11	DateOptionalTime
11.2.2	Offer Redemption End Date Time	11	DateOptionalTime
12	Offer Reward	11	Element group
12.1	Reward Type Code	11	RewardTypeCode, see 7.4.2
12.2	Rewarded Monetary Amount	01	Amount
12.3	Offer Reward Loyalty Points	0*	Element group
12.3.1	Loyalty Program Name	01	String
12.3.2	Rewarded Loyalty Points Quantity	11	positiveInteger
12.4	Offer Reward Trade Item	0*	Element group
12.4.1	Rewarded Trade Item GTIN	11	GTIN
12.4.2	Rewarded Trade Item Quantity	11	Quantity
13	Offer Purchase Requirements	11	Element group
13.1	Purchase Requirement Type Code	11	PurchaseRequirementTypeCode, see 7.4.2
13.2	Purchase Requirement Monetary Amount	01	Amount
13.3	Purchase Requirement Trade Item	0*	Element group
13.3.1	Purchase Requirement Trade Item GTIN	11	GTIN
13.3.2	Purchase Requirement Trade Item Quantity	11	Quantity
13.3.3	Purchase Requirement Trade Item Group	01	String



7.3.6. Message: Offer Notification Receipt Acknowledgement

Specification of the data that needs to be exchanged in order to confirm that an Offer Notification has been received and is under consideration.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
5	Offer Notification Reference	11	String

7.3.7. Message: Offer Response

Specification of the data to be exchanged between Offer Awarder and Offer Issuer when accepting a proposed Coupon Offer.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
2	Offer Issuer GLN	11	GLN
3	Offer Issuer Clearing Agent GLN	01	GLN
4	Offer Awarder GLN	11	GLN
5	Offer Awarder Clearing Agent GLN	01	GLN
6	Coupon Offer ID	11	GCN (non-serialized), see 7.4.2
7	Offer Response Code	11	OfferResponseCode, see 7.4.2

7.3.8. Message: Digital Coupon Acquisition Notification

Specification of the data to be exchanged to inform relevant parties on the acquisition of a Digital Coupon by an Offer User.

Level ID	Data Element	Cardinality	Data Type
1	Coupon Instance ID	11	GCN (serialized or non- serialized) , see 7.4.2
2	Customer Account	01	Element group
2.1	Customer Account GSRN	01	GSRN
2.2	Customer Account Alternate ID	01	Identifier
3	Acquisition Date Time	11	dateTime

7.3.9. Record: Digital Coupon Redemption Record

Specification of the data to be recorded in the POS-system after a digital coupon has been redeemed.

Level ID	Data Element	Cardinality	Data Type
1	Point-of-sale	11	Element group



Level ID	Data Element	Cardinality	Data Type
1.1	Store GLN	01	GLN
1.2	Store Internal ID	01	String
1.3	POS Terminal ID	01	String
2	Coupon Instance ID	11	GCN (serialized or non- serialized), see 7.4.2
3	Customer Account	01	Element group
3.1	Customer Account GSRN	01	GSRN
3.2	Customer Account Alternate ID	01	Identifier
4	Redemption Date Time	11	dateTime
5	Offer Reward		Element group
5.1	Rewarded Monetary Amount	01	Amount
5.2	Rewarded Loyalty Points	0*	Element group
5.2.1	Loyalty Program Name	01	String
5.2.2	Rewarded Loyalty Points Quantity	11	positiveInteger
5.3	Rewarded Trade Item	0*	Element group
5.3.1	Rewarded Trade Item GTIN	11	GTIN
5.3.2	Rewarded Trade Item Quantity	11	Quantity
6	Qualifying Purchase	11	Element group
6.1	Qualifying Purchase Amount	01	Amount
6.2	Qualifying Trade Item	0*	Element group
6.2.1	Qualifying Trade Item GTIN	11	GTIN
6.2.2	Qualifying Trade Item Quantity	11	Quantity
6.2.3	Qualifying Trade Item Group	01	String
7	Validation Override Reference	01	String

7.3.10. Message: Digital Coupon Redemption Notification

Specification of the data to be exchanged for a real time or near real time notification of a coupon redemption occurrence.

Level ID	Data Element	Cardinality	Data Type
1	Offer Awarder GLN	11	GLN
2	Redemption Record (subset of 7.3.9)	1*	Element group
2.1	Coupon Instance ID	11	GCN (serialized or non- serialized), see 7.4.2
2.2	Redemption Date Time	11	dateTime
2.3	Customer Account	01	Element group
2.3.1	Customer Account GSRN	01	GSRN



Level ID	Data Element	Cardinality	Data Type
2.3.2	Customer Account Alternate ID	01	Identifier
2.4	Point-of-sale	11	Element group
2.4.1	Store GLN	01	GLN
2.4.2	Store Internal ID	01	String
2.4.3	POS Terminal ID	01	String

7.3.11. Message: Digital Coupon Redemption Report

Specification of the data to be exchanged when reporting about the coupons that have been redeemed by the offer awarder over a given period of time.

Level ID	Data Element	Cardinality	Data Type
1	Document Header Details [see 7.3.2.1]	11	Element group
2	Offer Awarder Clearing Agent GLN	01	GLN
3	Offer Issuer GLN	11	GLN
4	Offer Issuer Clearing Agent GLN	01	GLN
5	Reporting Period Start Date Time	11	dateTime
6	Reporting Period End Date Time	11	dateTime
7	Redemption Totals		Element group
7.1	Offer Awarder GLN	11	GLN
7.2	7.2 Total Redemption Value Claimed 1		Amount
7.3	Total Redemption Count Claimed	11	nonNegativeInteger
7.4	Digital Coupon Redemption Record [see 7.3.9]	0*	Element group

7.4. Data Elements

7.4.1. Data Element Definitions

Term	Description
Acquisition Date Time	The date and time at which a digital coupon was acquired.
Coupon Instance ID	The identification of a unique instance of a digital coupon.
Coupon Offer ID	The identification of a particular coupon offer. The Coupon Offer ID must be unique to the Offer Issuer.
Customer Account	Information identifying the customer relation data for a specific customer.
Customer Account Alternate ID	Non GS1 key used to identify the customer account.
Customer Account GSRN	The GS1 Global Service Relation Number (GSRN) identifying the customer account.
Document Change Date Time	Date and time when the business document was last updated.



Term	Description
Document Change Reason	Description of the reason the document was updated by the sender.
Document Creation Date Time	Date and time when the business document was created.
Document Header Details	General information required for the correct processing of the document, such as document ID and creation date time.
Document ID	The identifier of a business document.
Document Recipient GLN	The GS1 Global Location Number (GLN) identifying the receiver of the message.
Document Sender GLN	The GS1 Global Location Number (GLN) identifying the sender of the message.
File Content Description	Free form description of the content of the file.
File Format Name	The name of the file format. Examples: PDF; JPEG; BMP.
File Name	The name of the file that contains the external information.
File URI	Simple text string that identifies the name of the file or the location of the file on the Internet.
Latest Acceptance Date	Date the coupon offer should be accepted by the Offer Awarder.
Loyalty Program Name	Name identifying a particular loyalty program.
Maximum number of offer acquisitions	The maximum number of coupons that may be acquired in total (across consumers) for a particular offer.
Maximum number of offer acquisitions per user	The maximum number of coupons a single Offer User may acquire in total for a particular offer.
Maximum number of uses per transaction	Defines the maximum number of times a single Offer User can redeem an offer within a single purchase transaction.
Offer Acquisition End Date Time	Date time from which the offer can no longer be acquired by consumers.
Offer Acquisition Period	Time frame within which the offer can be acquired by consumers.
Offer Acquisition Start Date Time	Date time from which the offer can be acquired by consumers.
Offer Artwork	Electronic file containing a piece of artwork related to the coupon offer. Offer artwork may consist of product images, logos or other representations of the offered item.
Offer Artwork Type Code	Code specifying the type of offer artwork that is included.
Offer Awarder Clearing Agent GLN	The GS1 Global Location Number (GLN) identifying the Offer Awarder Clearing Agent.
Offer Awarder Details	Information on the Offer Awarders and stores that will support the coupon offer.
Offer Awarder GLN	The Global Location Number (GLN) identifying the Offer Awarder.
Offer Brand Name	Name of the primary brand sponsoring the coupon offer.
Offer Clearing Instructions	Textual information on the manner in which redemption information should be communicated for reimbursement and/or reporting.
Offer Distribution Details	Information to be used by Offer Distributors for the publication of the offer.
Offer Distributor GLN	The GS1 Global Location Number (GLN) identifying the Offer Distributor.
Offer Expiration Date Time	The date time the offer ends for consumers. No further redemption can occur after that date time.



Term	Description
Offer Issuer Clearing Agent GLN	The GS1 Global Location Number (GLN) identifying the Offer Issuer Clearing Agent.
Offer Issuer GLN	The GS1 Global Location Number (GLN) identifying the Offer Issuer.
Offer Legal Statement	The legal statement helps the consumer understand any rules or legal aspects related to the offer. This is also called "terms and conditions."
Offer Long Description	The long description is a text explaining the offer. A long description may include other purchase requirements and "Terms and Conditions".
Offer Marketing Materials	Information to be used to market the coupon offer.
Offer Notification Reference	Identification of a referenced Offer Notification message.
Offer Product Category	Name of the primary product category to which the coupon offer relates. For example Health & Beauty, Grocery.
Offer Publication End Date Time	Date time from which the offer will no longer be brought to the attention of consumers.
Offer Publication Period	Time frame within which the Offer Distributor informs the Offer Users of the Coupon Offer.
Offer Publication Start Date Time	Date time from which the offer will be brought to the attention of consumers.
Offer Purchase Requirements	Information on the items and quantities that need to be bought in order to qualify for the coupon reward.
Offer Redemption End Date Time	The date and time after which an offer cannot be redeemed.
Offer Redemption Period	Timeframe during which a coupon can be redeemed at the point-of-sale.
Offer Redemption Start Date Time	The date and time after which an offer can be redeemed.
Offer Response Code	Code specifying the response to an offer notification, for example 'accept'.
Offer Reward	Information on the reward the consumer will get as a result of the coupon redemption.
Offer Reward Loyalty Points	A number of loyalty points for a particular loyalty program offered as consumer reward for a coupon.
Offer Reward Trade Item	A quantity of a particular trade item offered as consumer reward for a coupon.
Offer Set-up Reference	Identification of a referenced Offer Set-up message.
Offer Short Description	A very brief text explaining the offer. For example, "Save \$1.00 on Brand A."
Offer Start Date Time	The date time as of which the offer user can get the offer reward. No redemption can occur before that date time.
Offer Type Code	Indicates the way the offer is to be treated for accounting and taxation purposes.
Offer Usage Conditions	Information on the way the offer is to be used.
Point-of-sale	Information used to identify where the point-of-sale transaction took place.
Point-of-Sale (POS) Terminal ID	Identifies a specific cashier terminal within a store.



Term	Description
Purchase Requirement Monetary Amount	Minimum purchase amount to qualify for the offer reward.
Purchase Requirement Trade Item	Information on trade items and related quantities as part of a purchase requirement.
Purchase Requirement Trade Item Group	Grouping of trade items within a purchase requirement. For example: primary purchase group.
Purchase Requirement Trade Item GTIN	The Global Trade Item Number (GTIN) identifying a trade item that is required to be purchased to qualify for a coupon offer.
Purchase Requirement Trade Item Quantity	Quantity of a trade item that is required to be purchased to qualify for a coupon offer.
Purchase Requirement Type Code	Code specifying the rules for a purchase requirement. E.g. all items, one of the items.
Qualifying Purchase	Purchase transaction or part of a purchase transaction that qualifies for the redemption of a coupon.
Qualifying Purchase Amount	Monetary value of a qualifying purchase.
Qualifying Trade Item	Information on a trade item and related quantity as part of a qualifying purchase.
Qualifying Trade Item Group	Grouping of trade items within a qualifying purchase. For example: primary purchase group.
Qualifying Trade Item GTIN	The Global Trade Item Number (GTIN) identifying a trade item that was purchased to qualify for a coupon offer.
Qualifying Trade Item Quantity	Quantity of a trade item that was purchased to qualify for a coupon offer.
Redemption Date Time	The date and time of a specific redemption transaction.
Redemption Record	The redemption information for a single coupon transaction.
Redemption Totals	Information on redeemed coupons grouped by Offer Awarder.
Reporting Period End Date Time	End date time of the reporting period, defining which transactions have been included in the report.
Reporting Period Start Date Time	Start date time of the reporting period, defining which transactions have been included in the report.
Reward Type Code	Code specifying rules for calculating the consumer reward related to a coupon.
Rewarded Loyalty Points Quantity	A number of loyalty points offered as consumer reward for a coupon.
Rewarded Monetary Amount	Monetary value of the consumer reward related to a coupon.
Rewarded Trade Item GTIN	The Global Trade Item Number (GTIN) identifying a trade item that is offered as a coupon reward.
Rewarded Trade Item Quantity	Quantity of the trade item that is offered as a coupon reward.
Store GLN	The Global Location Number (GLN) identifying a Store.
Store Internal ID	An internal identifier used by the Offer Awarder to identify the store.
Validation Override Reference	Text specifying the reason for overriding an unsuccessful validation of a coupon.



7.4.2. Data Types

Please refer to [BMS Shared] for the definitions of the applied data types, except for the ones defined in following paragraphs.

7.4.2.1. Data Type: GCN

Exactly 13 numeric digits representing the Coupon Offer ID, followed by an optional serial number of minimum 1, maximum 12 numeric digits.

7.4.2.2. Data Type: OfferArtworkTypeCode

String with allowed values as listed below.

Code Value	Code Definition
PRODUCT_IMAGE	Artwork is a link to the product image related to the coupon offer.
OFFER_VIDEO	Artwork is a link to a video related to the coupon offer.
OFFER_LEAFLET	Artwork is a link to a brochure describing to the coupon offer.

7.4.2.3. Data Type: OfferResponseCode

String with allowed values as listed below.

Code Value	Code Definition
ACCEPT	The Coupon Offer is accepted by the Offer Awarder.
REJECT	The Coupon Offer is rejected by the Offer Awarder.
CHANGES_NEEDED	The Coupon Offer is acceptable to the Offer Awarder but requires modifications.

7.4.2.4. Data Type: OfferTypeCode

String with allowed values as listed below.

Code Value	Code Definition
MANUFACTURER_COUPON	The coupon will be treated as a manufacturer coupon for taxation purposes.
NON_MANUFACTURER_COUPON	The coupon will be treated as a retailer coupon for taxation purposes.

7.4.2.5. Data Type: PurchaseRequirementTypeCode

String with allowed values as listed below.

Code Value	Code Definition	
ALL_SPECIFIED_ITEMS	All trade items specified must be purchased in order to qualify for the coupon offer.	
ONE_OF_SPECIFIED_ITEMS	One of the specified trade items must be purchased in order to qualify for the coupon offer.	
ONE_ITEM_PER_GROUP	For each specified trade item group one of the specified trade items must be purchased in order to qualify for the coupon offer.	
SPECIFIED_PURCHASE_AMOUNT	Minimum monetary value of the purchase transaction required to qualify for the coupon offer.	



7.4.2.6. Data Type: RewardTypeCode

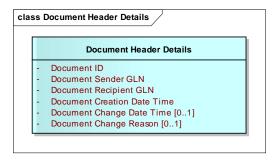
String with allowed values as listed below.

Code Value	Code Definition
MONETARY_REWARD	The coupon offer reward is a monetary amount.
LOYALTY_POINTS_REWARD	The coupon offer reward is an amount of loyalty points.
TRADE_ITEM_REWARD	The coupon offer reward consists of one or more trade items.



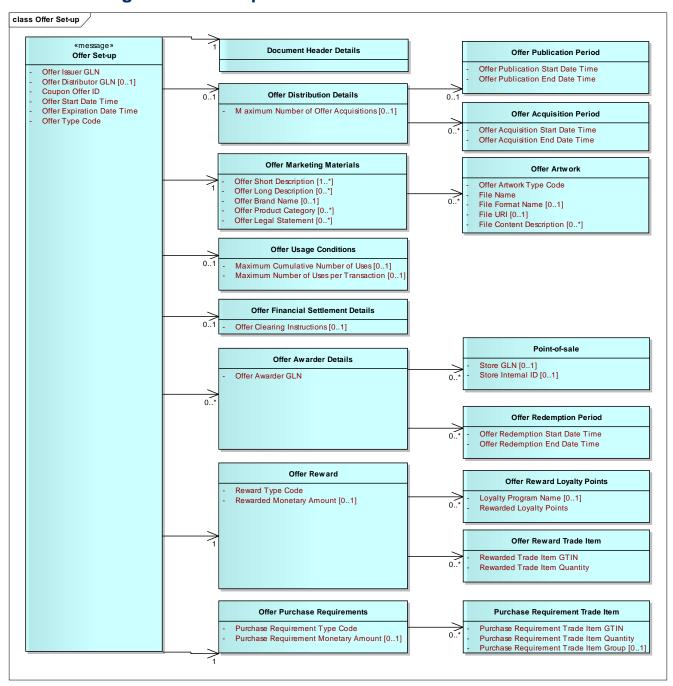
Appendix A – Class Diagrams (non-normative)

A.1 Document Header Details



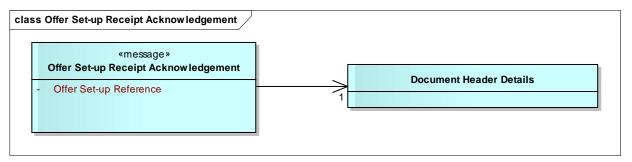


A.2 Message: Offer Set-up

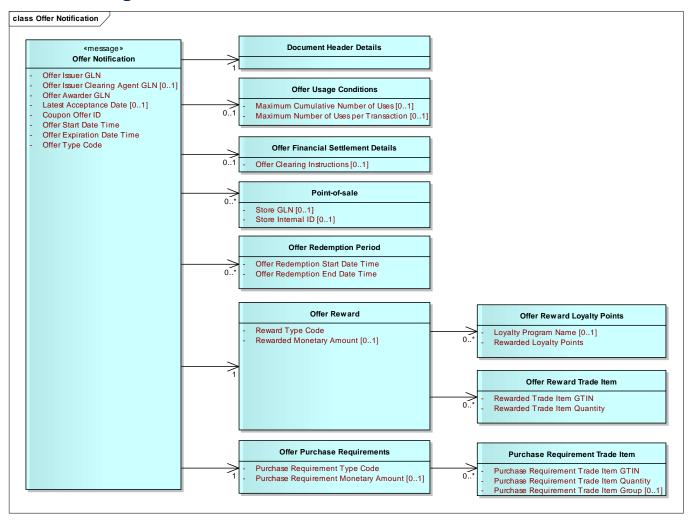




A.3 Message: Offer Set-up Receipt Acknowledgement

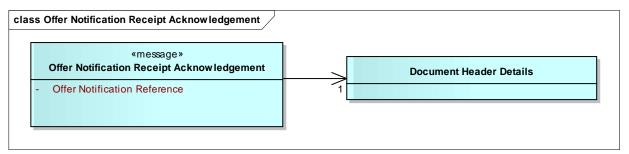


A.4 Message: Offer Notification

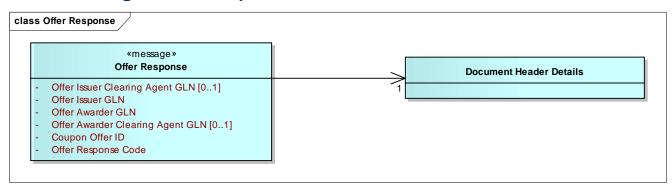




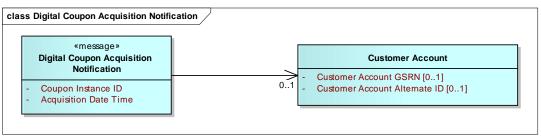
A.5 Message: Offer Notification Receipt Acknowledgement



A.6 Message: Offer Response

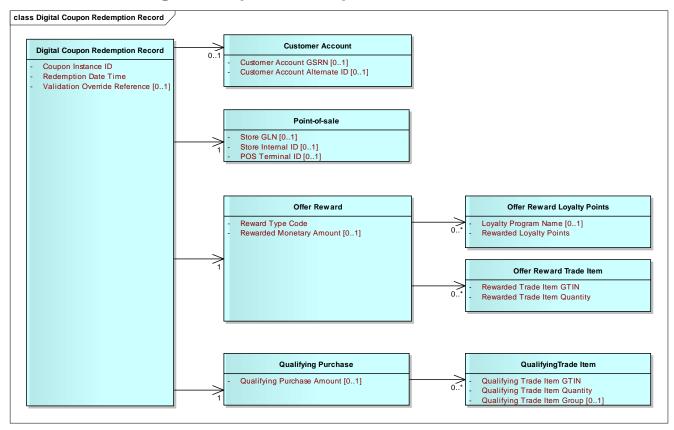


A.8 Message: Digital Coupon Acquisition Notification

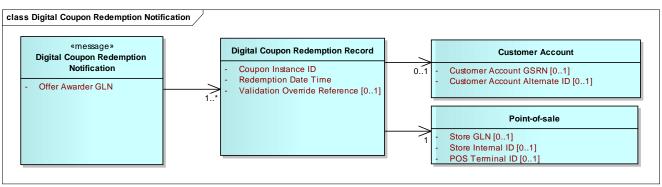




A.9 Record: Digital Coupon Redemption Record

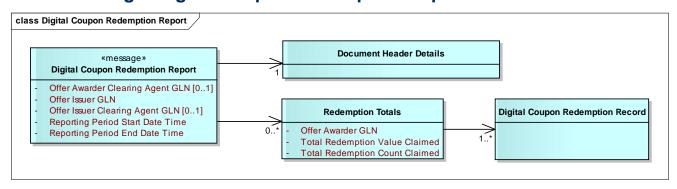


A.10 Message: Digital Coupon Redemption Notification





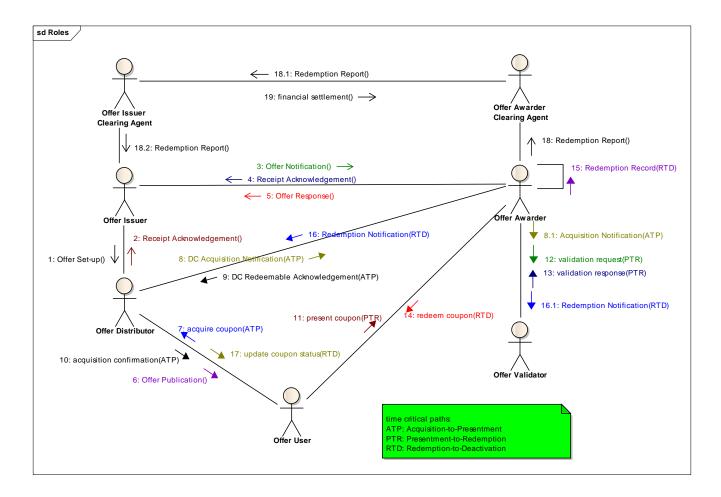
A.11 Message: Digital Coupon Redemption Report





Appendix B. Message Choreography (non-normative)

The diagram below illustrates the various messaging interfaces that may be required. Some of the interfaces are supported by standard messages.





Appendix C. Message Examples (non normative)

Example 1 – Offer Set-up

Brand Owner - company prefix 1111111

Offer Distributor – company prefix 2222222

Retailer – company prefix 3333333

Data element	value	
Document Header Details		
> Document ID	OSE123	
> Document Sender GLN	1111111000007	
> Document Recipient GLN	2222222000004	
> Document Creation Date Time	2012-01-01T13:00:00	
Offer Issuer GLN	1111111000007	
Offer Distributor GLN	2222222000004	
Coupon Offer ID	1111111003336	
Offer Start Date Time	2012-02-15T00:00:00	
Offer End Date Time	2012-04-01T00:00:00	
Offer Type Code	MANUFACTURER_COUPON	
Offer Distribution Details	Offer Distribution Details	
> Offer Publication Window		
>> Offer Publication Start Date Time	2012-02-10T00:00:00	
>> Offer Publication End Date Time	2012-03-25T00:00:00	
> Maximum number of offer acquisitions	100000	
Offer Marketing Materials		
> Offer Short Description	<pre>(language = en) Save 50 cents on Spaghetti and Meatballs in Tomato Sauce</pre>	
> Offer Long Description		
> Offer Artwork	http://chef.us/spaghetti_meatballs.gif	
> Offer Legal Statement	(language = en) Valid with coupon only. Limit of one coupon per purchased item.	
> Offer Brand Name	Chef Boyardee	
> Offer Product Category	(language = en) Convenience Foods	
Offer Usage Conditions		
> Maximum cumulative number of uses	3	
> Maximum number of uses per transaction	1	
Offer Clearing Instructions		
Offer Awarder Details		



Data element	value
> Offer Awarder GLN	333333300001
> Offer Redemption Window	
>> Offer Redemption Start Date Time	2012-02-15T00:00:00
>> Offer Redemption End Date Time	2012-04-01T00:00:00
Offer Reward	
> Reward Type Code	MONETARY_REWARD
> Reward Monetary Amount	0.50 EUR
Offer Purchase Requirements	
> Purchase Requirement Type Code	ALL_SPECIFIED_ITEMS
> Purchase Requirement Trade Item	
>> Purchase Requirement Trade Item GTIN	01111111000120
>> Purchase Requirement Trade Item Quantity	1

Example 2 – Offer Set-up: Grouped purchase requirements

Purchase Requirement: buy items 120 and either 130 or 140.

Offer Purchase Requirements	
> Purchase Requirement Type Code	ONE_ITEM_PER_GROUP
> Purchase Requirement Trade Item	
>> Purchase Requirement Trade Item GTIN	01111111000120
>> Purchase Requirement Trade Item Quantity	1
>> Purchase Requirement Trade Item Group	Primary
> Purchase Requirement Trade Item	
>> Purchase Requirement Trade Item GTIN	01111111000130
>> Purchase Requirement Trade Item Quantity	1
>> Purchase Requirement Trade Item Group	Secondary
> Purchase Requirement Trade Item	
>> Purchase Requirement Trade Item GTIN	01111111000140
>> Purchase Requirement Trade Item Quantity	1
>> Purchase Requirement Trade Item Group	Secondary

Example 3 – Digital Coupon Acquisition Notification

Coupon Instance ID - sGCN (Company prefix 1234567, Coupon reference number 89012, serial extension 123456789012

Customer Account GSRN - 1234567.8901234567

Customer Account Alternate ID - Proprietary loyalty account ID



Data element	Value	
Coupon Instance Details		
Coupon Instance ID	1234567.89012.123456789012	
Customer Account		
Customer Account GSRN	1234567.8901234567	
Customer Account Alternate ID	3083420494273950	
Acquisition Time		
Acquisition Date Time	2012-02-15T00:00:00	

Example 4 – Digital Coupon Validation Request

[Presentment via a customer account ID]

Transaction ID - 1234567890

Customer Account GSRN - 1234567.8901234567

Customer Account Alternate ID - Proprietary loyalty account ID

Store GLN - sGLN Company prefix 2345678, Location 8901

Store Internal ID - 8901

POS Terminal ID - sGLN Company prefix 2345678, Location 8901, POS No. 400010000010

Data element	Value
Validation Query Date Time	2012-02-17T18:00:01
Transaction ID	1234567890
Customer Account	
Customer Account GSRN	1234567.8901234567
Customer Account Alternate ID	3083420494273950
Point-of-sale	
Store GLN	23456789.08901
Store Internal ID	08901
POS Terminal ID	23456789.08901.400010000010

Example 5 – Digital Coupon Validation Response

Transaction ID - 1234567890

Offer Awarder GLN - Company prefix 2345678, Location 11111

Coupon Instance ID – sGCN (Company prefix 1234567, Coupon reference number 89012, serial extension 123456789012

Customer Account GSRN - 1234567.8901234567

Customer Account Alternate ID - Proprietary loyalty account ID

Store Internal ID - 8901

POS Terminal ID - sGLN Company prefix 2345678, Location 8901, POS No. 400010000010



Data element	Value	
Validation Response Date Time	2012-02-17T18:00:02	
Transaction ID	1234567890	
Offer Awarder GLN	23456789.11111	
Coupon Information		
Coupon Instance ID	1234567.89012.123456789012	
Customer Account		
Customer Account GSRN	1234567.8901234567	
Customer Account Alternate ID	3083420494273950	
Point-of-sale		
Store GLN	23456789.08901	
Store Internal ID	08901	
POS Terminal ID	23456789.08901.400010000010	

Example 6 – Digital Coupon Redemption Notification

Offer Awarder GLN - Company prefix 2345678, Location 11111

Coupon Instance ID - sGCN (Company prefix 1234567, Coupon reference number 89012, serial extension 123456789012

Customer Account GSRN - 1234567.8901234567

Customer Account Alternate ID - Proprietary loyalty account ID

Store GLN - sGLN Company prefix 2345678, Location 8901

Store Internal ID - 8901

POS Terminal ID - sGLN Company prefix 2345678, Location 8901, POS No. 400010000010

Data element	Value
Offer Awarder GLN	23456789.11111
Redemption Record	
Coupon Instance ID	1234567.89012.123456789012
Redemption Date Time	2012-02-17T19:00:01
Customer Account	
Customer Account GSRN	1234567.8901234567
Customer Account Alternate ID	3083420494273950
Point-of-sale	
Store GLN	23456789.08901.0
Store Internal ID	08901
POS Terminal ID	23456789.08901.400010000010