



Transaction Systems

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ClickandBuy Module Manuals

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1 ClickandBuy Transaction System

The ClickandBuy transaction system is a web-based interface for settling payments between providers, customers and ClickandBuy. For example, the following billing variants can be used:

- Funding of customer or credit accounts
- Billing of services on the Internet
- Billing of digital or physical goods from shop systems
- Billing of non-recurring transactions

Special mode of operation: A payment entry script (know hereinafter as “transaction script”) created by you in your role as provider, decides whether ClickandBuy should actually book a transaction or not. The transaction system renders this possible, operating a so-called handshake method.

1.1 Requirements for use

To use the ClickandBuy transaction system, the following requirements must be given:

1. You must have a Premium Account at ClickandBuy.

The “Transaction System” feature is available to all providers with a Premium Account and it is enabled when requested by your Account Support Manager. You have had this feature enabled.

2. You have already set up a transaction link.

You have asked your Account Support Manager to configure a transaction link for you and you have been notified of the exact URL for the link.

Further information on the “Transaction link” topic is available in chapter 1.2.1, page 2.

3. You have created a transaction script and set-up a database.

To process the details in a transaction you will require a transaction script (e.g. in PHP, JSP or ASP) which evaluates the transferred parameters. Apart from this, you will also require a database (MySQL), into which you can enter your transactions. You have created the script and set up the database.

You can find out which functions exactly are assumed by the script and how it is created as from Seite 5. Additional information on “Transferring parameters” is available as from Seite 2.

4. You have integrated the transaction link into your Internet site

You have integrated the transaction link with the parameters for transfer into your Internet site.

You have made all necessary preparations and the transaction system is now ready for use.

1.2 How it works

The transaction system and exactly how it is used is described in detail below. To help you understand it all better, we recommend that you study – at the same time – the activity diagram on chapter 2.1, page 8.

A customer clicks on your offer, which in turn calls up your transaction link.

When the transaction link is called up, you transfer all the data required for the transaction as a GET parameter link (Step 1). The customer is then routed to the ClickandBuy Login/Registration process page (Step 2). Following successful authentication and purchase confirmation on the ClickandBuy payment page (Steps 3 and 4), your transaction script is called up with the header parameters and the provider-relevant GET parameters in your backend “Server to Server” (Step 5). The ClickandBuy transaction system now waits for a transcription script “result=success”.

A response must be given within a period of 40seconds!

Important note

If your transcription scrip fails to return “Redirect” as the response, the ClickandBuy system **CANNOT** provide any evaluation. The transaction in the ClickandBuy system is then “rolled back”. If “redirect” is returned after expiry of the allotted time, the response is not evaluated and the transaction is not processed. The customer is notified by means of an error message on the ClickandBuy page if such a timeout occurs.

Because you transfer information concerning particular amounts and further relevant GET parameters to ClickandBuy, and it could be falsified, a handshake method is used here. The handshake method is structured such that provider-relevant parameters and ClickandBuy-specific information on the purchase transaction is sent for verification to the transaction script as part of a server-to-server communication process. This enables you – as a provider – to manage whether the purchase transaction is to be entered by triggering a redirect with the corresponding result parameter.

Handshake method

1.2.1 What is a ClickandBuy transaction link?

Actually, the transaction link is nothing other than a ClickandBuy link, the difference being that it is managed by attaching GET parameters to it, whereby processing is then conducted using the previously-mentioned handshake method. It is set up by your Account Support Manager, who will notify you of the exact URL.

The following are examples of GET parameters:

- Price
The amount to be billed in cents (e.g. 1 euro would be: price=100)
- cb_currency
The currency of the amount to be billed (e.g. EUR for euro)
- cb_content_name_utf
Offer / invoice text (cb_content_name_utf = Transfer of 10 euro)

The structure of the transaction link would be as follows for this example:

```
http://premium-encrypted.eu.clickandbuy.com//transaction.php?
price=100&cb_currency=EUR&cb_content_name_utf=Transfer&my_id=123.....
```

Additional parameters required for booking into your system can simply be attached as additional GET parameters onto the transaction link. These are then transferred in the server-to-server communication to your transaction script.

1.2.2 Transferring parameters

The transaction link has certain GET parameters transferred to it during the transaction. The “price”, “cb_currency” and “externalBDRID” parameters here are mandatory, additional individual parameters can also be attached.

During dynamic transfer of parameters, you must use the “MD5 Hashing” encoding principle for the security check or the parameters have to be checked for manipulation using the handshake method. More details on the encoding procedure are available in the ClickandBuy “Dynamic parameter transfer” module manual, which is available from your Account Support Manager.

Important note!

1.2.2.1 “Price” parameter

To transfer the price for your offer dynamically, attach the “price=” parameter to the Clickand-Buy link. The value of this parameter contains the amount given in cents without a comma or decimal point. In other words, for a price of 1 euro you have to enter a value of 100. If your offer costs 50 cents, transfer a value of 050 for the “price” parameter. The smallest price unit is 1 cent and it has been transferred in the transaction link with the price=001 parameter.

If this parameter is not transferred or if it is done incorrectly, the system displays the default price which you have defined for this link.

Please note that it is not allowed to transfer a price=0. In such an instance, the customer will be notified by an error message on the ClickandBuy pages.

Note:

1.2.2.2 “Cb_currency” parameter

The “cb_currency” parameter enables you to assign the corresponding currency to the price of your offer. ClickandBuy currently supports the following currencies:

- AUD (Australian Dollar)
- EUR (Euro)
- GBP (British Pound)
- USD (US Dollar)
- CHF (Swiss Franc)
- DKK (Danish Krone)
- NOK (Norwegian Krone)
- SEK (Swedish Krone)
- NZD (New Zealand Dollar)
- CAD (Canadian Dollar)
- MXN (Mexican Peso)
- ZAR (South African Rand)
- TRY (New Turkish Lira)
- JPY (Japanese Yen)
- HKD (Hong Kong Dollar)
- CNY (Chinese Yuan)
- TWD (Taiwanese Dollar)
- INR (Indian Rupee)
- BRL (Brazilian Real)
- KRW (Korean Won)
- MYR (Malaysian Ringgit)

Please note that these parameters have to be enabled separately by your Account Support Manager and that they can only be used for dynamic transaction links and subscription links. If the parameter is transferred within a static link, the ClickandBuy system indicates this through an error message.

Note

1.2.2.3 “cb_content_name_utf” Parameter

The optional “cb_content_name_utf” parameter transfers your offer designation, which appears on the payment page and the billing documents. Please enter the value of the parameters as an URL code, to be able to transfer when in the transaction link.

What does this mean?

In accordance with the “urlencode” encoding method, the blanks in the “My Offer” example text are replaced by a “+”, so that the value to be transferred for this parameter would be as follows for the transaction link:

```
http://... &cb_content_name=my+offer
```

This parameter supports UTF-8 coding, however, only those characters can be transferred that can always be displayed in the ISO 8859-1 standard, these include, e.g. all West European special characters.

Note:

1.2.2.4 “ExternalBDRID” parameter

The “externalBDRID” parameter is used along with the transaction ID used by ClickandBuy for a purchase transaction (see hereto also “Overview of header parameters” auf Seite 5) to issue a separate, unique ID for a transaction, for example to enable a transaction to be uniquely assigned.

If the user clicks more than once, your transaction script will be called up as often as he/she clicks. To ensure that, in this instance, you do not book the purchase several times over, we advise you to transfer a separate, unique ID for each purchase transaction and to store this externalBDRID parameter as a unique value in your database. If your transaction script is called up several times using the same ID, then all additional call-ups must be ignored. In the event of a multiple call, your transaction script must always return a “result=success” to the ClickandBuy system, however you should only book one transaction into your system and dismiss the others.

Important note

For this reason, ClickandBuy strongly advises you to integrate this parameter. If you also wish to use this in your Kapitel 1.2.4, Seite 6 “Second Confirmation” specified procedure, you *must* have used this parameter.

1.2.2.5 “result” parameter

Following verification, the transaction script is triggered in the event of a redirect to a thank you or an error page using the “result=success” parameter in the event of a success or the “result=error” parameter in an error instance.

The ClickandBuy transaction system then evaluates the GET parameter “result”. Depending on the result, the transaction is booked or dismissed.

Whatever the case, your script should perform a check as to whether the “externalBDRID” has already been booked, as this may result in double entries in certain circumstances.

1.2.2.6 Individual parameters

You can define your own separate parameters to meet your particular requirements, which can be returned to you during a purchase transaction for further processing. For example, one could consider parameters such as “User name” for assignment in your user administration or a separate offer number for further processing within your inventory control system.

A URL could, for example look something like this:

```
http://premium-encrypted.eu.clickandbuy.com/transaction.php?
price=250&cb_content_name_utf=my+offer&externalBDRID=1234&offerID=123&
username=anyone
```

You may not use certain parameter names as they represent specific ClickandBuy parameters. A list of all parameters that may not be used is included in chapter 2.3, page 10. **Note**

Further parameters are described in the ClickandBuy “Dynamic parameter transfer” module manual. Your Account Support Manager will be glad to supply you with this manual.

1.2.3 Transaction script

The transaction script is located on your web server and it must be capable of being reached using HTTP or HTTPS. The URL for the transaction script is filed in your service area by way of the transaction link.

During the purchase transaction, the transaction script is called up in your backend server-to-server. Here, the transaction information for the ClickandBuy system is transferred as header parameters, as are your specified GET parameters, which the system requires to book the transaction into your system.

The following table contains an overview of the most important header parameters transmitted by the ClickandBuy transaction system:

Header parameter name	Description
HTTP_X_USERID	User ID
HTTP_X_PRICE	Offer price
HTTP_X_CURRENCY	Price currency
HTTP_X_TRANSACTION	BDR ID
HTTP_X_CONTENTID	Link ID
HTTP_X_USERIP	User IP address

Tab. 1-1 Overview of header parameters

The transaction script accepts the transaction details. The following parameters should be verified:

1. Header parameter verification: The header parameters should all contain values.
2. Remote IP range verification: The request should be sent by ClickandBuy proxy. The ClickandBuy proxy IP address is: 217.22.128.
3. Verification of amount to be booked: The amount to be transferred to the ClickandBuy transaction system should match the amount that is actually to be booked.
4. Currency verification: The currency to be transferred to the ClickandBuy transaction system should match the originally transferred currency.
5. “externalBDRID” parameter verification: The “externalBDRID” parameter should not be booked in twice (s. Kapitel 1.2.2.5, Seite 4).

Please note the following important information when creating the script:

- Always insert the exact URL for the HTTP redirect, it must never be entered relatively!
- Apart from this, zero output must have been used in the script, i.e. on no account may your script generate any output similar to an “echo”.
- The ClickandBuy system will provide you with a separate transaction ID for every purchase transaction. If your customer inadvertently clicks the “Accept” button more than once, so that several transaction IDs are generated, then only **one** transaction is to be entered by the ClickandBuy system.
- Read out the customer reference number, transaction ID and price from the ClickandBuy header parameters and save them in your database.

Your Account Support Manager can provide you with an example of a PHP transaction script.

1.2.4 Second confirmation transaction safeguarding

Communication between a provider’s transaction script and the ClickandBuy system is mainly characterized by confirmation prompts, which have to be answered within specific time windows. The “Second Confirmation” procedure enables you to ensure that a transaction is only evaluated as successful if the transaction was actually able to be created in the ClickandBuy system. Any transactions that have not been created or which are unconfirmed because of a timeout are filtered out of the system.

1.2.4.1 How do you integrate Second Confirmation?

The second confirmation prompt is not integrated into your transcription script until *after* the first confirmation and the handshake procedure.

In other words, if the handshake procedure has returned a “result=success” over the URL’s redirect string, you can then call up the “isExternalBDRIDcommitted” TMI method. This method can return four values.

- If the method returns the Boolean value “1” or “true”, then ClickandBuy considers the transaction to be confirmed. You can then route your customers to the “Thanks.php” page. At the same time, you can assign the “successful” status to the transaction in your database and send your customer the digital content or ship the good(s) to the customer.
- If the method returns the Boolean value “0” or “false”, then ClickandBuy considers the transaction to be unconfirmed. Your customer is forwarded to the “Error.php” page. In this case, ClickandBuy advises you to display a corresponding error message to the customer. The digital content or the good(s) should then not be sent or delivered.

1.2.4.2 How do you use the Transaction Manager Interface (TMI)?

Second confirmation can be settled using the Transaction Manager Interface (known hereinafter as TMI). To do so, integrate the “isExternalBDRIDcommitted” method into our “Thanks.php” page.

Communication with the TMI requires the standard web protocol SOAP (Simple Object Access Protocol). The ClickandBuy TMI requires an SOAP 1.2 interface (XML scheme definition: Part 2-20010502).

SOAP

An exact TMI description is included in the WSDL (Web Services Description Language). The original WSDL is available at the following URL:

```
http://wsdl.[system-id].clickandbuy.com/TMI/1.4/
TransactionManagerbinding.wsdl
```

```
TransactionManager.wsdl
TransactionManager.xsd
```

For dotNet:

```
http://wsdl.[system-id].clickandbuy.com/TMI/1.4/
TransactionManager_dotNET.wsdl
```

1.2.4.3 TMI method isExternalBDRIDCommitted

This method enables you to query whether a transaction (BDR) was created at ClickandBuy. The method functions irrespective of whether the transaction was previously processed by one of our billing servers. This is why this method is particularly well-suited to safeguarding transactions. You enter a BDR-ID, as defined by you, for a specific transaction.

	Name	Type	Format	Description
Input	SellerID	Long	Automatically generated by the system, in range long: 0, 12678967543233	This is your account number. This number identifies you uniquely in the ClickandBuy system. You can view your seller ID in the service area under "Master data".
	tmPassword	String	ISO 8859-1, minimum 6, maximum 10 characters	The Transaction Manager password is required for all transaction and status prompts, which are submitted over the Transaction Manager in the service area or directly over the Transaction Manager Interface.
	SlaveMerchantID	Long	Automatically generated by the system, in range long: 0, 12678967543233	The slaveMerchantIDs are the sellerIDs for your sub-dealers. They have the value 0, if you have not created any SlaveMerchants.
	ExternalBDRID	Long	Maximum 20 characters, ISO 8859-1	This is a unique ID as created by you, which you must submit for all billing transactions.
Output		ClickAndBuy.Transaction.BDRProcessingState		
Exception		TransactionManager.Status.StatusException		

Tab. 1-2 Method for the interface: TransactionManager.Status – isExternalBDRIDCommitted

1.2.4.4 Complex type ClickAndBuy.Transaction.BDRProcessingState

	Options	Type	Format	Description
	Iscommitted	Boolean	True or false, 1 or 0	If the method returns the Boolean value "1" or "true", then ClickandBuy considers the transaction to be confirmed. If the method returns the Boolean value "0" or "false", then ClickandBuy considers the transaction to be unconfirmed.
	BDRID	Long	Currently 8 digits	Billing Detail Record – This is a unique identification number, which is issued internally by the system for each transaction.

Tab. 1-3 Complex type for the interface: ClickAndBuy.Transaction.BDRProcessingState

Tab. 1-4

2 Appendix

2.1 Activity Diagram

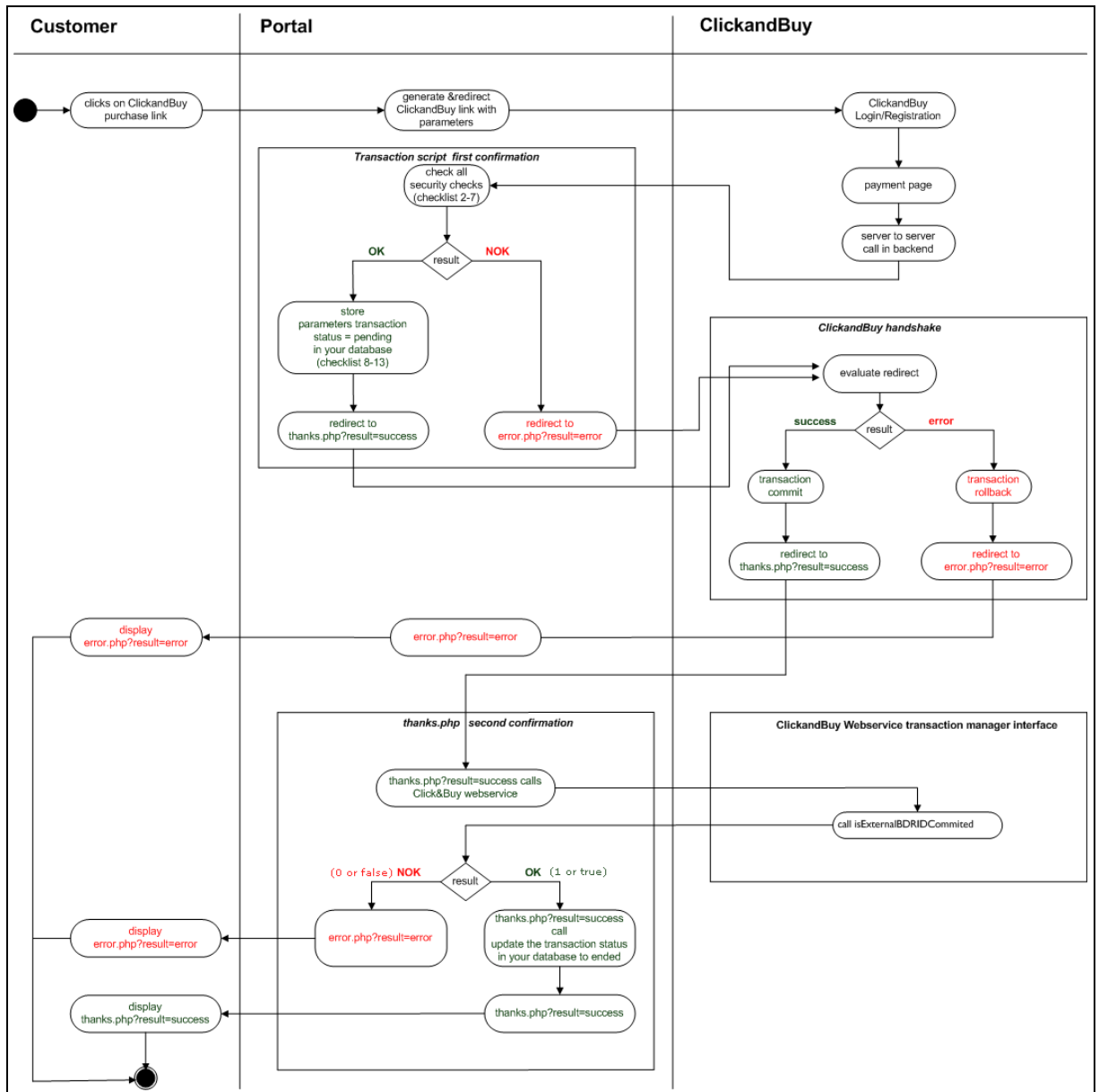


Fig. 2-1 Activity diagram of the ClickandBuy transaction system

2.2 Sequence Diagram

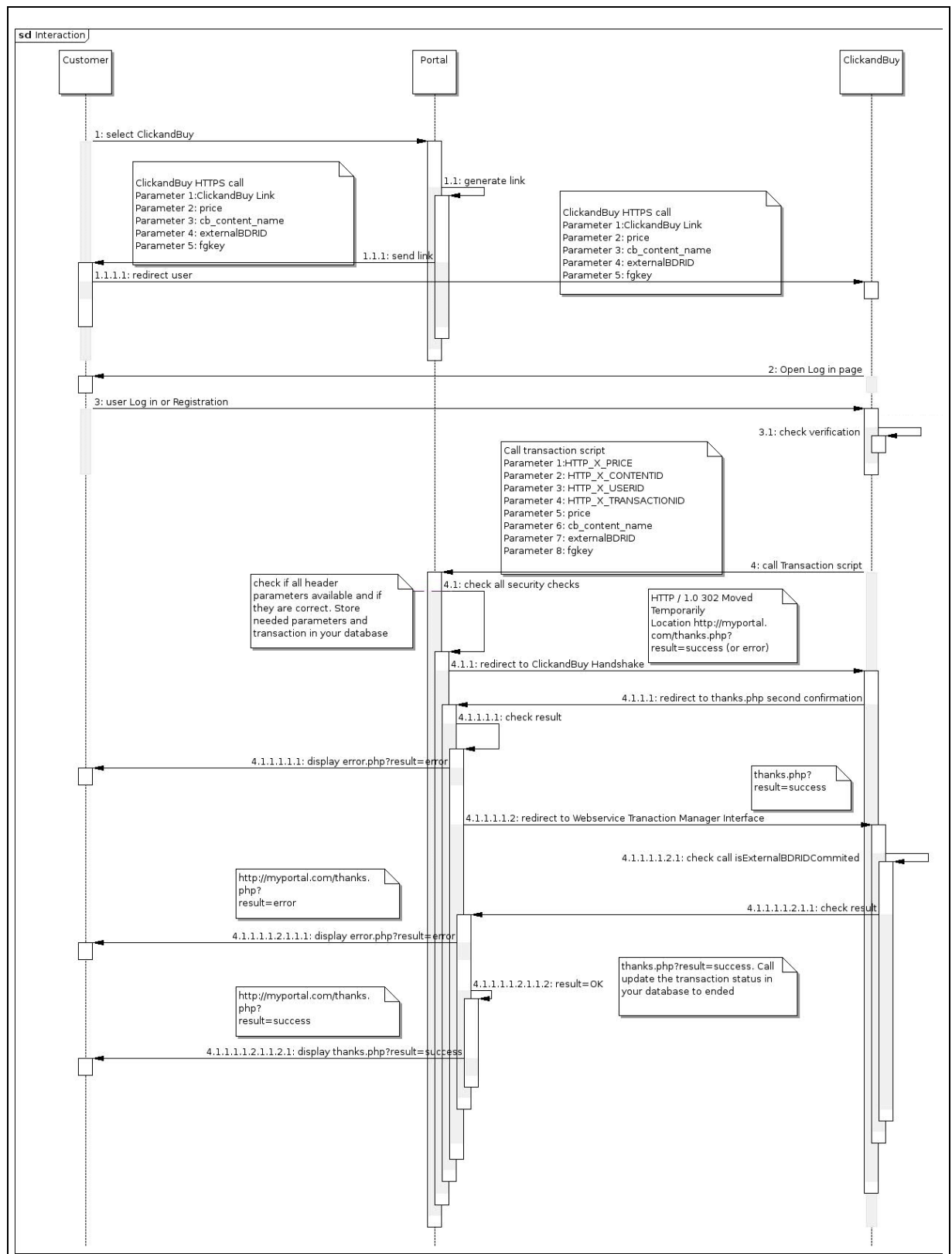


Fig. 2-2 Sequence diagram of the ClickandBuy transaction systems

2.3 Prohibited parameter names

You may not use the following parameter names. The use of these parameter names can cause problems in the ClickandBuy system, as these parameters are used by the ClickandBuy system itself. The parameter names are valid both as GET and as POST parameters.

Already used parameter names	
Bank	login_step
BLZ	MiddleName
cb_content_name_utf	MultipleTradeAllowed
cb_currency	Nation
City	password
company	Phone
CreditCard	prepaid
CreditCardNo	price
CreditCardValid	querykey
DateOfBirth	setlogincookie
Email	State
externalBDRID	Street
Fax	Street2
FirstName	subscriptionid
gender	usertref
Handynr	weiter.x
ID	weiter.y
Konto	x
lang	y
LastName	ZIP
logincookie	

Tab. 2-1 Overview of parameter names