From	Stefan Röthlisberger	Copy to	
Date	04.04.2014		
Subject		Cc	

Document-ID	
Version	1.8
Status	published
Replaces version	1.7
Issue date	05.10.2020
Valid from	
Valid until	
Document name	

Easypay Integrators Manual

Checklist of changes

Version	Date	Changed by	Comments/nature of the change
0.1	04.04.2014	S. Röthlisberger	Initial Draft
0.2	02.06.2014	R. Schneider	First Review
1.0	01.07.2014	S. Röthlisberger et al	Released version after full review
1.1	07.01.2016	S. Röthlisberger	General update (screenshots, links, …)
1.2	04.01.2017	S. Röthlisberger	Checkout-flow and general update (screenshots, …)
1.3	23.01.2017	S. Röthlisberger	Amended remark on business exceptions in section 8.2
1.4	12.05.2017	S. Röthlisberger	Updated GWG-Limit in section 8.9
1.5	02.06.2017	S. Röthlisberger	Updated GWG-Limit in section 8.9
1.6	09.08.2017	S. Röthlisberger	Updated Table 'Authorisation Error Codes' 8.1
1.7	04.10.2019	S. Röthlisberger	General update, actualisation of screenshots and links
1.8	06.10.2020	K. Jordan	Updated links for documents and refImpl

1 Some Answers at Start of the Integration

Which access-channels are supported?
Easypay supports access by mobile and fixline network, by (Swisscom)TV and by Internet/ Wi-Fi.
See also section 4 'User Authentication'.

Which devices are supported?
Easypay supports all modern mobile phones and internet capable devices as PCs and tablets with appropriate browsers supporting HTML5, CSS3, Cookies and re-routing.
The Swisscom generated check out page is based on HTML5. Legacy devices, not supporting HTML5, are therefore not capable to use Easypay.

Which users can be addressed with Easypay?
All Swisscom mobile users (prepaid and postpaid) including some Swisscom MVNOs (e.g. Migros budget mobile) can be reached via Easypay. Except users which asked to be blocked for mobile value added services.

Which user authentication methods are supported?
In the mobile network (GSM) Easypay supports silent authentication with header enrichment. At the check out procedure the user is authenticated by the mobile network and the users MSISDN is provided in the header of the transaction.Easypay supports a token-authentication procedure with SMS-PIN and Captcha.
AuthorizedMerchants are free to build their own authentication mechanisms (e.g. cookie-based, e.c.t.).

Which user-ID is used?
The user is identified by the MSISDN or a BillingID /Swisscom Customer Number
Swisscom reserves the right to replace the user-IDs for privacy reasons with a neutral user-ID.

Are subscriptions supported?
Yes, subscriptions are - beside the OTCs (one time charges) - main area of application in Easypay.
Subscriptions are administrated by the merchant and authorized by Easypay (see 3.2 Auth Subscriptions).

If subscription authorization is cancelled on Swisscom side will the merchant be notified?
Not immediately. On next renewal request from merchant to Easypay after cancellation on Swisscom side the merchant will get a response from Easypay about unsuccessful renewal due to already cancellation. The merchant has to update the subscription on his side upon this response.

What is the difference between 'Authorized', 'Standard' and 'OneClick'?
'Standard' is the normal mode of operation (Third Party contract). In this mode the merchant has to redirect to the Swisscom Checkout page.
 'Authorized' can be used by a specially qualified group of merchants which may act in the name of Swisscom. 'Authorized' requires an extended contract with Swisscom. Merchants using 'Authorized' get a different API which allows creating the checkout-page by themselves and therefore allows a machine to machine interface with Swisscom. Merchant selling adult content cannot get Authorized mode.
With 'OneClick', the user authorises all subsequent payments from a specific merchant. This allows a 'OneClick' mode for the subsequent payments.

What does 'checkout page' mean?
The checkout page summarizes the data of the purchase transaction and its price. Its purpose is to assure that every purchase is within the appropriate legal framework and is financially covered by the user (see 5 Checkout Page). The checkout page is presented to the user between the selection-phase in the shop and the payment phase.
Beside this, Swisscom checkout page contains functionality for authentication (SMS-PIN validation) and customer protection (e.g. Captcha).

How can I technically connect?
Easypay provides a REST-API which can be implemented by the merchant (Easypay Interface Manual)

Does Easypay support a 4th Party-model?
Yes, models with one integrator maintaining several 4th parties are supported.
 (See also: 8.12 Relation Partner - Merchant – Service).

Is it possible to sell physical goods?
Yes selling of physical goods is supported.
Swiss VAT-regulations for physical goods have to be respected (see 6.3 VAT and Revenue Share calculation). Implementing refund possibilities is advisable (see 8.5 Refund Possibilities)

Which languages are supported?
Easypay supports multilingual operation. In Switzerland services has to support German / French / Italian and if possible English. See also: 8.10 Monolingual / Multilingual.

How does the financial settlement process work?
Swisscom creates monthly settlement reports. Daily reconciliation is available on request.
Financial settlement can be initiated either by the merchant or by Swisscom, based on those reports.
See also: 6.2 Monthly Settlement.

Is it possible to use other currencies than CHF?
Easypay basically handles CHF-transactions.
EUR-Transactions are available on request.

Which Tax-models are supported?
The price displayed to the user always includes tax.
Easypay supports both models:
    a)   tax remittance by merchant (=Inkasso-Modell)
    b)   tax remittance by Swisscom (=Leistungskette)
Swisscom prefers model a). Selling physical goods is restricted to a)

Who is responsible for customer care?
The merchant is basically responsible to provide customer care.
Swisscom provides self-care possibilities (see 7 Customer Care, Customer Selfcare)

Is it possible to sell adult content?
Yes, in 'standard' mode only and under strict constraints:
      - The merchant has to declare clearly if he is selling adult content.
      - The "adult" flag in checkout page request must be set to "true".

- Swisscom is blocking users younger than 16 years old from purchasing adult content.
- Selling adult content has impact on the revenue share (see: 6.1 Definable revenue share models).

See also: 8.1.2 Adult Check

Is refunding possible?

Yes, a refund-transaction relates to a specific purchasing transaction. Its max amount is equal to the purchasing amount. The merchant is free to allow users or customer-care, or both to trigger refund transactions.
See 0 Refund possibilities.

What is Charge Back?

The system allows to charge back the merchant in case the user does not pay the invoice within a dunning period. Charge back payments are part of the settlement process.

What is 'OneClick'?

With 'OneClick', the user authorises all following payments from a specific merchant.
The 'OneClick' facility is particularly useful for frequent, low value payments (e.g. local traffic ticketing) where it is crucial to minimize clicks for a transaction.
'OneClick' follows the same rules as authorized mode.
See also: **Fehler! Verweisquelle konnte nicht gefunden werden.** One Click.

Can Corporate Users pay via Easypay?

Companies may not want their employees to pay via Easypay, when the cost of the subscription is bared by the company. Therefore, Easypay offers the possibility, that Corporate Users who want to use mobile payment on their business mobile, can enter a private billing account and will then be billed on their private Swisscom invoice (if the feature has been activated by the Company).

Are promotion models supported?

When selling subscriptions, you might wish to offer "first period for free" or similar. This is supported, to the extent, that you are free to charge on any period less than the nominal price for that period. Decent communication of the promo to the user has to be provided by the merchant.

Which notifications to the user are created by Swisscom?

Swisscom notifies the user with an SMS after each purchase and after cancellation or refunding of a subscription (mandatory at start/stop of a subscription, optional after renewal of a subscription and OTC). Notification on renewal of a subscription or refund of a transaction can be activated by configuration.

Which testing possibilities do I have during the integration?

Normal integration testing shall be done towards the Easypay STAGING-environment. This environment has production-like functionality, but costs are not productively charged and therefore no revenue share is paid out.

Can I get a report of my transactions?

Swisscom provides monthly summary- reports to registered E-mails for each partner. If a partner needs a detailed list of his transactions, Swisscom may provide additionally a monthly report with transactions details.

Does Swisscom provide sample code?
Yes, see GitHub. https://github.com/rolandschwarz/easypay-signature-code
Code examples are also contained in the interface manuals on
https://www.swisscom.ch/en/business/enterprise/offer/value-added-services/business-numbers/technische-dokumentation-business-numbers.html

Does Swisscom provide a functional example?
Yes. Swisscom maintains a reference implementation (refImpl).
RefImpl is a small, but fully functional shop implementation. It is used as a testing and demonstrator solution. This demo application (Login: guest/guest) is publicly available on two environments.

Staging (for test and integration) :
https://refimpl-staging.scapp.swisscom.com/refimpl3/home.jsf

Production (should be used carefully, as the payments will be billed on the Swisscom invoice):
https://refimpl.scapp.swisscom.com/refimpl3/home.jsf

What is the difference between SwisscomPay and Easypay?
SwisscomPay (former NatelPay) is the marketing name for customers. Easypay is the technical platform name.

Which documents are available?
See https://www.swisscom.ch/de/business/wholesale/angebot/ott/direct-carrier-billing/downloads.html

Doc Title	Description	Audience
Integrators Manual	This document.	
Easypay Interface Manual	Technical detail information on the Easypay REST interface for developers.	SW-developer /-integrator on partner-side
Easypay checkout page Interface Manual	Technical detail information on the Easypay checkout page for developers.	SW-developer /-integrator if partner uses Swisscom COP (standard partner).

2 Payment Process Step by Step

This Document shows the payment process for standard payment model with mobile access. For other models and access (e.g. via TV or fix-lie) contact Swisscom.
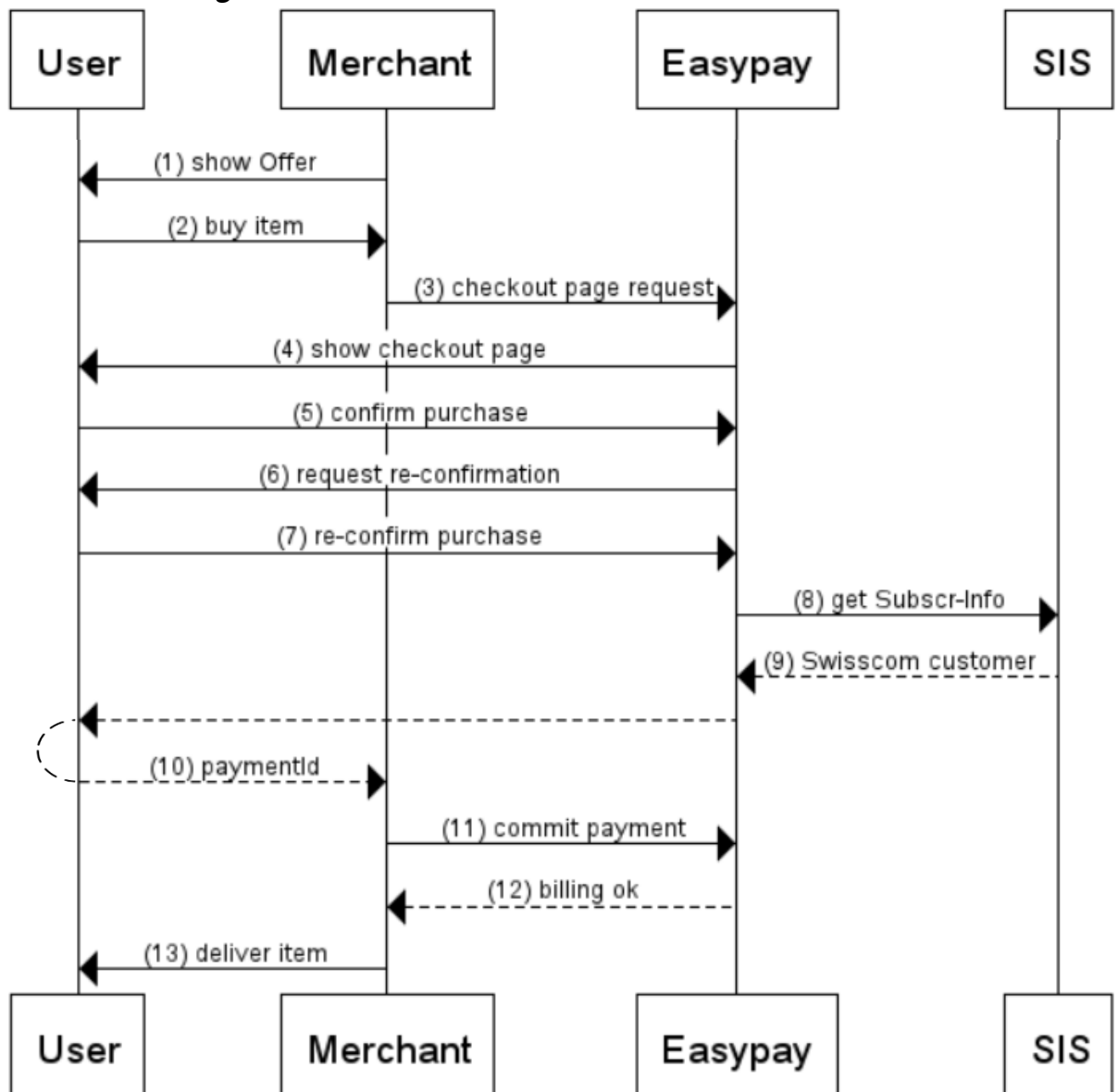
2.1 One time Charge

Figure 1: Sequence Diagram One time Charge

Step 1: The merchant presents offerings on his Web shop.

Step 2: User is interested to buy an item or content and triggers the purchase.

Step 3: Merchant sends checkout page REST request to the Easypay system.

Step 4: Swisscom checkout page is rendered on the user mobile device browser.

Step 5: User confirms the purchase by clicking the "Kaufen" button

Step 6: User is requested to re-confirm the purchase

Step 7: User re-confirms the purchase by clicking the "Kaufen" button

Step 8/9: The Easypay (EP) system makes the purchase authorization via SIS (subscriber information server)

Step 10: Easypay is re-directing the user with the corresponding response, containing the paymentId (case success), or error code to the merchants application.

Step 11/12: The merchant has to commit the payment in order to release the billing

Step 13: The user get the purchased item or content.

For more details see: https://www.swisscom.ch/en/business/enterprise/offer/value-added-services/business-numbers/technische-dokumentation-business-numbers.html
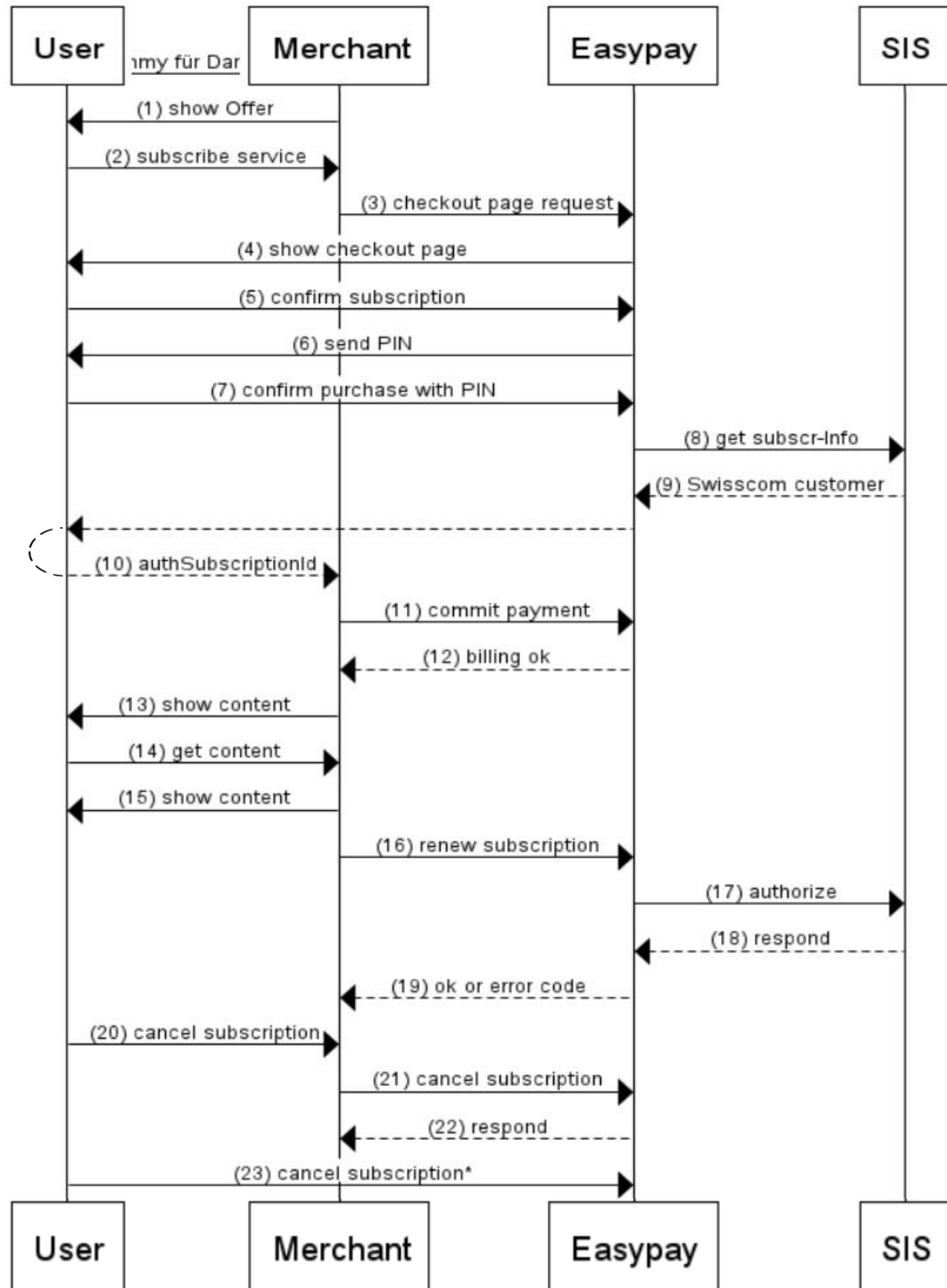(Easypay Interface Manual)

2.2 AuthSubscription

Figure 2: Sequence Diagram AuthSubscription

Step 1: The merchant offers subscriptions on his Web shop.

Step 2: User is interested to subscribe a service and triggers the purchase.

Step 3: Merchant sends checkout page REST request to the Easypay system.

Step 4: Swisscom checkout page is rendered on the user mobile device browser.

Step 5: User confirms the purchase by clicking the "Kaufen" button

Step 6: User receives a PIN by SMS

Step7 User re-confirms the purchase by entering the PIN and clicking "Kauf bestätigen"

Step 8/9: The Easypay (EP) system makes the purchase authorization via SIS (subscriber information server)

Step 10: Easypay is re-directing the user with the corresponding response, containing the authSubscriptionId (success case), or error code to the merchants application.

Step 11/12: The merchant has to commit the payment in order to release the billing

Step 13: The user consumes content.

Step 14/15: The user returns to consumes more content during the subscription period

Step 16: Recurring subscription needs to be renewed

Step 17/18: EP authorise the subscription renewing via SIS (subscriber information server)

Step 19: At a positive SIS response the EP indicates the successful renewing with an http-200 ok.
The authSubscriptionId stays valid! (in case of response: "subscription cancelled already", the user has cancelled the subscription authorization through Swisscom Kundencenter or Hotline, see Step 23, in this case the subscription on merchant side must be closed.) In case of other non-successful response please check which are eligible for retries (see 8.1.1 Authorisation Error Codes).

Step 20: User cancels the subscription via administration page (Meine Abos) on the merchant Webpage.

Step 21/22: Merchant cancels the authSubscriptionId to deactivate the subscription authorization

Step 23: User cancel the subscription via Swisscom Kundencenter or Hotline = Deactivation of the authSubscriptionId.

For more details check the Easypay Interface Manual

3   Payment Methods

3.1   One Time Charging OTC (Direct Payments)

OTC is the basic payment transaction. All transactions of an OTC are done within one user-session and are always 2-phase payments with reserve and commit. The end user is charged after successful commit only. The price of each OTC is defined individually by the merchant.
For payment process of OTCs see section 2.1.
For price limits of OTCs see section 8.8.

3.2   Subscription (Authsubscription)

The term "Authsubscription" indicates that subscriptions are managed autonomic by the merchant, but the (recurring) payment is still authorized by Swisscom. In this document "Authsubscription" is used equivalent with "subscription".

The services sold with Authsubscriptions are solely managed by the merchant. The services are NOT stored and managed on the Easypay environment. Easypay just stores the price and duration of the subscription and will authorize a recurrent payment only, if the time since last payment is equal or longer than the subscription-period, and if the price is equal or lower than the initial price.

After the subscription authorization is once created, the merchant is allowed to renew the subscription without user interaction. The end user may cancel the recurrent subscription on Swisscom or merchant side at any time. An appropriate subscription management page has to be offered by the provider/merchant in its web shop.

Creation of subscription authorization is always 2-phase transaction (reserve and commit) whereas renewal and cancellation are 1-phase transactions.

Subscriptions follow the same rules for min/max prices as OTCs. (See 8.9 Price Limits).

3.2.1   Renewal of Subscriptions

The renewal of a recurrent subscription by the provider application makes the same credit checks as the initial purchase of a subscription (e.g. sufficient credit, barring status). At failed authorisation the merchant has to retry the renewal until timeout and definitive cancellation of the subscription or successful renewal.
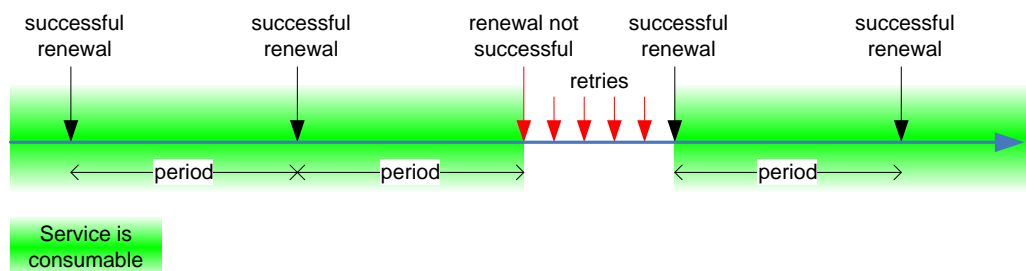

Figure 3: Renewal of Subscription

3.2.2 Cancellation

A user may cancel a subscription either via merchant or by self-care facilities at Swisscom side.

A subscription service is authorized to be renewed by the merchant until it is cancelled. Cancellation of a subscription causes the authorization flag to reset. The subscription then expires at the next renewal date.
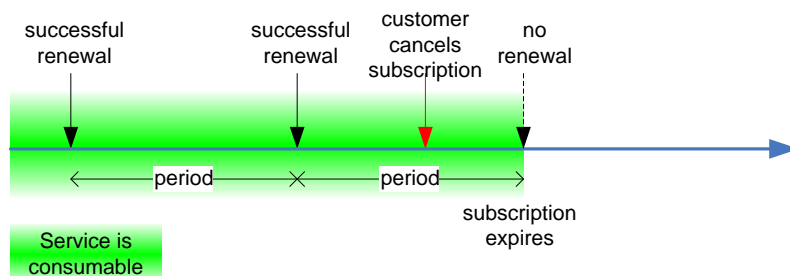

Figure 4: Cancellation of Subscriptions

The merchant has to assure that content can be consumed during successfully renewed periods, but that the content can't be consumed anymore after the subscription expires. In order to do this he needs to consider the expiry date of a subscription.

Immediate cancel: A normal cancellation terminates the subscription at the end of the running period. Easypay also offers the function "Immediate cancel". This function is restricted to Swisscom customer care agents and is used only under special circumstances (e.g. customer leaves Swisscom). After such a cancellation the content consummation is to be stopped immediately. For merchants this functionality is available on STAGING environment.

3.3 OneClick Payments

With 'OneClick', the user authorises all following payments from a specific merchant.
The 'OneClick' facility is particularly useful for frequent, low value payments (e.g. local traffic ticketing) where it is crucial to minimize clicks for a transaction. 'OneClick' follows the same rules as authorized mode and requires special contract.

3.4 Refunds

Refunds can be an efficient way to lower the efforts for customer care, while maintaining customer satisfaction on a high level.

See 8.5 Refund Possibilities

4   User Authentication

4.1   On mobile network

In the mobile network (GSM) Easypay supports user authentication with header enrichment. The user is authenticated by the mobile network and the users MSISDN is provided in the header of the transaction and pre-filled in COP.
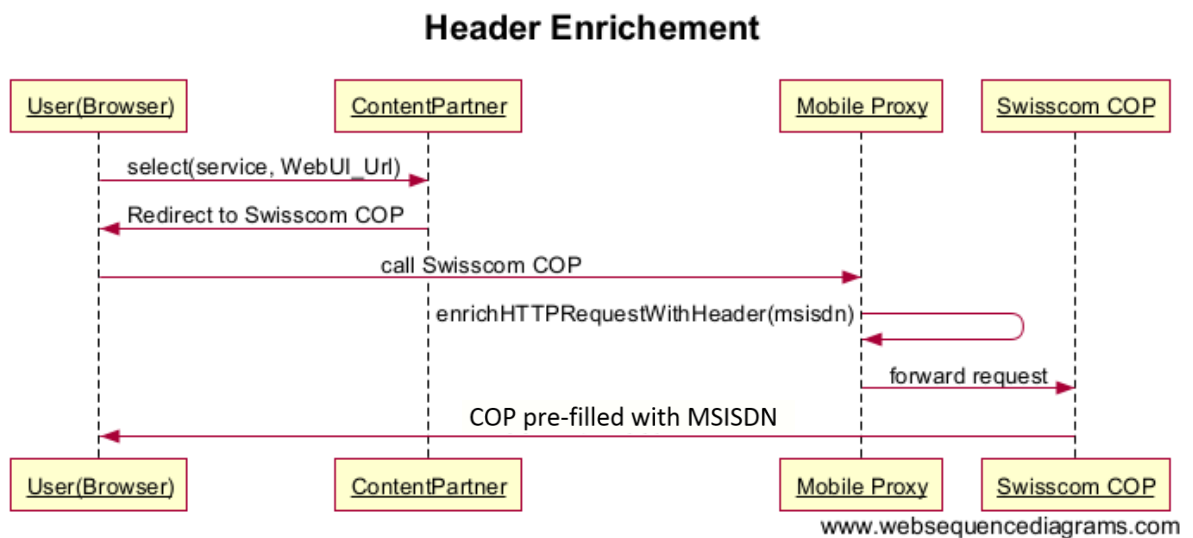
Figure 5: Header Enrichment

As the authentication is done silently, the corresponding checkout page just contains the user approval:

Figure 6:
Example of Checkout Screen

4.2   Token Validation

In Wi-Fi / Internet and for selling subscriptions, Easypay supports a token-authentication procedure with SMS-PIN.

Figure 7:   Token login

The user Interface for the token validation is the Checkout Page:

Step 1)   Step 2)

Figure 8: Two-Step Checkout Screen

4.3   Token Validation by Merchant

Figure 9:   Token Validation by Merchant
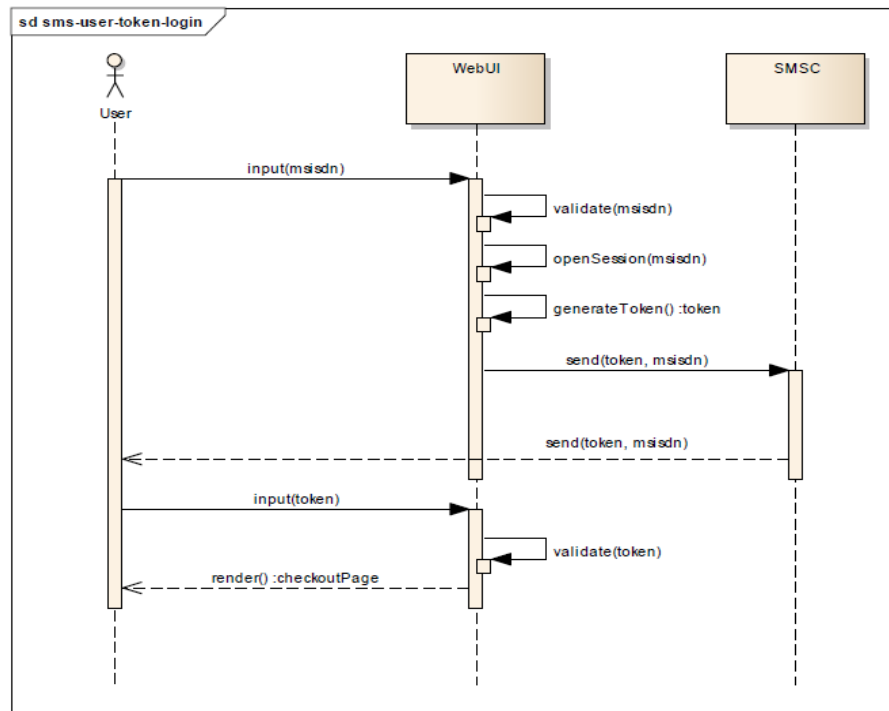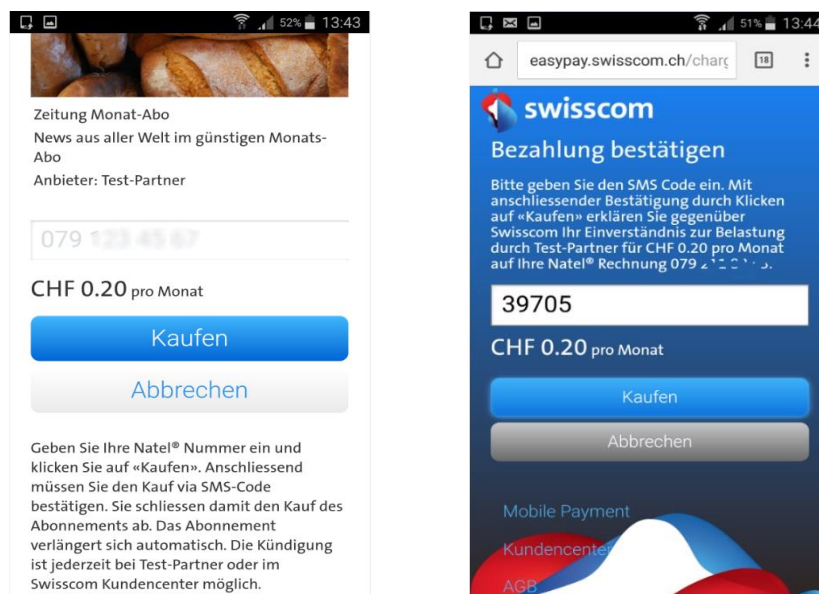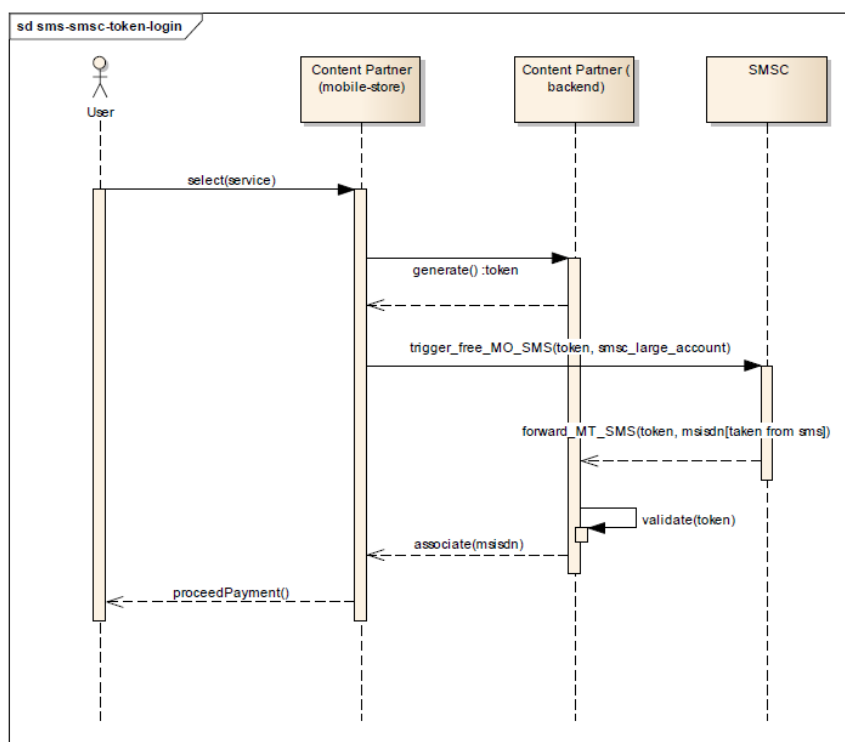
User authentication is done by the merchant (only 'authorized' merchants). The checkout page containing the user-authentication is merchant-specific.

5   Checkout Page (COP)

The checkout page
- summarizes the data of the purchase transaction including the price.
- Queries the user to insert the MSISDN.
- Requests the user to confirm his will to purchase/pay the selected items.
- Protects the website against bot generated traffic by means of a Captcha

The COP covers two steps:
- Landing page: can be customized by merchant (no more supported for new merchants))
- Confirmation page: is always in Swisscom Layout

We distinguish two COP-flows:
- double opt-in: restricted to mobile net and silos with one time charges only.
- token login: for subscriptions, or if MSISDN cannot be detected (wlan case).
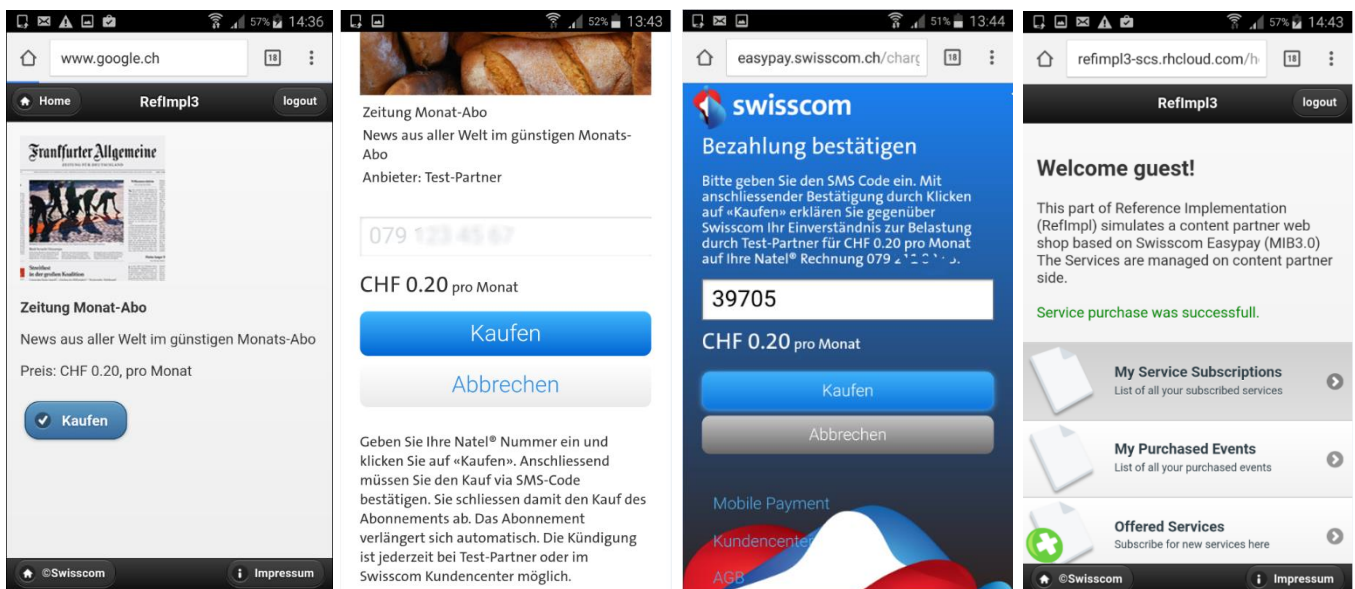

Figure 10:   Checkout Page with Token Validation

The checkout page is realized in HTML5 and CSS3. This allows optimum presentation on different screen sizes (smartphones, tablets, PC-screens, ..). But it is not granted, that legacy devices are compatible with the checkout page. If the browser don't support HTML5 and CSS3 the checkout page, and therefore Easypay billing, is not available.

6　Revenue Share, Settlement, Reporting

6.1　Definable revenue share models.

Easypay offers definable revenue share rates, depending on the consumed functionality and contractual agreements.

6.2　Monthly settlement

In the settlement process Swisscom
- Calculates revenue shares and creates settlement detail files towards the merchant.
- Processes finance out-payment. Process takes around 45d
- Provides a monthly report to the merchant.

6.3　VAT and Revenue Share calculation

The price displayed to the user (on the shop, on the checkout page, on the bill, ..) always includes VAT. Easypay supports tax remittance by merchant (=factoring model = Inkasso-Modell) or tax remittance by Swisscom (=value chain model =Leistungskette). Swisscom prefers Inkasso-Modell. Selling physical goods is restricted to Inkasso Modell.

Revenue Share is calculated on the net amount.

Example for 'Leistungskette' (VAT is paid by Swisscom):
Purchase amount:　　　CHF100.00 +8% VAT = CHF108.00
Net amount:　　　　　CHF108.00 - 8% = CHF100.00
Out-payment　　　　　CHF100.00 * 0.75 (rev share) = CHF75.00

Example for 'Inkasso-Modell' (VAT is paid by merchant):
Purchase amount:　　　CHF100.00 +8% VAT = CHF108.00
Net amount:　　　　　CHF108.00 - 8% = CHF100.00
Out-payment　　　　　CHF100.00 * 0.75 (rev share) = CHF75.00 + CHF8.00 =CHF83.00

6.4 Reporting

6.4.1 Monthly Reporting

A report showing the details of transactions and revenues is sent monthly to the partners.

The monthly report includes:

- Service Id
- Amount
- Grossamount incl. VAT
- Tax Rate (VAT)
- Revenue Share SCS in %
- Revenue merchant incl. VAT
- Revenue SCS incl. VAT

SERVICE	AMOUNT	GROSSAMOUNT_ INCL_VAT	VAT	REVENUE_ SHARE_SCS	REVENUE_CP _INCL_VAT	REVENUE_SCS _INCL_VAT	BSK_NUMBER _PAYMENT
CH020037	1	1	8	18	0.82	0.18	54012341
p210021	2.95	605797.25	8	19	490695.77	115101.48	54012341
p210028	1.95	66381.9	8	19	53769.34	12612.56	54012341
p210044	1.5	37557	8	19	30421.17	7135.83	54012341
p210060	2.95	784.7	8	19	635.61	149.09	54012341
p210064	3.95	14859.9	8	19	12036.52	2823.38	54012341
p210065	2.95	876.15	8	19	709.68	166.47	54012341
	2.95	3032.6	8	19	2456.41	576.19	54012341

Figure 12:   Monthly Reporting Example

6.4.2 Detailed Reports

A detailed report, showing each transaction, can be sent to the partner on request.
The periodicity of this detailed report can be set to weekly or monthly or both.

7   Customer Care, Customer Selfcare

The merchant is requested to maintain customer care facilities (e.g. provide opt-in, provide overview on all active subscriptions and provide a possibility to cancel subscription) according to the contract. The merchant should always be the first contact point for the customer. Customers calling the Swisscom customer care are forwarded usually to the helpdesk of the merchant. In case of any problems regarding Easypay, the merchant can get in contact with Support.DCB@swisscom.com

Swisscom provides additional customer care possibilities to its customers. Swisscom maintains three different platforms therefore. All of them are based on the same customer data and are described below.

7.1   mySwisscom App

The App for mobile user self-care is called mySwisscomApp. The customer is accessing it via his mobile handset (http://www.swisscom.ch/easypay-kundencentermobile). Here the customer is able to cancel his subscriptions anytime.

Figure 14:   Example mSAM

7.2   Swisscom Kundencenter

The platform for general user self- care is called Swisscom Kundencenter. The customer is accessing it via internet (www.swisscom.ch/kundencenter) with the customers credentials (Username/Password). Here the customer is able to cancel his subscriptions anytime.

The link to mSAM and extSAM is provided on the checkout page, in the notification SMS as well as on the following website: http://www.swisscom.ch/easypay

Please note: Customer self-care is active only for residential customers. Business customers are not supported.

Figure 15: Example Swisscom Kundencenter

8 Detailed Functions

8.1 Authorisation

8.1.1 Authorisation Error Codes

The authorisation procedure is determining whether a user is allowed to buy an asset as well it assures that any purchase lies within the appropriate legal framework and is financially covered. If any authorisation check fails, an error message will be sent to the merchant and the user is redirected to the errorURL mentioned in the Easypay interface. The merchant gets the appropriate error message only if the customer clicks here on "Buy" or "Subscribe" but not when the customer is leaving the page undefined.
The merchant shall forward the error message appropriately to the user (error page).

List of authorisation parameters:
(List with the most important codes. For complete list see technical manuals)

Error Code	Description	Retri able
CE_NOT_AUTHORIZED	General system error.	No
CE_NOT_AUTHORIZED_NOT_SUPPORTED_TELCO	Checks if the MSISDN belongs to an active Swisscom customer (including MVNOs).	No
CE_NOT_AUTHORIZED_NOT_SUPPORTED_ROAMING	Checks if the transaction is initiated from inside or outside Switzerland.	Yes
CE_NOT_AUTHORIZED_BLOCKED_ADULT_CHECK_FAILED	Checks if the customer's age (according to contract with Swisscom) is over a certain limit (today > 16).	No
CE_NOT_AUTHORIZED_BLOCKED_CUSTOMER_FOR_ADULT	Customer has the possibility of barring all adult services on his MSISDN.	No
CE_NOT_AUTHORIZED_BLOCKED_VAS_NOT_ALLOWED	Customer has the possibility of barring all premium services on his MSISDN.	No
CE_NOT_AUTHORIZED_NOT_ALLOWED_DATA_ABO	Data-SIMs are generally not allowed to purchase via Easypay	No
CE_NOT_AUTHORIZED_BLOCKED_NOT_ENOUGH_PREPAID_CREDIT	Checks if customer has enough credit (only for prepaid customers).	Yes
CE_NOT_AUTHORIZED_BLOCKED_TOP_STOP_REACHED	This is a spending limit over all services to prevent bill shocks.	Yes
CE_NOT_AUTHORIZED_BARRING_STATE_REACHED	Checks if the customer is not barred (e.g. due to credit under-run, missed payment)	Yes
CE_NOT_AUTHORIZED_BLOCKED_PREPAID_ACCOUNT_CLOSED	The prepaid account is not valid anymore.	No
CE_NOT_AUTHORIZED_BLOCKED_PREPAID_ACCOUNT_MOVED	The prepaid account was out-ported to another carrier.	No

CE_NOT_AUTHORIZED_BLOCKED_P REPAID	The prepaid account is not allowed for this merchant	No
CE_NOT_AUTHORIZED_BLOCKED_C OMPANY	Coorporate user of a company that is barring Easypay services	No
CE_NOT_AUTHORIZED_BLOCKED_S PENDING_LIMIT_REACHED	Customer has reached spending limits (see 8.8. Purchasing Limits)	Yes
CE_NOT_AUTHORIZED_BLOCKED_C HILD_PROTECTION	Under aged customer is not allowed to purchase via Easypay (see 8.8. Purchasing Limits)	No
CE_NOT_AUTHORIZED_BLOCKED_C HILD_PROTECTION_SPENDING_LIMI T_REACHED	Under aged customer has reached child protection limit. (see 8.8. Purchasing Limits)	Yes
CE_NOT_AUTHORIZED_NOT_FOUND _ONE_CLICK_AUTH	OneClick Authorization is not active or was not found	No
CE_NOT_AUTHORIZED_SIM_NOT_AC TIVE	Error code if a de-activated SIM is accessed for e.g. subscription renewal or refund	No
CE_NOT_AUTHORIZED_TOKEN_EXPI RED	The SMS token validity expired (TAN has not been entered within appropriate time)	Yes

Table 1: Authorization Error Codes

8.1.2 Adult Check

Easypay provides adult check possibilities for services containing adult entertainment. Nevertheless, the merchant is obliged by law to inform the customer about adult content before he grants the customer access to such services and the adult flag in the checkout page request must be set to "true".

If a customer wants to purchase a service containing adult entertainment, Swisscom checks the age of the user* of the MSISDN during checkout request. If the user's age is below a certain limit (today < 16), the purchase is denied and an appropriate error message will be displayed to the customer.

*age of the user = age of the MSISDN-owner or age of the most frequent user, if lower.

8.2 Notification SMS to the User

If the customers purchases a subscription, Easypay sends several notification SMS to the user.
SMS notifications can be sent in the following cases:

• After a purchase (OTC) the customer receives a notification with the purchase details (optional).

• After a purchase of a subscription the customer receives a notification with the purchase details and the information on where he can cancel the subscription (mandatory).

• After a renewal of a subscription, the customer can optionally be informed on the renewal (optional).

• After cancellation of a subscription the customer receives the information that the subscription was properly stopped (mandatory).

- Refunding a transaction triggers an appropriate notification to the user (mandatory).

Sending of the notification-SMS can be configured by Swisscom per merchant. Standard policy is:

• Renewal notification:	Actually de-activated for all merchants
• All other notifications:	Activated for all merchants

Notification Reason	Notification Text Example
Start Subscription	Start subscription confirmation: *Monthly TV (5.00 CHF/month).* Cancellation possible via *Zattoo* (Hotline: *0800755755*) or http://www.swisscom.ch/easypay-kundencentermobile.
Subscription Renewal	Subscription renewal confirmation: *Monthly TV (5.00 CHF/month).* Cancellation possible via *Zattoo* (Hotline: *0800755755*) or http://www.swisscom.ch/easypay-kundencentermobile.
Stop Subscription	Subscription stop confirmation: *Monthly TV* from *Zattoo* (Hotline: *0800755755*).
OTC purchase	Purchase confirmation *(BC06BEC9): Die Zeitung Tagesausgabe* for *CHF 3.00* from *refimpl.*
Refund	Refund confirmation *(BC06BEC9): Die Zeitung Tagesausgabe* for *CHF 3.00* from *refimpl.*

Table 2: Overview SMS Notification Content

Beside those notifications, which are directly related with purchasing transactions, Easypay provides also notifications on certain business exceptions. E.g. not successful transactions due to authorization failures (limit overruns, barred user or account, ….).

These notifications are user and/or merchant specific and therefore not described in detail within this manual.

8.3 Charging & Billing

Easypay allows billing for mobile post- and prepaid, as well as fixed line and (Swisscom) TV customers. The charging process collects the relevant data to enable accounting and billing. The billing process is rendering those data to a post-paid bill or is deducting the accordant amount of a prepaid account.

8.3.1 Postpaid Billing

8.3.1.1 Monthly Bill

Swisscom displays the customer the total cost of all services for a specific period on the monthly or bi-monthly bill. The customer has the possibility to request an itemized bill.

Depending on the tax-model (see 6.3 VAT and Revenue Share calculation) purchases are presented on the bill in different categories.

Sonstige Dienstleistungen	Menge	MWST%	inkl. MWST
Services anderer Anbieter [1]			
Easypay: BUONGIORNO SCHWEIZ AG (Helpdesk 0840 000 424 / easypay@buongiorno.com)	5	8.0	14.75
[1] Informationen zu Mehrwertdiensten **am Ende der Rechnung**	**Zwischensumme**		**14.75**

Figure 16: Monthly Bill (Leistungskette)

🛒 **Einkäufe**

NATEL® Pay - Online Einkäufe	Menge	Betrag **)
Belastung im Auftrag von / Ihre Bezüge bei: Google Ireland Ltd. - Google Play (Helpdesk +41800199077)	4	44.77
Belastung im Auftrag von / Ihre Bezüge bei: Google Ireland Ltd. - Google Play (Helpdesk 0800 199 077)	5	65.92
Belastung im Auftrag von / Ihre Bezüge bei: Sony (Helpdesk 031 528 0276)	3	150.00
	Zwischensumme	**260.69**
	Summe Einkäufe	**260.69**

**) Bei Fragen / Mängeln / korrekter MWST-Ausweis wenden Sie sich bitte an den entsprechenden Anbieter.

Figure 17: Monthly Bill (Inkasso Model)

8.3.1.2 Itemized Bill

The itemized bill is a supplementary service offered by Swisscom. In addition to the regular bill, the detailed service charges are listed as well.

Datum	Zeit	Rufnummer	Auf	Dienstleistung	Dauer/Menge/KB	Betrag
21.09.2020	06:24:07	0792270409	000	Apple Store (Helpdesk +41800001853 / www.apple.com/bill): Apple MM96Y7LFK6 ID:0E36049F	1	19.90
11.09.2020	12:03:51	0792270409	000	Apple Store (Helpdesk +41800001853 / www.apple.com/bill): Apple MM96TMWQ02 ID:180BAA10	1	7.20
09.09.2020	03:27:25	0792270409	000	Apple Store (Helpdesk +41800001853 / www.apple.com/bill): Apple MM96T1BHBQ ID:22C1561E	1	5.70

Figure 18: Itemized Bill

8.3.2 Prepaid Billing

For prepaid customers the amount is deducted in real time from the prepaid account.

The customer is not actively informed about the deduction of the account, but may check the balance by dialling *130# <send> anytime.

In case the prepaid account has not enough credit for the renewing of a recurrent subscription, the subscription stays active for 40 days more but with the renewing date in the past. The merchant may try to renew the subscription during this period (see chapter 3.2.1). After the 40 days period the subscription is cancelled.

8.3.3 Bill Shock Prevention

Measures for bill shock prevention support the customer in keeping self-defined monthly spending limits. The mechanisms for bill shock prevention Swisscom is called Top Stop.

Top Stop is a monthly spending limit over value added services (Easypay and Premium SMS). The limit is per default set to 500 CHF/Month. After reaching the set limit an error message is issued to the customer and further spending is prevented on the concerned MSISDN until the end of the running month. The limit for new customers is set to CHF250 per MSISDN and CHF500 per SCN.

See also: Purchasing Limits

Please note: Intensive testing on productive Easypay environment on a specific MSISDN may cause this MSISDN to reach the spending limit.

8.4 OrderID, paymentId…

Each transaction is uniquely identified by the orderID (8 digit code). The orderID is displayed on all «touchpoints» to the user (notification-SMS, Invoice, CuC, merchant-API). Each orderID has a corresponding paymentId which is used as an Easypay Interface parameter.
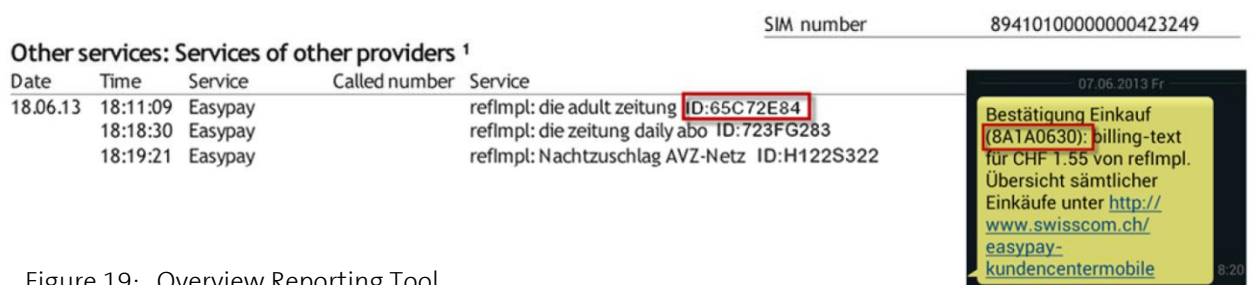

Figure 19: Overview Reporting Tool

8.5   Refund Possibilities

Easypay provides the possibility to refund a transaction. Refunds completely reverse a transaction, the user gets the charged amount back, merchant and Swisscom pay the amount back according to their respective revenue share.

A refund-transaction relates to a specific purchasing transaction. Its amount is max equal or lower to the charged amount. The merchant is free to allow users and/or customer-care, and/or Swisscom on behalf of the merchant, to trigger refund transactions. Refunds are related to the charged transactionId.

8.6   Charge Back

The system allows to charge back the merchant in case the user does not pay the invoice within a dunning period (commercial details according to contract). Charge back payments are part of the settlement process.

8.7   Transaction Fee

Transaction fee can be agreed between the merchant and Swisscom. Transaction fees are to be paid by the user or the merchant in addition to the product price.

Transaction fees are explicitly displayed on COP and on the detailed bill.

Transaction fees may be encashed by Swisscom on behalf of the merchant. VAT must be paid by the merchant (FINMA regulation).
In case of refunds, transaction fees are also refunded to the user.

8.8   Payment Info (Billing text)

The paymentInfo informs the user on the purchased services. The merchant sends the paymentInfo text within the purchasing request. The paymentInfo can be up to 44 characters.

Guidelines for the paymentInfo:

-   paymentInfo need to be clear, informative and politically correct (e.g. acceptable language, no cryptic names).

-   paymentInfo shall never contain the name of the merchant. This name is entered by Swisscom.

-   paymentInfo relating to services with erotic and pornographic content are not allowed to contain any sensitive text. They must contain neutral descriptions.

-   paymentInfo must not contain any of the following special characters: ! " % & ' ( ) ; < > [ ] { } ,

The following table provides an overview where the paymentInfo is shown to the customer depending on the type of the transaction.

Transaction:	Checkout Screen:	SAM:	Itemized bill:	Notification SMS:
Event	Service description	paymentInfo	paymentInfo	paymentInfo
Buying a subscription	Service description	paymentInfo	paymentInfo	paymentInfo
Renewing a subscription	n.a.	paymentInfo	paymentInfo	paymentInfo

Table 3: Usage of Billing Text

8.9   Purchasing Limits

The following limits apply. The lowest limit is determining the cut off.

- *GWG-limit: (Geldwäschereigesetz)*
  CHF 1000.- for postpaid-MSISDNs and CHF400.- for prepaid-MSISDNs.
  Purchasing limit within the last month.
  The postpaid limit for residential-customers is based on their SCN. I.e. customers with more than one MSISDN per SCN are not allowed to spend more than CHF1000 in total.

- *TopStop:*
  per default on CHF 500.- per MSISDN and (calendar) month. The user may define different limits.

- *Limit for new customers:*
  During the first 2Mt max purchase limit of CHF250 per MSISDN and CHF500 per SCN.

- *'Care'-Customer Limits**:*
  Care Customers below 18years:
  CHF 100   1. SMS with cost alert
  CHF 150   2. SMS with cost alert
  CHF 200   barring until end of month

  Care Customers 18years and older:
  CHF 400   1. SMS with cost alert
  CHF 500   2. SMS with cost alert
  CHF 600   barring until end of month

- *Solvency limits:*
  Customers with critical risk scores get lowered payment limits or barrings. The risk score is a representation of the customers payment behaviour, derived from several collection figures.

- *Child protection limit:*
  for children below 13 years = 0, for youth between 13 and 16 years = CHF 150.-

- *Max-amount per transaction* = CHF 100.-

- *In addition: youth protection at adult content:*
  No purchasing transaction allowed for youths below 16 years*

  * Age of the user = age of the MSISDN-owner or age of the most frequent user, if lower.

Price Limits

There are some restrictions regarding setting a price for a service:

Service Type	Subscription	Service Price
One-off purchase	-	$0.20 - 100.00$
24 hours	(available only on staging)	$0.20 - 25.00$
1 week	weekly	$0.20 - 25.00$
1 month	monthly	$0.20 - 100.00$

Figure 20: Price Limits

8.10   Monolingual / Multilingual

For its communication to the user, Easypay takes the language which is set by the merchant. This language is used throughout the purchase transaction. If no language is defined by the merchant, Easypay uses the default language, according to user-contract information.

Some parts of Easypay which require the input of text by the merchant are monolingual. Other ones support input of different languages:

Name	Language
Checkout Screen	multilingual (D/F/I/E)
Error Messages	multilingual (D/F/I/E)
Notification SMS	multilingual (D/F/I/E)

Table 4: Language Support

8.11   Enterprise Customer Extranet

As merchant you have the possibility to register on ENT-extranet on:
https://extranet.swisscom.ch/business-center/support/en/registration/1On the Easypay Home menu you can select from:

General Information: provides general information from Swisscom

Reporting: provides a transaction-summary report on a defined timeframe

Checkout Page Designer: allows to customize the Checkout page (please ask for activation)

Documents: here you can find all the documents published for Easypay

8.12   Relation Partner - Merchant - Service

The Swisscom Customer Number (SCN) is the main identifier of a Swisscom business customer. All relevant contracts and contact data for each partner are stored under a unique SCN.

Every Partner is able to maintain different merchants/web shops under his SCN with different Merchant names, called SILO, and each SILO is able to maintain different services.
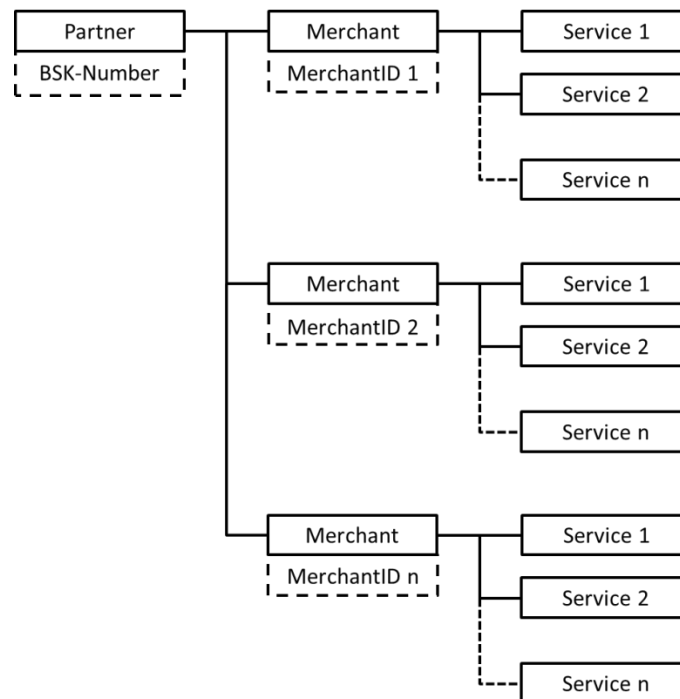

Figure 21: Relation Partner - Merchant – Service

8.13   TEST/STAGING and PROD Environment

Swisscom provides a PROD and a STAGING platform to the merchant. The STAGING platform is used for partner developments, testing and service integration activities.

It is expected that the merchant maintains a test platform for his portal environment as well. All changes need to be tested and validated on his TEST environment before it is deployed to PROD. All environments must be connected as shown:
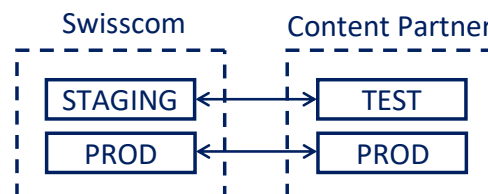

Figure 22: TEST/STAGING & PROD Environment

8.14   Test and Integration of New Services

The following steps describe the procedure to set up a new service on STAGING environment:

1. Add a new service to your test shop

2. Test the new service against Easypay Staging environment

3. Repeat the same procedure on PROD environment

Please note:
Swisscom may carry out some random inspection regarding new services. If a merchant wants to make sure that a new implemented service is compliant with Swisscom requirements, the code-of-conduct and Swiss law, he may request Swisscom to validate it.

8.15   Information in Case of Integration Problems

Swisscom may support merchants in case of integration issues regarding Easypay. In such a case your first contact point is: Easypay.Team@swisscom.com

Support may be most effective, if you specify the following data for every support request:

− What's the problem / the behaviour in detail?

− On which Swisscom platform (STAGING or PROD) do you observe the problem?

− On which MSISDN is the specified behaviour observed?

− On which handset and browser type (SW version) was the problem observed?

− When did it occur (date/time)?

− Which service is affected?

8.16   Error Messages Easypay

See section 8.1.1 Authorisation Parameters

8.17   Abbreviations

API	Application Programming Interface
ASP	Application Service Provider
Captcha	Completely automated public Turing test to tell computers and humans apart
CBU /ENT	Organisational unit of Swisscom for enterprise customers
CUC	Customer Care
COP	Checkout Page
EP	Easypay
Merchant	Content Partner (in some documents also: Content Partner = 3rd-party, Merchant = 4th party)
MSISDN	Mobile Subscriber ISDN number = mobile telephone number (e.g. 41 79 666 77 88)
MVNO	Mobile Virtual Network Operator (e.g. Mbudget Mobile)
SwisscomPay	marketing name of Easypay
OTC	One Time Charge. At some places also called 'Direct Payment'
PROD	Productive environment, for life traffic
REST	Representational state transfer
SCS	Swisscom Schweiz AG
SCN	Swisscom Customer Number
SIS	Subscriber Information System
SMSC	Short Message Service Center
STAGING	non-productive environment, for integration / testing by the partner
VAS	Value Added Services
VAT	Value Added Tax, (in Switzerland: MWST, Mehrwertsteuer)