



Shopping Cart Interface 2.00

Documentation

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Introduction

This documentation explains the handling and functions of the internet based Shopping Card Interface (SCI) for the online payment system S-PAY. With this program interface providers of all services are able to use a simple possibility to receive payments for goods and services directly to their S-PAY account and for sure verify it for further handling.

Also there are HTML and PHP sample scripts included which shows how you are able to include the SCI into any web-based application and how the returns of those data can be handled further ways.

Requirements

This documentation is for website owners and developers who want to accept and handle S-PAY payments. Developers therefore should be experienced in the following sectors:

- Creation of HTML scripts
- Working with HTML forms
- Handling of server-returns
- Handling HASH codes (i.e. in PHP)

Terminology

Identifier	Definition
Provider	S-PAY account holder who wants to receive payments by the S-PAY SCI
Consumer	S-PAY account holder who wants to pay a provider for goods / services using the SCI payment page where he is able to pay.

General information about the SCI

The SCI as a part of the S-PAY system allows payments from consumers directly to your S-PAY account. Therefore S-PAY offers a separate payment website which makes sure to redirect payments directly to the account of the provider. SCI and the provider's website therefore are handling several requests and transfer information by HTML forms which make a direct payment between the provider and the consumer possible.

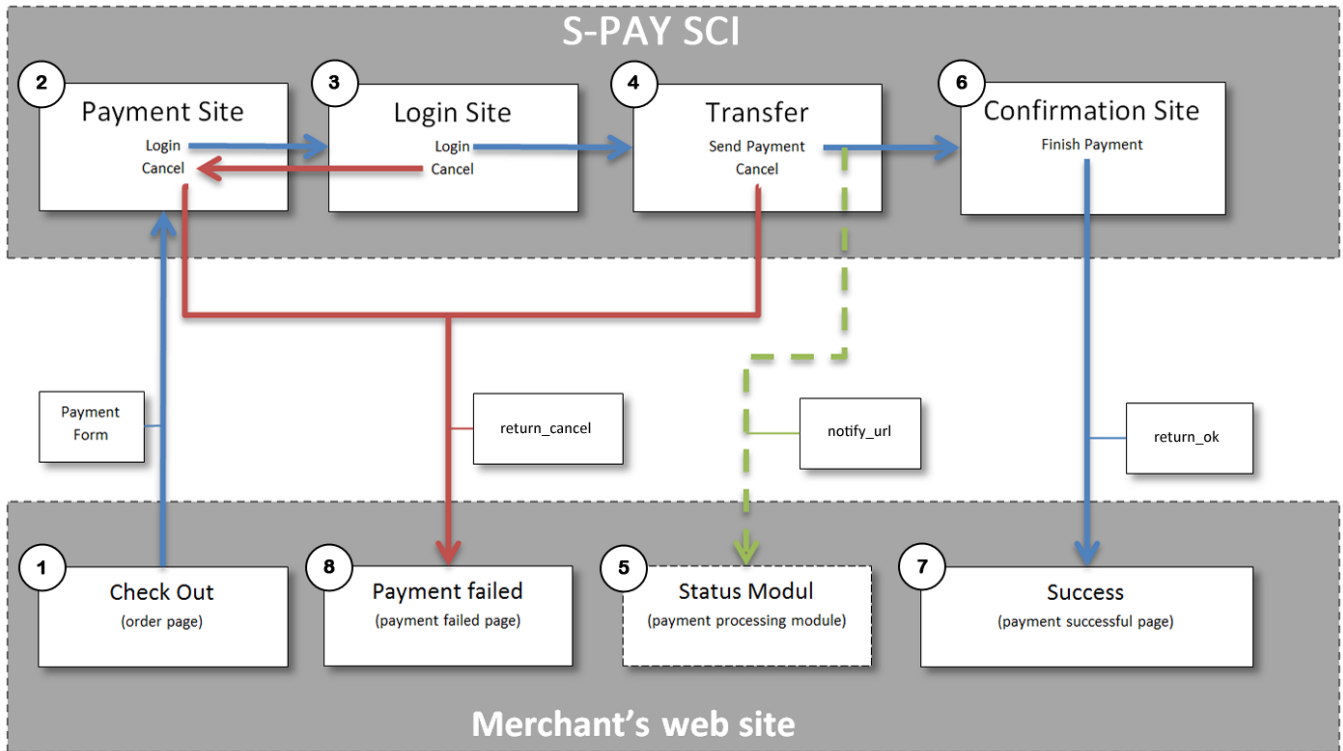
The provider needs to have at least those two HTML websites:

Payment Page	Website which leads the consumer to S-PAY to make the payment and to finish the shopping process.
Successful Payment Page	Website which informs the consumer that the payment was successfully done.
Canceled Payment Page	Website which shows the consumer that the payment was not a success or canceled and shows other payment options alternatively.

How the SCI works

To receive online payments the provider should forward the consumer to the S-PAY payment website to do the payment for purchasing goods or services. After the successful payment the consumer is forwarded back to the provider's website.

The complete process for such a payment transaction includes the following steps:



The consumer is browsing and selecting items or services he wants to purchase. The provider shows the summary amount which the consumer is in need to pay. The consumer chooses S-PAY (\$, €, Aug or BTC) for the payment transaction. The consumer will now be forwarded to the S-PAY SCI payment page and the provider sends the necessary parameters for these transactions by a HTML form (1).

On the payment page the consumer is now able to choose if he want to login and pay or if he wants to cancel the payment process (2). In the case he decides to cancel the payment he will be forwarded to the cancellation website (8).

If the consumer successfully logged in (3) he will be forwarded to the payment page where he can decide which accounts from his own S-PAY online banking he wants to use for the dedicated payment. If he decides to cancel the transaction at this step he is forwarded to the cancellation website (8).

If the consumer authorized and successfully finished the payment process (4) he will be forwarded to the confirmation page (7) and S-PAY will therefore send real time data of the payment to the server of the provider (5).

Testing Environment

S-PAY offers all customers and developers a whole testing environment at <https://paytest.s-pay.me>. There you are able to fully test our API and SCI.

At the testing system you need to create a new account. You cannot use your accounts from your live online banking sign up! You are able to use any details in the testing system. The only information which needs to be valid is your email address to activate the testing account. If you want to get the advanced features activated which we offer for exchanging services do not wait to contact our support!

Requirements

To use the S-PAY Shopping Cart Interface there are 2 possibilities:

Simple Method:

The provider creates a simple HTML form code with the payment button generator and includes it everywhere he needs it at his website. If a customer does a payment with this button he will pay directly to the provider without any further automated handling. But the provider is able to request information about an incoming payment by email in example. This method is a great and easy one if you use it for donations or other simple transactions.

Requirements:

1. The provider holds an activated account at S-PAY and at least one internal account with the currency of his choice which is activated too!
2. The provider creates a HTML code for the dedicated currency account. This can be done by visiting the button generator under "Personal Settings" → "SCI"
3. The provider includes the generated code into his website.

Advanced Method:

The provider includes the S-PAY SCI into his website and sends the information automated to the SCI by a HTML form. Furthermore he creates additional pages for successful or canceled payments and develops a module to handle the successful payment further on his own server.

Requirements:

1. The provider holds an activated account at S-PAY and at least one internal account with the currency of his choice which is activated too!
2. The provider includes a payment button into his website which forwards the consumer to the S-PAY SCI payment page.
3. If the provider wants to handle successful payments further on his own server he needs to create / include an extra module which can work with the information returned by the SCI.
4. For payment validation the provider needs the SCI HASH password which is available by visiting the detailed view of an account from your total accounts overview.
5. The provider optionally creates a page to show a confirmation of the payment to his customers.
6. The provider optionally creates a page to show a non-successful payment process to his customers.

Accepting and handling payments

SCI-Overview

The general principle for interactions between providers and the SCI is handled via the following steps:

1. Forwarding of the consumer from the providers page to the SCI payment page and transferring of all necessary information for the dedicated payment.
2. Receiving and handling of the information after a successful payment
3. Displaying of a cancellation page if it's in need
4. Displaying of the confirmation page after processed payment.

To forward your customers to the S-PAY SCI website you need to use the following URL:

Live-System: <https://www.s-pay.me/pay/payment/?lang=en>

Test-System: <https://paytest.s-pay.me/payment/?lang=en>

Language for the payment website

The language in what the S-PAY payment website is displayed can be preselected by the URL parameter "lang=". At this time you can use English (lang=en) and German (lang=de).

As soon as the consumer logged in into the payment website he will be shown the language he set himself in his own online banking account settings.

Form for requests for payments

The HTML form for requests for payments is generated by the provider and will be used to transfer all information necessary to the S-PAY SCI. The HTML form consists of several hidden fields which contain all data which is in need for the SCI to do a successful transfer.

Table of all possible fields in HTML forms

HTML form field	Format	Description	Examples
cmd	Text, 6 signs	This content is fix	paynow
account	Text min. 11 signs max. 12 signs for exchangers	Account number of the provider for receiving payments	E1234567890 XE1234567890 U1234567890 XU1234567890
ref	Text min. 11 signs max. 12 signs for exchangers	Account number which will be used for referring new customers to S-PAY	E1234567890 XE1234567890 U1234567890 XU1234567890
amount	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Amount which needs to be transferred	25.88 2.558 0.25582558
description	Text, max. 100 signs	Payment purpose (also reference in the customer's account statement)	e-Book – Order No.: 1588
subject	Text, max. 100 signs	Reference as it should be shown on the statement of the provider	Order 1588, provider.com
notify_url	Text	URL to which the information should be transferred after a successful payment via the POST command	http://www.provider.com/process_payment.php
reference_id	Text, max. 100 signs	Signifier-ID of the provider which will be stored additionally in the S-PAY database and which can be displayed by XML-API requests	
return_ok	Text	URL which leads to the successful payment page of the provider	http://www.provider.com/success.html
return_cancel	Text	URL which leads to the payment cancellation page of the provider	http://www.provider.com/cancel.html
logo_url	Text	URL to the logo of the provider, HTTPS only, jpg, jpeg, gif and png only, size = 200 x 70px	https://www.provider.com/img/providers_logo.png
optional_text	Text, max. 100 signs	Text which is displayed behind "S-PAY Payment"	to PROVIDER.COM
optional1 ... optional10	Text, max. 100 signs	10 fields for your own usage which are not handled by the SCI	Order-No. 1588 John Doe Color: blue

Example for a payment request towards the SCI:

For the following examples we will use the following details:

Provider's website:	www.provider.com
Provider's account number:	E0123456789
SCI – HASH of the account:	9efa35b034
Referral-ID of the provider:	E9876543210
URL for sending data after successful payment:	http://www.provider.com/process.php
URL for payment cancellation:	http://www.provider.com/cancel.html
URL for "Payment Successful" page	http://www.provider.com/successful.html
URL to provider's logo :	https://www.provider.com/img/logo.png
Providers Signifier:	BST25665899-225-555
Description	e-Book 719 Star listener
Amount:	USD 7.99
Reference:	provider.com Order-No: 199 Itm: 719
Optional text:	to Provider.com
Optional data 1:	Order 199

<!--Fragment of HTML page with the payment request form-->

```
<form action="https://www.s-pay.me/pay/payment/?lang=de" method="post">
<input type="hidden" name="cmd" value="paynow" />
<input type="hidden" name="account" value="E0123456789" />
<input type="hidden" name="ref" value="E9876543210" />
<input type="hidden" name="amount" value="7.99" />
<input type="hidden" name="description" value="e-Book 719 Star listener" />
<input type="hidden" name="subject" value="provider.com Order-No.: 199 Itm.: 719" />
<input type="hidden" name="reference_id" value="BST25665899-225-555" />
<input type="hidden" name="optional1" value="Order 199" />
<input type="hidden" name="notify_url" value=" http://www.provider.com/process.php" />
<input type="hidden" name="return_ok" value=" http://www.provider.com/successful.html" />
<input type="hidden" name="return_cancel" value=" http://www.provider.com/cancel.html" />
<input type="hidden" name="optional_text" value="to Provider.com " />
<input type="hidden" name="logo_url" value="https://www.provider.com/img/logo.png" />
</form>
```

....

Return of the HTML form after **successful** payment

If a return_ok URL was included a POST request will be sent to this URL after successful payment. This contains the following information:

HTML form field	Format	Description	Information from example above
account	Text min. 11 signs max. 12 signs for exchangers	Account number of the provider for receiving payments	E0123456789
amount	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Amount which needs to be transferred	7.99
description	Text, max. 100 signs	Payment purpose (also reference in the customer's account statement)	e-Book 719 Star listener
currency	Text, 3 signs	Currency of the transaction	EUR, USD, BTC, XAU
subject	Text, max. 100 signs	Reference as it should be shown on the statement of the provider	Provider.com Order-No.: 199 Art.: 719
reference_id	Text, max. 100 signs	Signifier-ID of the provider which will be stored additionally in the S-PAY database and which can be displayed by XML-API requests	BST25665899-225-555
transaction	Text	Transaction number of the successful payment	26874266
sp_timestamp	Date, in YYYY-DD-MMT HH:mm:SSZ format	Date of fulfillment	2015-28-05T11:12:23Z
paid_by	Text min. 11 signs max. 12 signs for exchangers	Account number of the payer	E2122232425
paid_fee	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Fee which was calculated for the provider for the dedicated transaction	0.38
optional1 ... optional10	Text, max. 100 signs	10 Fields for your own usage which are not handled by the SCI. Those will be returned without any change.	Order 199

Example for a return after successful payment (return_ok)

The following example of a form will be sent from the S-PAY SCI to the return_ok URL after a payment was done **successfully**.

```
<!--Payment successful HTML form-->

<form action="http:// www.provider.com/successful.html" method="post">
<input type="hidden" name="account" value="E0123456789" />
<input type="hidden" name="amount" value="7.99" />
<input type="hidden" name="description" value="e-Book 719 Star listener" />
<input type="hidden" name="currency" value="EUR" />
<input type="hidden" name="subject" value="provider.com Order-No.: 199 Itm.: 719" />
<input type="hidden" name="reference_id" value="BST25665899-225-555" />
<input type="hidden" name="transaction" value="26874266" />
<input type="hidden" name="paid_by" value="E2122232425" />
<input type="hidden" name="paid_fee" value="0.38" />
<input type="hidden" name="optional1" value="Order 199" />
</form>
```

.....

Return by **non-successful** payment

If a return_cancel URL was included a POST request will be sent this URL after a non-successful payment. This contains the following information

HTML form field	Format	Description	Information from example above
account	Text min. 11 signs max. 12 signs for exchangers	Account number of the provider for receiving payments	E0123456789
amount	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Amount which should have been transferred	7.99
description	Text, max. 100 signs	Reason for payment	e-Book 719 Star listener
currency	Text, 3 signs	Currency of the transaction	EUR, USD, BTC, XAU
optional1 ... optional10	Text, max. 100 signs	10 Fields for your own usage which are not handled by the SCI. Those will be returned without any change.	Order 199
error	Text	Error-Code	1 = Cancellation on SCI startpage 2 = Cancellation after successful login

Example of a return after a **non-successful** payment (return_cancel)

The following example form will be sent by the S-PAY SCI to the return_cancel URL after a payment was **not finished successful**:

```
<!--Payment failed HTML form-->
```

```
<form action="http://www.provider.com/cancel.html" method="post">
<input type="hidden" name="account" value="E0123456789" />
<input type="hidden" name="amount" value="7.99" />
<input type="hidden" name="description" value="e-Book 719 Star listener" />
<input type="hidden" name="currency" value="EUR" />
<input type="hidden" name="optional1" value="Order 199" />
<input type="hidden" name="error" value="1" />
</form>
```

```
....
```

Notification of the provider's server after a successful payment (notify_url)

If a notify_url was included a POST request will be sent to this URL after a successful payment. This contains the following information:

HTML form field	Format	Description	Information from example above
account	Text min. 11 signs max. 12 signs for exchangers	Account number of the provider for receiving payments	E0123456789
amount	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Amount which was transferred	7.99
description	Text, max. 100 signs	Payment purpose (also reference in the customer's account statement)	e-Book 719 Star listener
currency	Text, 3 signs	Currency of the transaction	EUR, USD, BTC, XAU
subject	Text, max. 100 signs	Reference as it should be shown on the statement of the provider	provider.com Order-No.: 199 Art.: 719
reference_id	Text, max. 100 signs	Signifier-ID of the provider which will be stored additionally in the S-PAY database and which can be displayed by XML-API requests	BST25665899-225-555
transaction	Text	Transaction number of the successful payment	26874266
hash	Text, max. 32 signs	MD5 Hash of the successful transaction	d005546a23f7de7fd2c21d58fae351b7
sp_timestamp	Date, in YYYY-DD-MMT HH:mm:SSZ format	Date of fulfillment	2015-28-05T11:12:23Z
paid_by	Text min. 11 signs max. 12 for exchangers	Account number of the payer	E2122232425
paid_fee	Text, no thousands delimiter, decimal delimiter: point(.) decimal place: Euro and USD: 2 Gold: 3 BTC: 8	Fee which was calculated for the provider for the dedicated transaction	0.38
optional1 ... optional10	Text, max. 100 signs	10 Fields for your own usage which are not handled by the SCI. After successful payment those will be returned to the notify_url without any changes	Order 199

Example for sent data after successful payment:

```
<!--Payment notify HTML form-->

<form action="http:// www.provider.com/process.php" method="post">
<input type="hidden" name="account" value="E0123456789" />
<input type="hidden" name="amount" value="7.99" />
<input type="hidden" name="description" value="e-Book 719 Star-listener" />
<input type="hidden" name="currency" value="EUR" />
<input type="hidden" name="subject" value="provider.com Order-No.: 199 Art.: 719" />
<input type="hidden" name="reference_id" value="BST25665899-225-555" />
<input type="hidden" name="transaction" value="26874266" />
<input type="hidden" name="sp_timestamp" value="2015-28-05T11:12:23Z " />
<input type="hidden" name="hash" value="d005546a23f7de7fd2c21d58fae351b7" />
<input type="hidden" name="paid_by" value="E2122232425" />
<input type="hidden" name="paid_fee" value="0.38" />
<input type="hidden" name="optional1" value="Order 199" />
<input type="hidden" name="optional_text" value="to provider.com" />
</form>

....
```

Validate the authenticity of the data

To validate the authenticity of the transaction notifications the SCI password is in need to build a HASH. This is unique for every account and can be found at “S-Pay SCI” or in your account overview by clicking on “Details”. The HASH itself consists of the following parts:

MD5(account + amount + currency + transaction + SCI-Password)

Following the example above the HASH in that case would be made up of this data:

account +	E0123456789
amount +	7.99
currency +	EUR
transaction +	26874266
Account-password for SCI	9efa35b034
= MD5 Hash created out of string:	E01234567897.99EUR268742669efa35b034

The MD5 function therefore will return the following hash-code: d005546a23f7de7fd2c21d58fae351b7

This calculated value needs to be identical with the one the S-PAY SCI returns to you so that you can be sure that a valid transaction has been done.

A simple example of HTML sites for receiving payments

Following you will find a very simple and easy to apply example how a provider can do financial transactions with the S-PAY SCI.

In that example we use the same information like we did the last examples before. Please be advised that in the following example we are not showing how to verify and to further handle a transaction. In fact we want to show you the general idea and reason behind such a fully functional payment transaction system.

To do financial transaction the provider needs 3 HTML web-pages:

1. Payment page which forwards the consumer to the S-PAY SCI and sends the information for the payment request.
2. Page if the payment was successful.
3. Page if the payment was not successful.

Creation of the payment page

In the case that the provider created a page called payment.html from which the buyer started the payment process. Here is a very simple example of a HTML website:

```
<!--payment HTML page-->
```

```
<html>
<head>
<title>Payment</title>
</head>
<body>
<p>Purchase of e-Book Star listener for EUR 7.99 !</p>
<form method="POST" action="https://www.s-pay.me/pay/payment/?lang=de">
<input type="hidden" name="cmd" value="paynow" />
<input type="hidden" name="account" value="E0123456789" />
<input type="hidden" name="amount" value="7.99" />
<input type="hidden" name="description" value="e-Book 719 Star listener" />
<input type="hidden" name="subject" value="provider.com Order-No.: 199 Art.: 719" />
<input type="hidden" name="optional1" value="Order 199" />
<input type="hidden" name="return_ok" value="http://www.provider.com/successful.html" />
<input type="hidden" name="return_cancel" value="http://www.provider.com/cancel.html" />
<input type="submit" name="buy" value="Pay Now!">
</form>
</body>
</html>
```

Creation of a “Payment successful” page

Let’s think that the provider created a “Payment Successful” web-page called success.html. The simple code for this site can be as this one:

```
<!--Payment successful HTML page-->

<html>

<head>

<title>Payment Successful/</title>

</head>

<body>

<p>We received your payment. Thank you!</p>

</body>

</html>
```

Creation of a “Payment non-successful” page

Let’s think that the provider created a website for non-successful payments called cancel.html. The simple code for such a page could be like this:

```
<!--Payment failed HTML page-->

<html>

<head>

<title>Payment Failed.</title>

</head>

<body>

<p>There went something wrong with your payment as we did not receive it.</p>

</body>

</html>
```

Considerations and suggestions regarding security

To exclude any compromise when it come up to security and make sure you minimize and harms done by malicious users we strongly recommend you to read and use the following recommendations:

Never edit or use any passwords or other details for authentication on computers in public or at computer which are not your own ones where it could be possible to spy you regarding what you type in in any way like direct views or even a key logger.

We strongly recommend that you NEVER save any authentication data like passwords, secure-words etc. in any source code. That information should always be held in a separated and secured database.

The one and only way to make sure that a payment was successful is by the HASH function which is included in the S-PAY SCI. You need to always make sure that those data is coming from S-PAY directly and not from any third party application or service provider!

For an absolute security we recommend you to verify all received payments via our dedicated S-PAY XML-API.

Do you have any questions or recommendations?

If you have any questions or recommendations related to the S-PAY API you are welcome to contact us using the ticket system anytime. You have urgent problems or questions? You are also welcome to contact our dedicated Skype support service which can be found with id "rbh-service". We always struggle to develop the last secured products and the best enhancements to meet our customer's needs. Help us doing that!