Functional Specification

ABU Functional Specification (Issuing)

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Contents

ABU (Automatic Billing Updater) functionality makes it possible for issuers to send payment system ABU systems up-to-date information about issued cards (PAN, Expire Date). This information will be used by payment systems to respond to requests by merchants where these cards are used for recurring transactions.

This document is intended for bank or processing centre employees responsible for interaction with payment systems as concerns ABU functionality.

When working with this document, it is recommended to use the following resources from the OpenWay documentation series:

- "Client and Contract Classifiers".
- "Dictionaries".
- "Products and Contract Subtypes".

The following notation is used in the document:

- Field labels in screen forms are shown in *italics.*
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS_HOME>.

Warnings and information are marked as follows:

> ⚠️ Warnings about potentially hazardous situations or actions.

> ℹ️ Messages with information about important features, additional options, or the best use of certain system functions.

1.   Purpose of ABU (issuing)

ABU for issuing offers the following functionality:

- Initial load of data about issued cards can be performed from WAY4 to payment system ABU systems.
- Card events can be saved (issue, reissue, final blocking, cardholder declined to participate in ABU).
- Accumulated data on payment card events can be exported to files for sending to payment systems.
- Files with payment system responses can be imported to WAY4.
- Participation of cards in payment system ABU systems can be set up for financial institutions, contract subtypes, and card contracts.

2.   ABU supported messages (issuing)

Interchange between an issuer's ABU system and Mastercard Automatic Billing Updater (MABU) and Visa Account Updater (VAU) systems takes place using files in the formats described in payment system specifications.

WAY4™ ABU functionality supports the following types of message (the "Reason Code" and "Service Identifier" fields for MABU and VAU, respectively) sent to payment system ABU systems:

- message types used in communication with Mastercard Automatic Billing Updater (MABU):
    - "N" (New Account) – created when events requiring that messages about a new card are sent to MABU occur (for example: card is issued and activated, or "ABU" classifier value is manually changed from "N" to "Y", etc.).
    - "I" (Initial Account Load) – created by the export pipe based on all type "N" (New) events found for cards participating in ABU, if the export pipe is being run the first time for a member (MemberID).
    - "R" (Replacement Card) – created automatically when a card is reissued with a different PAN, if the message doesn't contain the signs of codes "P" and "B".
    - "E" (Update Expiration Date) – created manually when a card is reissued with a different expiration date and the same PAN.
    - "C" (Closed Account) – created when a card contract's status changes to permanent rejection of all transaction with the card (the list of these statuses is defined in a financial institution's settings) from any other state.
    - "O" (Override for Deletion) – delete a card from ABU, performed manually or when the value of the "ABU" classifier (see the section "Setup of ABU functionality") changes from "Y" to "N".
    - "X" (Update New Account Information) – correct errors in the details of the new card that were made in the previous message with the type "R", "E", "X" or "Y"; performed manually.
    - "Y" (Update Old Account Information) – correct errors in the details of the old card that were made in the previous message with the type "R", "E", "X" or "Y"; performed manually.
    - "P" (Mastercard to Mastercard Portfolio Flip) – transfer a Mastercard card from another issuer.
    - "B" (Brand Flip to Mastercard) – change the card brand to Mastercard.
- message types used in communication with Visa Account Updater (VAU):
    - "A" (Account Change) – created automatically when a card is reissued with a different PAN, can be added to with the value of the "Conversion Code" field.
        - "V" (Visa to Visa Portfolio Flip) – transfer a Visa card from another issuer.
        - "M" (Brand Flip to Visa) – change the card brand to Visa.

- "E" (Update Expiration Date) – created manually when a card is reissued with a different expiration date and the same PAN.

- "C" (Closed Account) – created when a card contract's status changes to permanent rejection of all transaction with the card (the list of these statuses is defined in a financial institution's settings) from any other state.

- "O" (Cardholder opt-out) – delete a card from ABU, performed manually or when the value of the "ABU" classifier (see the section "Setup of ABU functionality") changes from "Y" to "N".

- "B" (Cardholder opt-back in) – re-add a card to ABU, performed manually or when the value of the "ABU" classifier (see the section "Setup of ABU functionality") changes from "N" to "Y".

> ⓘ Any type of VAU message can be added to with the "R" value in the "Reverse Code" field, which indicates reversal of the previous message with this "Service Identifier".
>
> "O" and "B" messages are generated if the "VISA_ABU_OPTOUT" tag is assigned the "Y" value (specified in a financial institution's *Special Parms* field). Otherwise, to exclude the card from VAU, a "Q" (Contact Cardholder) message is generated, and to re-include the card to VAU, previous "Q" message is cancelled.
>
> User documentation and the necessary pipes and forms are provided to OpenWay customers with the corresponding software licenses.
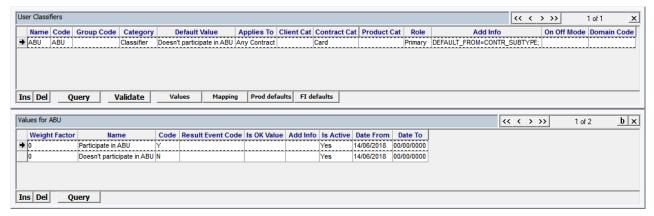
3.   Setup of ABU functionality (issuing)

For events in card lifecycles to be recorded in WAY4 in order to create and send ABU messages to a payment system, the following classifier setup is required:

- Set a classifier with the "ABU" code(the *Code* field) and the following mandatory field values:
    - *Applies To* = "Any Contract"
    - *Contract Category* = "Card"
    - *Add Info* – the "DEFAULT_FROM" tag is used.

> (i) The "DEFAULT_FROM" tag makes it possible, in the absence of a classifier value in a specific contract, to use the default value set for the financial institution, contract subtype, or Product. To do so, the tag can be assigned the F_I, CONTR_SUBTYPE or PRODUCT values, respectively. The tag can be assigned one or several of the values. Values in a list are separated by commas; for example: "DEFAULT_FROM=PRODUCT,CONTR_SUBTYPE,F_I;". The order in which a search is made for a default value does not depend on the order in which the values are listed in the tag: first, the value of the classifier in the Product is used, then in the contract subtype, and finally, in the financial institution. Depending on the tag's value, the "ABU" classifier must be set in the financial institution or Product, or the "ABU" tag for the card contract subtype.
> When the default value is used in a Product, for the "ABU" classifier, "No" must be set in the *Set To Contract* field in the Product (see the section "Contract Classifiers" of the document "Products and Contract Subtypes").
> For more information about classifier setup, see the document "Client and Contract Classifiers".

- For the "ABU" classifier, add allowed values with the "Y" and "N" values.
- In the classifier's *Default Value* field, select the "N" value.

	Name	Code	Group Code	Category	Default Value	Applies To	Client Cat	Contract Cat	Product Cat	Role	Add Info	On Off Mode	Domain Code
➡	ABU	ABU		Classifier	Doesn't participate in ABU	Any Contract		Card		Primary	DEFAULT_FROM=CONTR_SUBTYPE;		

Ins | Del | Query | Validate | Values | Mapping | Prod defaults | FI defaults

Values for ABU   1 of 2

	Weight Factor	Name	Code	Result Event Code	Is OK Value	Add Info	Is Active	Date From	Date To
➡	0	Participate in ABU	Y				Yes	14/06/2018	00/00/0000
	0	Doesn't participate in ABU	N				Yes	14/06/2018	00/00/0000

Ins | Del | Query

Example of ABU classifier setup

If a cardholder contacted the bank with a request to link recurring transactions for an old card from another bank to a new card, the application to issue a new card must contain the old card's details in the form of tags:

- ABU_PREVCN – previous card's number.
- ABU_PREVCD – previous card's expiration date in "YYMM" format.

When transferring Mastercard or Visa card contracts from one issuer to another, the PORTFOLIO_FLIP classifier with the "Y" value must be set in these contracts. In this case, information about the transferred cards will be sent in Mastercard "P" type messages (Mastercard to Mastercard Portfolio Flip) or in Visa "A" type messages (Account Change) with the "V" value (Visa to Visa Portfolio Flip) in the "Conversion Code" field. After successfully sending Mastercard messages of any type except "X" (Update New Account Information") and "Y" (Update Old Account Information), or Visa messages with the "R" value in the "Reverse Code" field, the PORTFOLIO_FLIP classifier for the corresponding card contract will be assigned the "N" value.

If the old card's brand differs from that of the new card, the old card's channel code (see the section "Message Channels" Dictionary" of the document "Dictionaries") will be saved as the value of the OLD_CARD_IPS tag of the record on reissuing (indicator that the card was reissued with a brand change). Information about reissuing cards with a brand change will be sent in Mastercard "B" type messages (Brand Flip to Mastercard), or in Visa "A" type messages (Account Change) with the "M" value (Brand Flip to Visa) in the "Conversion Code" field.

If there is no indicator that the brand has changed, and the PORTFOLIO_FLIP classifier is not set or its value differs from "Y", information about cards will be sent in Mastercard "R" (Replacement Card) type messages or in Visa "A" type messages without the "Conversion Code" field.

Conditions for generating messages about final closing ("C" – Closed Account) of card contracts are set using the "ABU_CONTR_CLOSED_CODES" and "ABU_CONTR_CLOSED_EXT_CODES" tags in the financial institution's *Special Parms* field.

Contract status codes (CONTR_STATUS.CODE) separated by comma must be specified as the "ABU_CONTR_CLOSED_CODES" tag's value. It is recommended to use the value "04,14,41,43" for this tag.

Contract status codes received from the external system (CONTR_STATUS.EXTERNAL_CODE) and separated by comma must be specified as the "ABU_CONTR_CLOSED_EXT_CODES" tag's value.

> (i) For more information about the list of contract statuses, see the section "Contract Statuses" of the document "WAY4" Dictionaries".

"C" message type is generated when the contract status changes to any status that meets at least one of the following conditions:

- A new contract status code (CONTR_STATUS.CODE) is specified in the "ABU_CONTR_CLOSED_CODES" tag while the code of the previous status is not specified in this tag.
- A new contract status code that is received from the external system (CONTR_STATUS.EXTERNAL_CODE) is specified in the "ABU_CONTR_CLOSED_EXT_CODES" tag while the code from the external system of the previous status is not specified in this tag.

⚠️ If several codes received from the external system (CONTR_STATUS.EXTERNAL_CODE) correspond to one status code (CONTR_STATUS.CODE), and messages about final closing ("C – Closed Account) must only be generated for a part of external codes, this status code (CONTR_STATUS.CODE) may not be specified in the "ABU_CONTR_CLOSED_CODES" tag. In this case, in the "ABU_CONTR_CLOSED_EXT_CODES" tag, specify those external codes (CONTR_STATUS.EXTERNAL_CODE) that must initiate creation of "C" type messages.

For example:

> In the "Contract Statuses" list, for card contracts, there are two records with similar codes (CONTR_STATUS.CODE) but different external codes (CONTR_STATUS.EXTERNAL_CODE):
>
> • CODE = 5; EXTERNAL_CODE = 5a.
>
> • CODE = 5; EXTERNAL_CODE = 5b.
>
> The message about final closing ("C – Closed Account) must only be generated for the second case (EXTERNAL_CODE = 5b).
>
> For correct operation, specify the "5b" value in the "ABU_CONTR_CLOSED_EXT_CODES" tag and do not specify the "5" value in the "ABU_CONTR_CLOSED_CODES" tag.

When the card whose data was compromised is reissued, it is possible to configure a mechanism for replacing a message about reissuance to a message about issuing a new card.

"ABU_CONTR_ALWAYSNEW_CODES" and "ABU_CONTR_ALWAYSNEW_EXT_CODES" tags in a financial institution's *Special Parms* field are used to configure replacement of messages. Replacement occurs if any of the following conditions is met:

• Contract status code (CONTR_STATUS.CODE) of the previous card is specified in the "ABU_CONTR_ALWAYSNEW_CODES" tag.
• Contract status code of the previous card that is received from an external system (CONTR_STATUS.EXTERNAL_CODE) is specified in the "ABU_CONTR_ALWAYSNEW_EXT_CODES" tag.

When these conditions are met, a message about issuing a new card is generated instead of a message about reissuance. For Visa cards participating in VAU, no message is generated since VAU does not support messages about issuing new cards.

ⓘ User documentation and the necessary pipes and forms are provided to OpenWay customers with the corresponding software licenses.