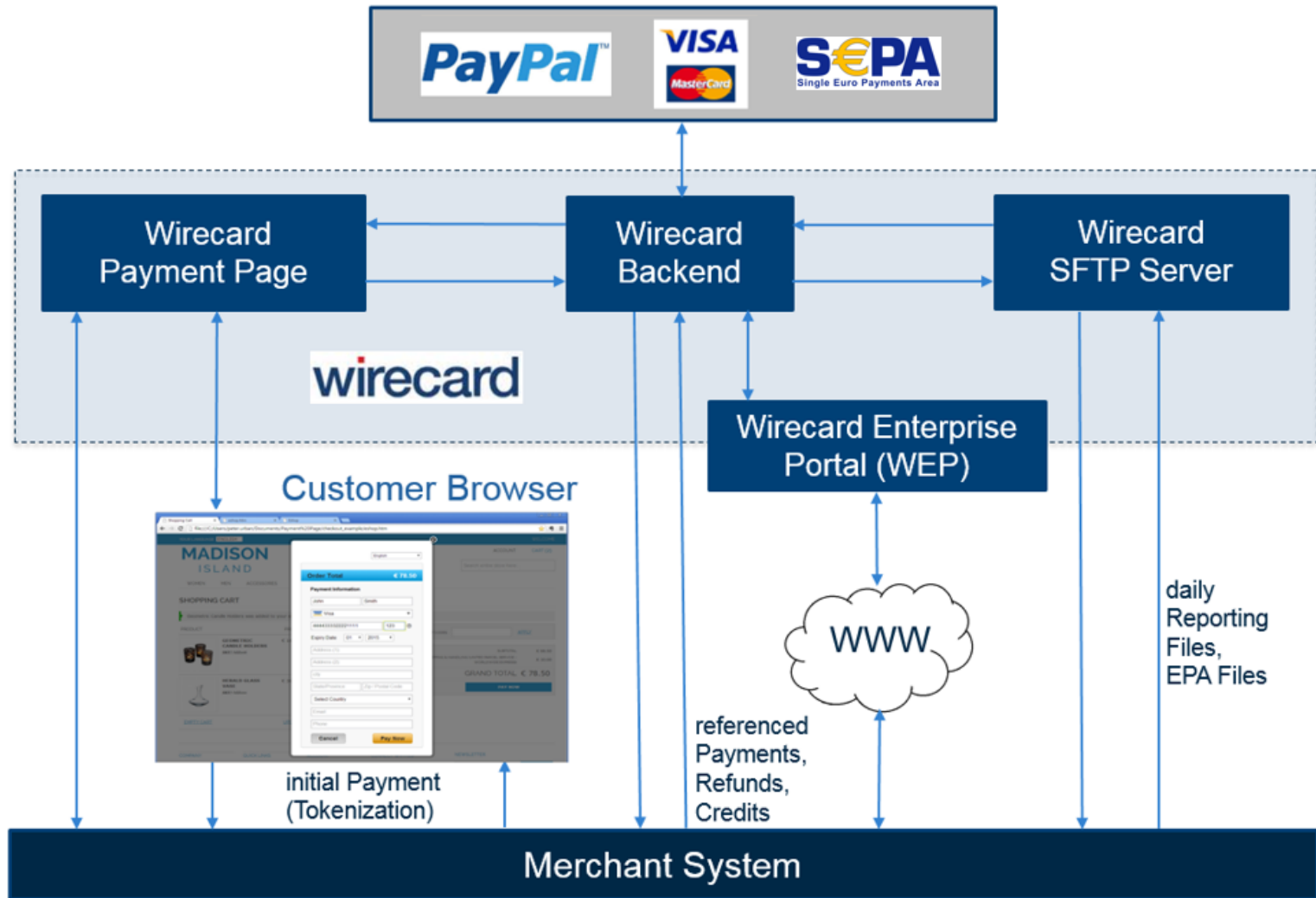


WIRECARD API

1

SYSTEM OVERVIEW

SYSTEM OVERVIEW



SECURITY

General:

- Encrypted communication via HTTPS by use of certificates

Payment Page:

- Usage of a secret to generate a fingerprint

REST API:

- Authentication by user ID and password to accept request

SFTP Server:

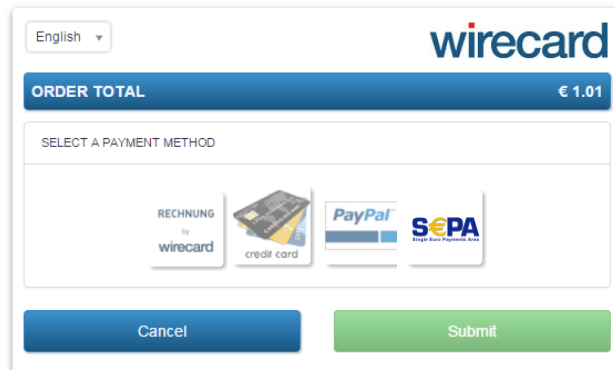
- IP restriction
- Authentication by user ID and password or key exchange

Wirecard Enterprise Portal:

- Login by username and password

HOSTED PAYMENT PAGE

- Hosted on Wirecard side
- Fully PCI compliant
- Redirect on Wirecard Hosted Payment Page
- Integration in iFrame or new window
- Integration by Pay button
- Dynamic routing supported by Resolver



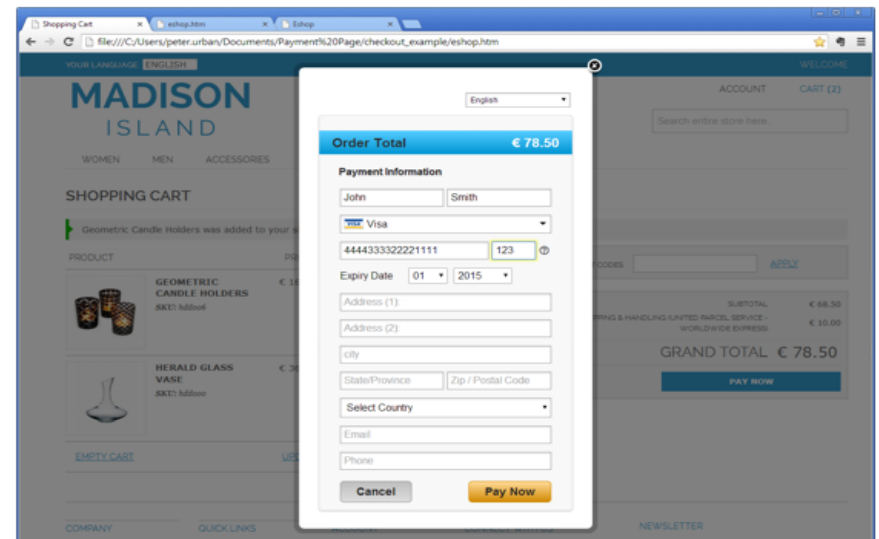
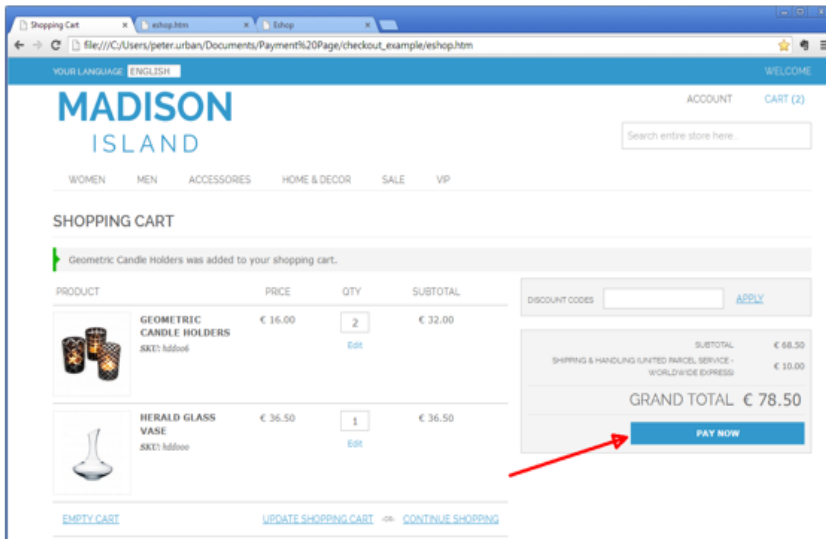
The image shows the selection screen of the Wirecard hosted payment page. At the top, there is a language selector set to 'English' and the Wirecard logo. Below this, a blue bar displays 'ORDER TOTAL' and '€ 1.01'. A section titled 'SELECT A PAYMENT METHOD' contains four options: 'RECHNUNG by wirecard', 'credit card' (with a card icon), 'PayPal', and 'SEPA' (with a logo). At the bottom, there are two buttons: a blue 'Cancel' button and a green 'Submit' button.



The image shows the credit card payment form on the Wirecard hosted payment page. At the top, there is a language selector set to 'English' and the Wirecard logo. Below this, a blue bar displays 'ORDER TOTAL' and '€ 1.01'. A section titled 'SELECT A PAYMENT METHOD' is followed by a 'CREDIT CARD' section. This section contains fields for 'First Name' (optional) with the value 'My Name' and a green checkmark, and 'Last Name' with the value 'Surname' and a green checkmark. Below these is a 'Card Type' dropdown menu showing 'VISA Visa' with a green checkmark. The 'Card Number' field is split into two parts: 'Card Number' and 'CVV' (optional), both with a green checkmark. The 'Expiry Date' is split into 'Month' and 'Year' dropdown menus. At the bottom, there are two buttons: a blue 'Cancel' button and a green 'Submit' button.

EMBEDDED PAYMENT PAGE

- Hosted on Wirecard side
- Fully PCI compliant
- Overlay on shop checkout
- Java Script based
- Integration by Pay button
- Dynamic routing supported by Resolver

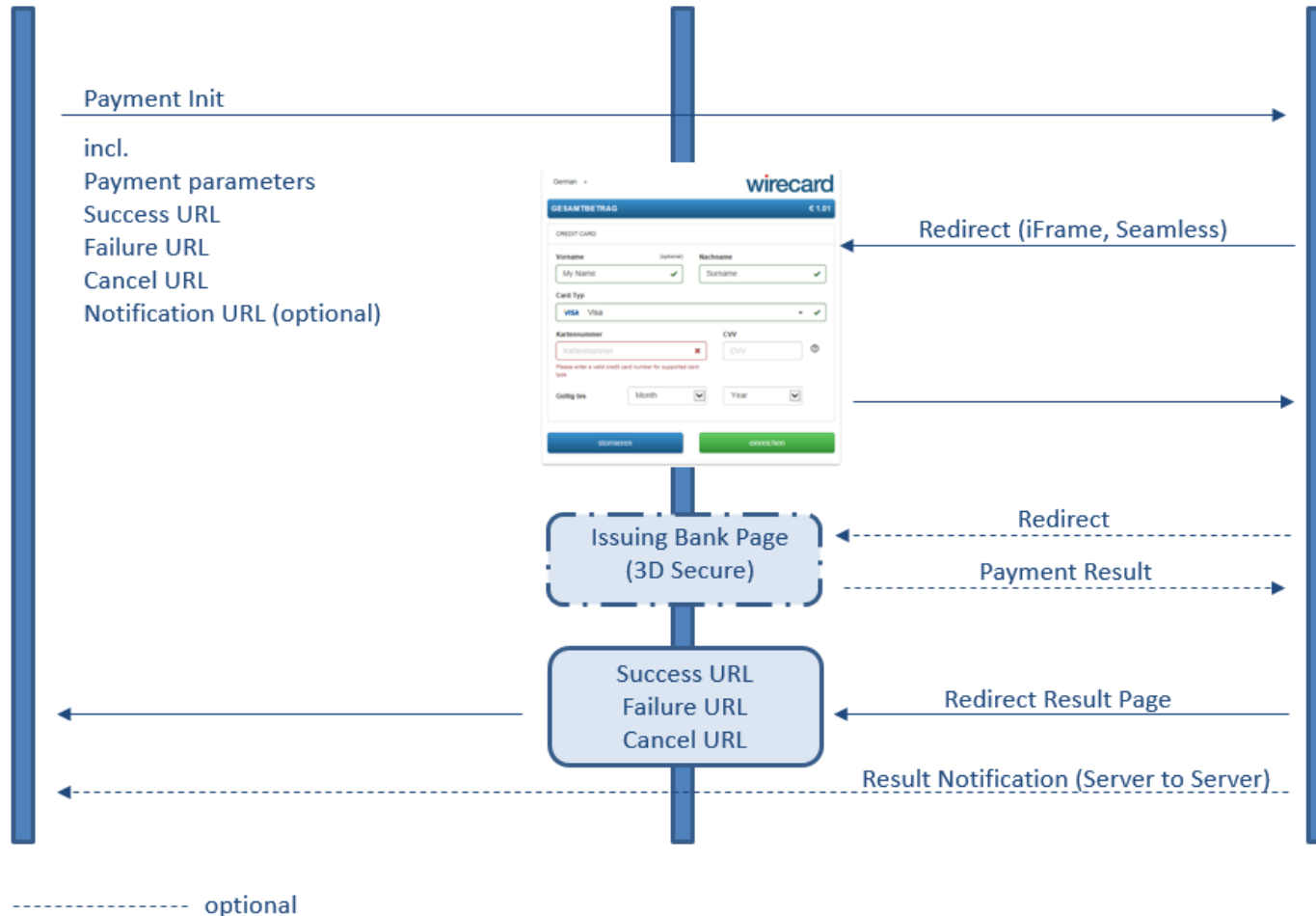


PAYMENT PAGE FLOW

Merchant Server

Customer Browser



wirecard



SEAMLESS SOLUTION

- Hosted on Wirecard side
- Fully PCI compliant
- Embedded iFrame on merchant page
- Java Script based
- Integration by Java Script methods and callback functions
- Fully customizable via templates (design, field positions etc.)
- Dynamic routing supported by Resolver





Kreditkarte



First Name

Last Name

Card Type



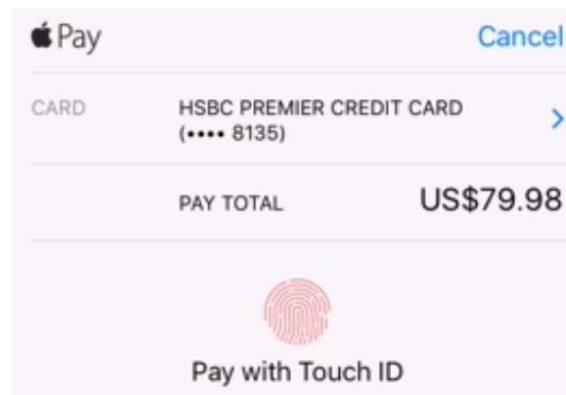
Card Number

CVV

Expiry Date

SDK SOLUTION

- Available for iOS and Android
- Fully PCI compliant
- Payment Methods: Credit Card, SEPA, PayPal, ApplePay (only iOS)
- Online documentation: <http://paymentsdk.github.io/index.html>
- Android: <https://github.com/mposSVK/paymentSDK-Android>
- iOS: <https://github.com/mposSVK/paymentSDK-iOS>
- iOS Cocoapods necessary to integrate iOS from GitHub: <https://cocoapods.org/pods/paymentSDK>



REST API

- Direct integration via XML, JSON or NVP
- POST requests for submitting data
- GET requests for retrieving data
- Different response formats are supported (XML, HTML, JSON, NVP)

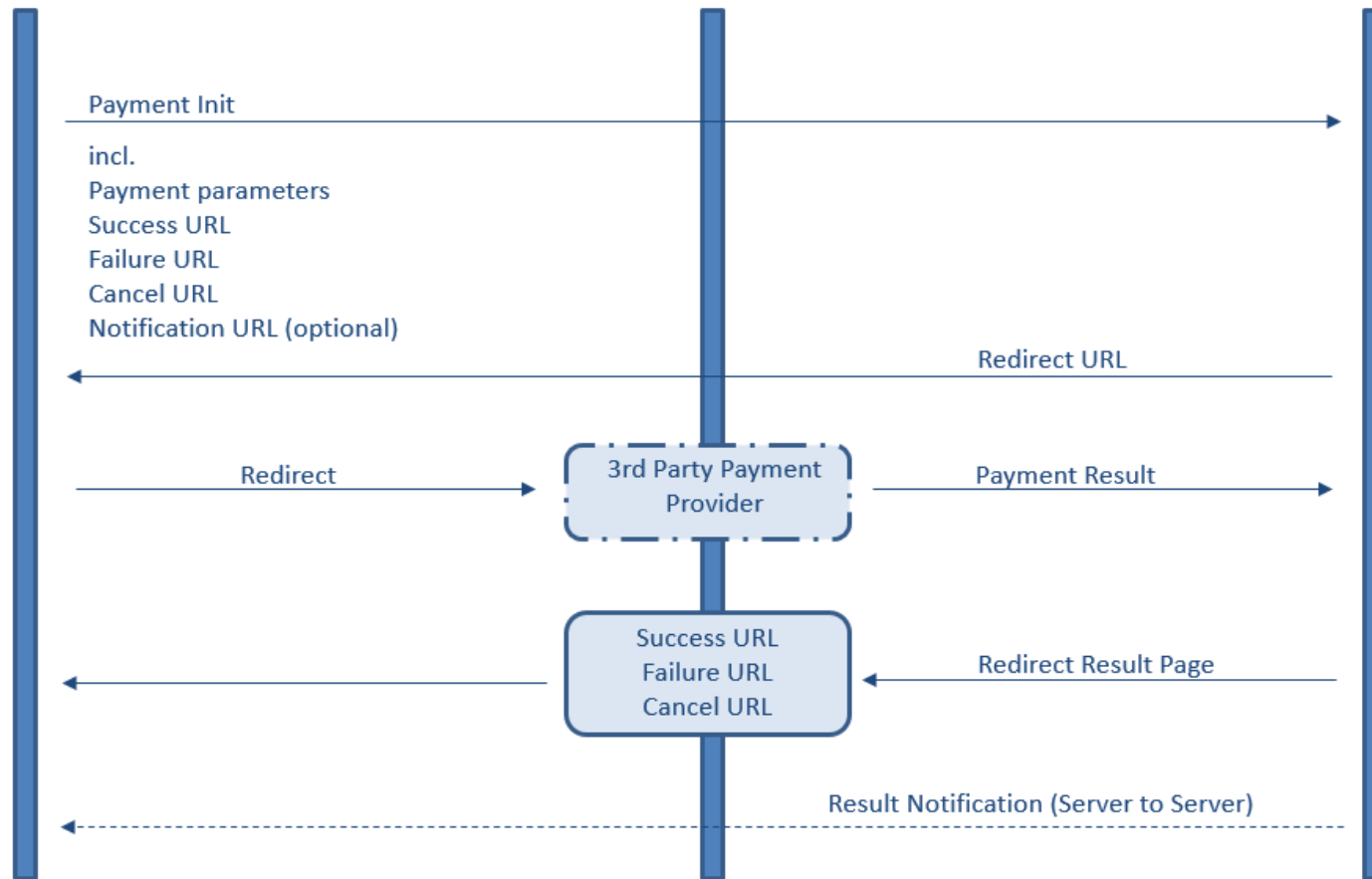
```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<payment xmlns="http://www.elastic-payments.com/schema/payment">
  <merchant-account-id>627ce1c7-17b5-4ea0-990a-4fe57b4de069</merchant-account-id>
  <request-id>b6334ca1-4872-4d92-9069-3ccd1b78b2ed</request-id>
  <transaction-type>purchase</transaction-type>
  <requested-amount currency="USD">1.01</requested-amount>
  <account-holder>
    <first-name>John</first-name>
    <last-name>Doe</last-name>
    <email>john.doe@test.com</email>
    <phone>+1(1)4161234567</phone>
    <address>
      <street1>123 anystreet</street1>
      <city>Brantford</city>
      <state>ON</state>
      <country>CA</country>
    </address>
  </account-holder>
  <card>
    <account-number>4444333322221111</account-number>
    <expiration-month>12</expiration-month>
    <expiration-year>2020</expiration-year>
    <card-type>visa</card-type>
    <card-security-code>123</card-security-code>
  </card>
  <entry-mode>mail-order</entry-mode>
  <ip-address>127.0.0.1</ip-address>
  <payment-methods>
    <payment-method name="creditcard"/>
  </payment-methods>
</payment>
```

REST API FLOW

Merchant Server

Customer Browser

wirecard



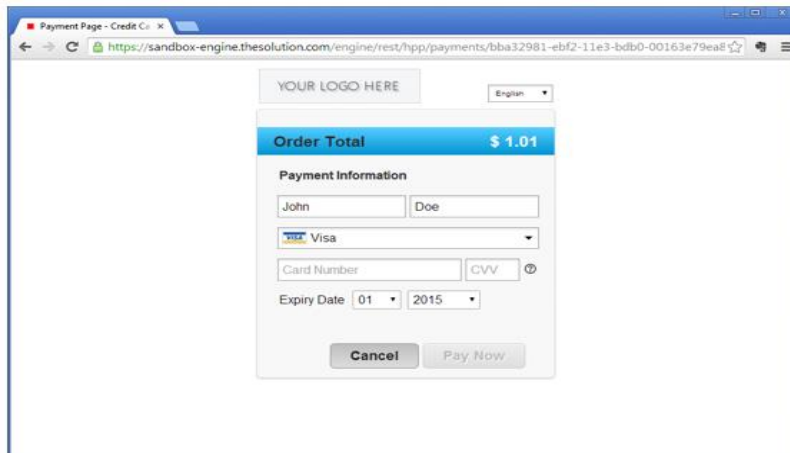
----- optional

2

TRANSACTION TYPES

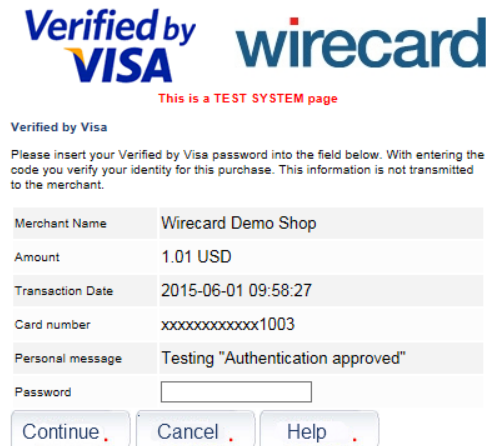
CREDIT CARD

- No PCI compliance required if payment page solution is used
- Verified by VISA and Master Secure Code supported
- Supported card brands:
VISA, MC, MAESTRO, AMEX, DINERS / DISC, JCB, CUP, UATP
- One integration and workflow for all card types
- Chargeback (Wirecard as Acquirer) and Fraud Data handling (TC40 and Safe)
- Offered as acquiring model (only Wirecard contract required)
- Settlement is performed by Wirecard



The screenshot shows a web browser window with the URL <https://sandbox-engine.thesolution.com/engine/rest/hpp/payments/bba32981-ebf2-11e3-bdb0-00163e79ea85>. The page displays a payment form with the following elements:

- A header area with "YOUR LOGO HERE" and a language dropdown set to "English".
- A blue bar indicating the "Order Total" of "\$ 1.01".
- A "Payment Information" section containing:
 - Customer name: "John Doe"
 - Card brand: "Visa" (selected from a dropdown)
 - Card Number and CVV input fields
 - Expiry Date: "01 / 2015"
- Buttons for "Cancel" and "Pay Now".



The screenshot shows a "Verified by Visa" authentication page. It includes the logos for "Verified by VISA" and "wirecard". A red text warning states: "This is a TEST SYSTEM page".

Below the logos, the text reads: "Verified by Visa. Please insert your Verified by Visa password into the field below. With entering the code you verify your identity for this purchase. This information is not transmitted to the merchant."

A table displays transaction details:

Merchant Name	Wirecard Demo Shop
Amount	1.01 USD
Transaction Date	2015-06-01 09:58:27
Card number	xxxxxxxxxxxx1003
Personal message	Testing "Authentication approved"
Password	<input type="password"/>

At the bottom, there are three buttons: "Continue", "Cancel", and "Help".

CREDIT CARD – TRANSACTION TYPES

- Tokenize (standalone Credit Card Tokenization)
- Authorization (reservation of the money)
- Authorization Only (Zero Authorization)
- Capture (charge of the credit card)
- Purchase (Authorization and Capture in one transaction type)
- Refund (referenced refund max. up to Capture amount)
- Credit (unreferenced refund with no amount restriction)
- Void (cancellation of Authorization or pending transactions)
- Referenced Authorizations and Purchases
- Query transaction

SEPA

- Enter IBAN and BIC on Payment Page and accept mandate
- Debit Return handling by Wirecard (Wirecard as Bank)
- Offered as collecting model (Wirecard contract required)
- Settlement is performed by Wirecard

ORDER TOTAL€ 1.01

SELECT A PAYMENT METHOD

SEPA

My Name ✓

Surname ✓

Iban

BIC

By signing this mandate form, you authorise (A) WD SEPA Test to send instructions to your bank to debit your account and (B) your bank to debit your account in accordance with the instructions from WD SEPA Test.

As part of your rights, you are entitled to a refund from your bank under the terms and conditions of your agreement with your bank. A refund must be claimed within 8 weeks starting from the date on which your account was debited.

Dienstag, 9. Juni 2015My Name Surname

☐ I accept the conditions above and hereby grant the SEPA direct debit mandate.

Cancel

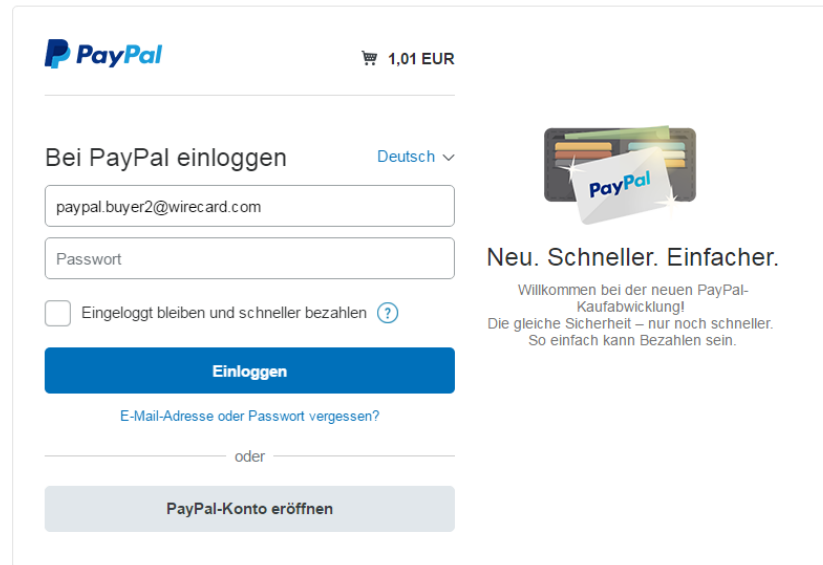
Submit

SEPA - TRANSACTION TYPES

- Authorization (internal account validation)
- Debit (Charge of the SEPA account)
- Credit (unreferenced refund with no amount restriction)
- Referenced Authorizations and Debits
- Query transaction

PAYPAL


- One integration and workflow for all alternative payment methods
- Redirect to PayPal page for login
- Confirm the payment or billing agreement
- Referenced payments supported without user interaction
- Offered as processing model (direct contract with PayPal required)
- Settlement is performed by PayPal



The screenshot shows the PayPal login interface. At the top left is the PayPal logo, and at the top right is a shopping cart icon with the text "1,01 EUR". Below the logo, the text "Bei PayPal einloggen" is displayed next to a language dropdown menu set to "Deutsch". There are two input fields: one for the email address "paypal.buyer2@wirecard.com" and one for the password. Below the password field is a checkbox labeled "Eingeloggt bleiben und schneller bezahlen" with a help icon. A large blue button labeled "Einloggen" is positioned below the login fields. Underneath the button is a link "E-Mail-Adresse oder Passwort vergessen?". Below this is a horizontal separator with the word "oder" in the center, followed by a grey button labeled "PayPal-Konto eröffnen". To the right of the login form is a graphic of a stack of books with a PayPal logo on top, and the text "Neu. Schneller. Einfacher." followed by a welcome message: "Willkommen bei der neuen PayPal-Kaufabwicklung! Die gleiche Sicherheit – nur noch schneller. So einfach kann Bezahlen sein."

[Abbrechen und zurück zu Wirecard Merchant's Test Store.](#)

[Impressum](#) [AGB](#) [Datenschutz](#) [Wesentliche Hinweise zu unserem Service](#) [Feedback](#)

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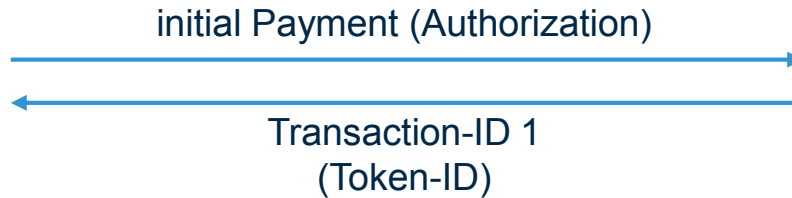
PAYPAL – TRANSACTION TYPES

- Authorization (reservation of the money or create billing agreement)
- Capture (charge of the PayPal account)
- Debit (Authorization and Capture in one transaction type)
- Refund (referenced refund max. up to Capture amount)
- Credit (unreferenced refund with no amount restriction)
- Reversal (cancellation of Authorization)
- Referenced Authorizations and Debits
- Query transaction

3

TRANSACTION FLOWS

TOKENIZATION

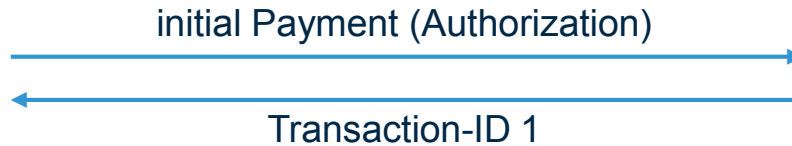


wirecard

Transaction-ID 1: Reference for initial Payment
Token-ID: Token for the Credit Card

PayPal™

SEPA
Single Euro Payments Area

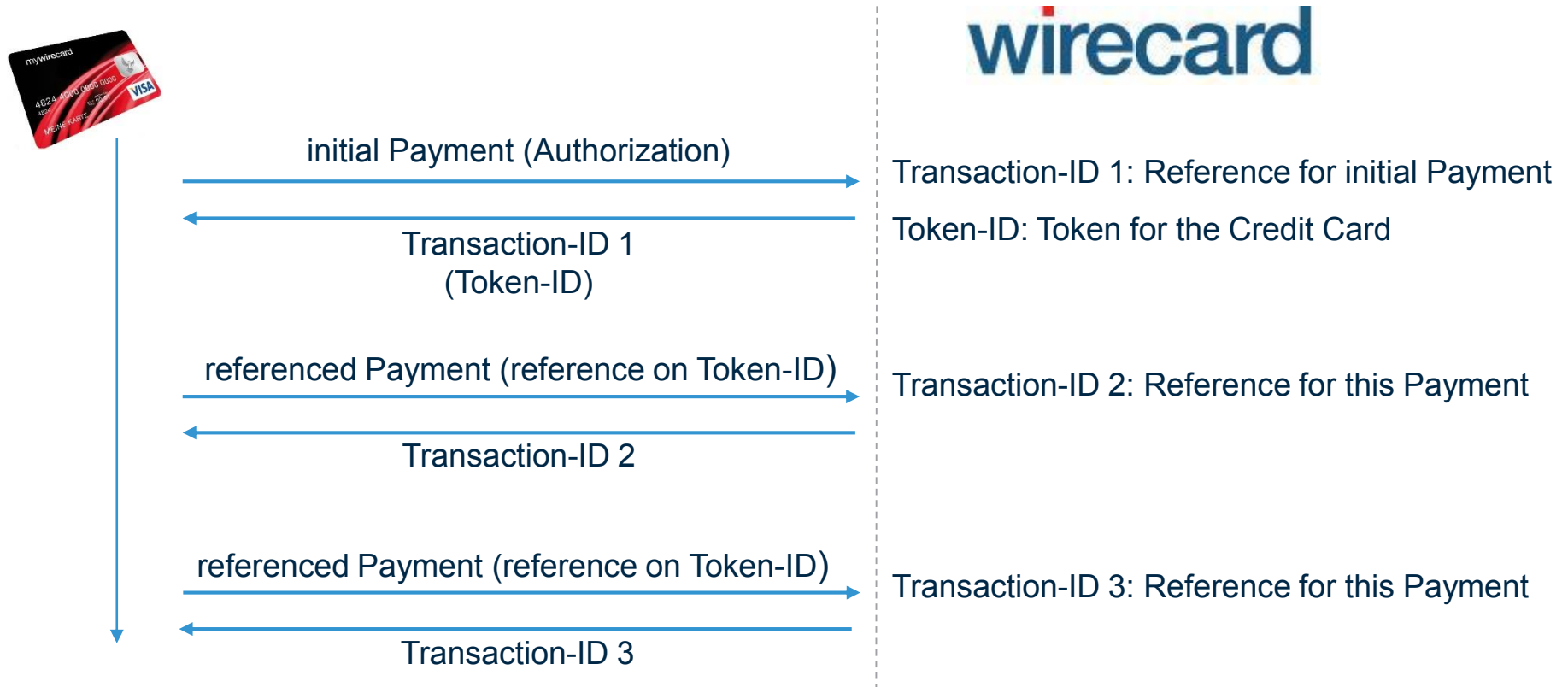


wirecard

Transaction-ID 1: Reference for initial Payment,
Token for the Account

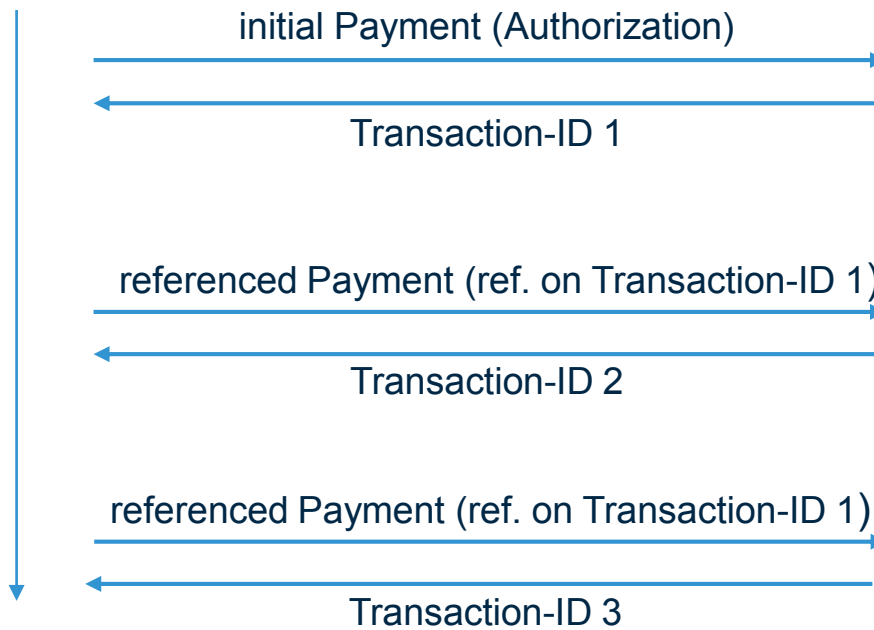
REFERENCED PAYMENTS – CREDIT CARD

- Referenced transactions reference on Token-ID received by initial payment



REFERENCED PAYMENTS – ALT. PAYMENTS

- Referenced transactions reference on Transaction-ID received by initial payment
- Following transactions reference on previous Transaction-ID (Authorization → Capture)



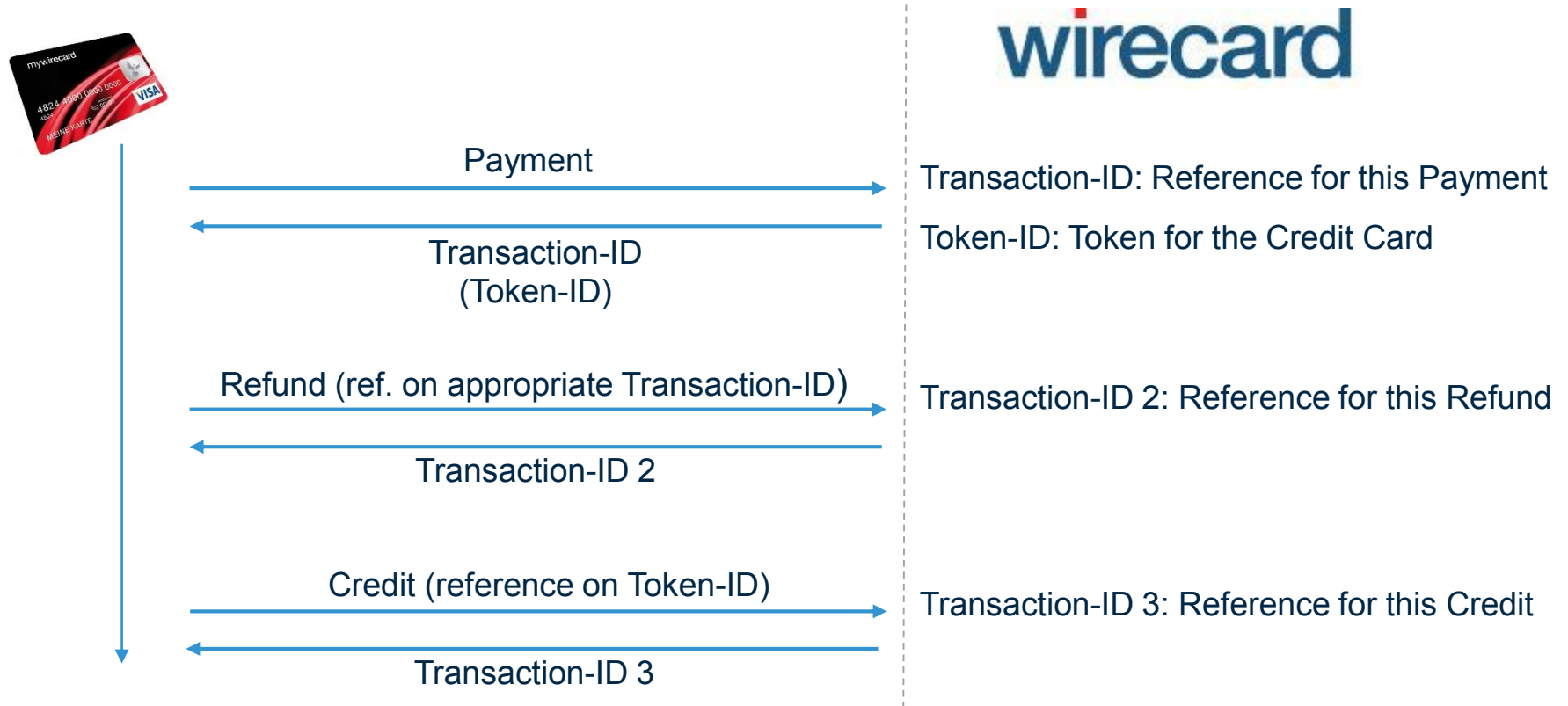
Transaction-ID 1: Reference for initial Payment,
Token for the Account

Transaction-ID 2: Reference for this Payment

Transaction-ID 3: Reference for this Payment

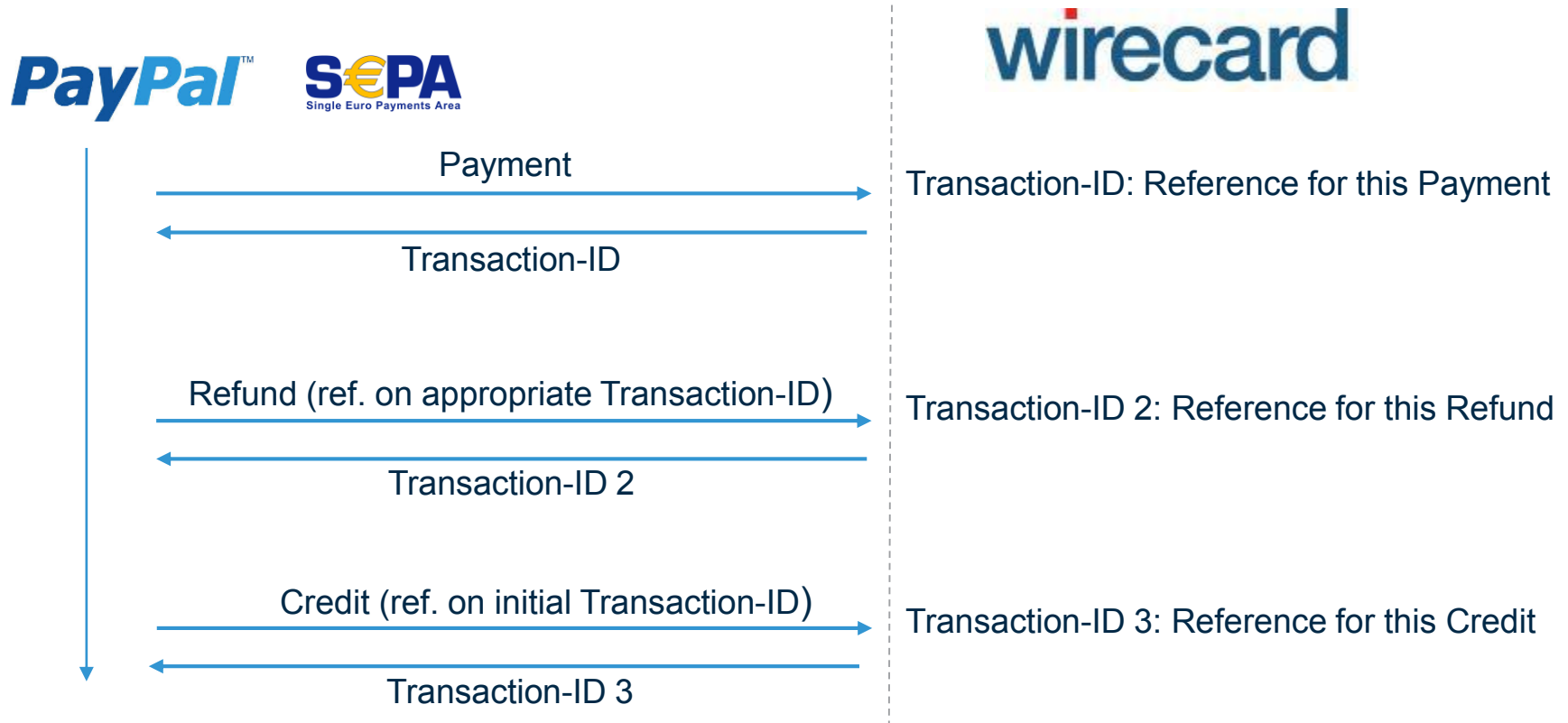
REFUNDS AND CREDITS – CREDIT CARD

- Credits reference on Token-ID received by initial payment
- Refunds reference on previous Transaction-ID of the payment



REFUNDS AND CREDITS - ALT. PAYMENTS

- Credits reference on Transaction-ID received by initial payment (only for PayPal)
- Refunds reference on previous Transaction-ID of the payment



ALT. PAYMENTS + SEPA COMBI

- Online payment as first transaction → bank account is verified
- Referenced Debit or Credit (Refund possibility) via SEPA
- Available for alt. Payment methods which deliver back IBAN and BIC
- Cross referencing between MAIDs possible

SOFORT
ÜBERWEISUNG



Debit

Transaction-ID

Transaction-ID: Reference for this Payment

SEPA
Single Euro Payments Area

Debit (ref. on initial Transaction-ID)

Transaction-ID 2

Transaction-ID 2: Reference for this Debit

SEPA
Single Euro Payments Area

Credit (ref. on initial Transaction-ID)

Transaction-ID 3

Transaction-ID 3: Reference for this Credit

wirecard

wirecard