



Technical Specification MCB

(WB.001)

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1. Terminology

Mobile Content Billing

The process of charging money on the mobile internet from an end-user, which can be in the form of a subscription or "one off".

WAP push message

An SMS that contains an URL to a mobile website. Instead of a normal text message, the end-user gets a confirmation screen for visiting the website. When the user confirms, a connection to the site will be made automatically.

Payment

One single billing moment where the end-user is charged for the entire amount or a portion (based on operator tariffs) multiple times.

Transaction

A transaction consists of one or more payments:

- In a one-off payment there is one payment per transaction.
- In a subscription, multiple recurring payments make for one transaction. The transaction starts at the moment of signup and ends when the user signs off.

Code of Conduct

The Code of Conduct or "Gedragcode voor Betaalde mobiele diensten" (in Dutch) applies to all WAP billing services and promotional activities. The Code of Conduct can be downloaded from: <http://www.openmobielinternet.com/wp-content/uploads/2008/04/Gedragcode-voor-Betaalde-Mob-dienst-finaal-concept-17-maart-2009.pdf>

Each country supported by TargetSMS has its own (self-)regulation with which your service must comply.

"Real" content billing

With "real" content billing we mean charging a specific amount with a single click. This means that we can charge money from end-users in the background without the need to send a Premium SMS. From the end-users perspective this is by far the most convenient way to pay on the mobile internet and also leads to an optimal ROI.

SMS content billing

Not all operators support "real" content billing. However, this doesn't mean that these end-users cannot be billed. Premium SMS will be used instead as a payment method.

2. In a nutshell...

This document describes how to connect to the MCB gateway of TargetPay. The transaction process in a nutshell:

1. The end-user opts for a payment, for example by selecting a ringtone from a MCB ringtone shop.
2. Your application makes an initial call to TargetPay to set all transaction details like the amount due, frequency (non-subscription, daily, weekly, etc.) and return URL. TargetPay will give you an unique link where you can forward the end-user to. See section 3.
3. The end-user completes the payment or confirms the signup.
4. The end-user is forwarded to the return URL. On the return URL you can make a call to TargetPay to check if the signup or payment was indeed completed succesfully (pull). See section 5.

In case of a subscription service you can thereafter send requests to TargetPay in order to make following payments. Optionally you can request the MCB gateway to inform you about all status changes, like a sign off.

3. Initial call: one-off payment or subscription sign up

In order to start a new transaction (that is an one-off payment or the start of a subscription), you need to call this URL with a HTTP GET or POST:

3.1 Request

<https://www.targetpay.com/wap/start>

With the following parameters:

Parameters	Explanation
service	The ID of your service.
ip	The IP address of the end-user
description*	Description of your service (max. 255 chars)
amount*	Amount to be charged in eurocents, e.g. 100 = € 1,-
returnurl*	The URL to which we redirect the end-user after paying or signing up.
notifyurl*	(Optional) give a URL where we need to push updates of the transaction to, like wether it has been succesfully processed, confirmed or signed off. See section 6
cancelurl*	When the customer doesn't want to pay he/she could click on the link back to your page. When you are creating or updating the content billing service in Targetpay you were able to set a default cancelurl. This url could be overwritten by setting this cancelurl. This cancelurl will also be used to create a link when the customer clicked on "cancel". If there is an contentId given on the transaction this id will be added to the link.
check*	If you want to test your transactionrequest you can add "check". The script will execute all there checks for a normal transaction, but the transaction will not be created. Just for testing.

*: These parameters are optional. If omitted they will be copied from the service settings. The bare parameters you need to use the start.php5 page are simply the ID of your service and the IP of the end-user.

Note: you need to urlencode all parameters. See the following example:

<https://www.targetpay.com/wap/start?>

`service=1&rtlo=1&description=Test+bestelling&ip=12.34.56.78&amount=150&returnurl=http%3A%2F%2Fwww.mysite.nl%2F%return.php ¬ifyurl=http%3A%2F%2Fwww.mysite.nl%2F%notify.php`

3.2 Response

The response will be either an error code (WBxxx), like: *WB011 No rtaff found for rtlo*

or if succesful:

000000 transactionID|paymentURL

for example:

000000 61|http://www.targetpay.mobi/?trxid=61

Actions to undertake:

- Store the transaction ID for later use!
- If a mobile telephone number is already known to you, you can append this to the orderscreen link returned by calling start.php5. This parameter is called "tn" and must be 10 digits. This way, if the user has to use the SMS variant they will not have to type in their phone number, which is more user friendly. Example:
http://www.targetpay.mobi/?trxid=61&tn=0612345678
- Redirect the enduser to the payment URL

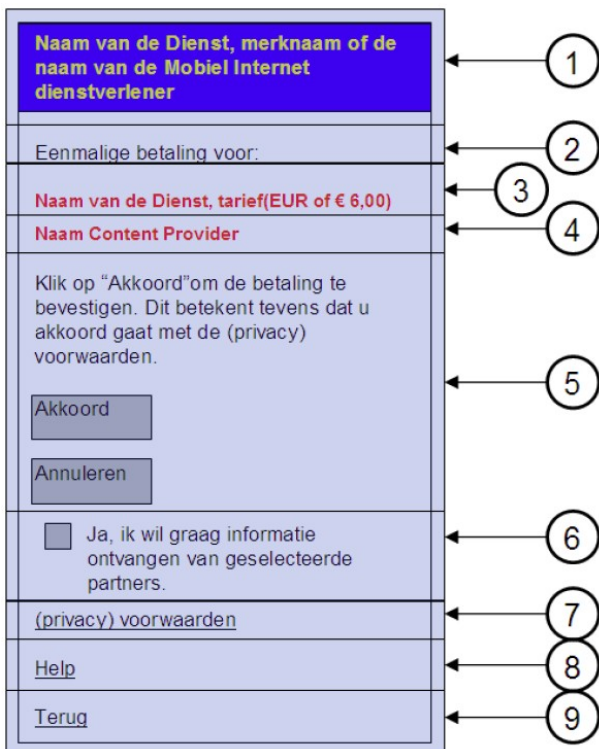
or if you used the "check" parameter you will receive:

000001 Transaction request is valid.

4. Interaction with end-user

4.1 Orderscreen one-time payment

The end-user can now confirm the payment or subscription. A screen is displayed depending on whether a non-subscription or a subscription service is invoked respectively:



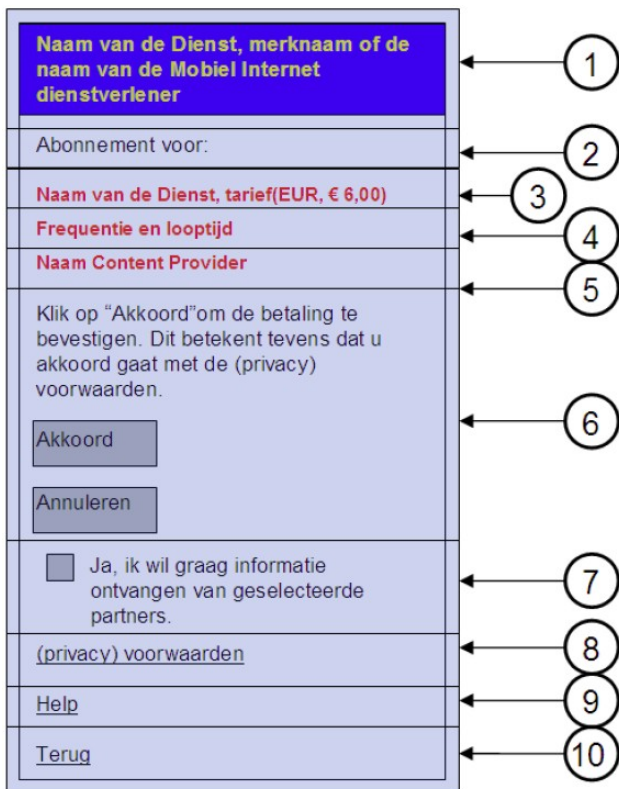
The screenshot shows a mobile payment screen with the following elements and callouts:

- 1: Blue header bar with text: "Naam van de Dienst, merknaam of de naam van de Mobiel Internet dienstverlener"
- 2: Text: "Eenmalige betaling voor:"
- 3: Text: "Naam van de Dienst, tarief(EUR of € 6,00)"
- 4: Text: "Naam Content Provider"
- 5: Text: "Klik op "Akkoord"om de betaling te bevestigen. Dit betekent tevens dat u akkoord gaat met de (privacy) voorwaarden." Below this are buttons for "Akkoord" and "Annuleren".
- 6: Text: "Ja, ik wil graag informatie ontvangen van geselecteerde partners." with a checkbox.
- 7: Text: "(privacy) voorwaarden" (link)
- 8: Text: "Help" (link)
- 9: Text: "Terug" (link)

Non-subscription layout (see page 12 of the Code of Conduct)

Number	Explanation
1	Name of the service, brandname or the name of the Mobile Internet Service Provider
2	One time payment for
3	Name of the Service, Tarrif EU
4	Name content provider
5	Click on "Agree" to confirm the payment. This also means that you will confirm the (privacy) terms.
6	Yes, I want receive information from the selected partner.
7	Link to the (privacy) terms
8	Link to the help-page with information about the content provider
9	Back link to the given cancelUrl

4.2 Orderscreen subscription



The screenshot shows a mobile subscription screen with the following elements and callouts:

- 1: Naam van de Dienst, merknaam of de naam van de Mobiel Internet dienstverlener
- 2: Abonnement voor:
- 3: Naam van de Dienst, tarief(EUR, € 6,00)
- 4: Frequentie en looptijd
- 5: Naam Content Provider
- 6: Klik op "Akkoord" om de betaling te bevestigen. Dit betekent tevens dat u akkoord gaat met de (privacy) voorwaarden. (Includes buttons for Akkoord and Annuleren)
- 7: Ja, ik wil graag informatie ontvangen van geselecteerde partners.
- 8: [\(privacy\) voorwaarden](#)
- 9: [Help](#)
- 10: [Terug](#)

Subscription layout (see page 14 of the Code of Conduct)

Number	Explanation
1	Name of the service, brandname or the name of the Mobile Internet Service Provider
2	Subscription for
3	Frequency and the duration of the subscription
4	Name of the Service, Tarrif EU
5	Name content provider
6	Click on "Agree" to confirm the payment. This also means that you will confirm the (privacy) terms.
7	Yes, I want receive information from the selected partner.
8	Link to the (privacy) terms
9	Link to the help-page with information about the content provider
10	Back link to the given cancelUrl

4.1 Orderscreen altered layout

The layout of these pages can be altered using the layout editor in TargetPay. Like:

- Change of font/color
- Displayed logo
- etc.

For more in-depth changes to the look and feel of the orderscreen, contact the TargetMedia Sales department (sales@targetmedia.nl).

5. Request payment or sign up status (pull)

When the end-user completed the payment or signup, he will be redirected to the *return URL*. The transaction ID and a unique user id will be appended to the return URL you gave. E.g.:

<http://www.mysite.nl/returnurl.php?trxid=1651556156&unique=23ASEF342>

At this return URL and using this *trxid* you can check the status of the transaction. The unique could be used for own purposes. Maybe you have a system which is already built but this system needs a variable like *phonenummer*, then you can use this number.

5.1 checktransaction

Example how to check a status of a payment:

Make a HTTP GET or POST call to:

<https://www.targetpay.com/wap/checktransaction>

With the parameters:

Parameters	Explanation
rtlo	The layoutcode/subaccount
trxid	The transaction ID (see section 3)
once	Set this parameter to 1 when you only want to receive an OK status the first time you check, and thereafter a: <i>WR999 Already checked</i> status. When you set <i>once</i> to 0, then TargetPay will return OK no matter how many times you asked for the status.

Example:

<https://www.targetpay.com/wap/checktransaction?rtlo=12345&trxid=1651556156&once=1>

The response will be a 5-digit response code followed by a space and a textual representation of the status. When the transaction was completed successfully, the responsecode is:

00000 OK

This means that the user has successfully signed up for the subscription service or has completed the one-off payment.

In case of an error, one of the following resultcodes is returned:

Resultcode	Explanation
WR001	Transaction not processed yet, try again later
WR002	Transaction cancelled by user
WR003	Transaction expired (not paid in 1 hour)
WR004	Technical fault at TargetPay
WR005	Payment refused by operator: credit related
WR006	Payment refused by operator: technical fault at operator
WR007	Payment refused by operator: user unknown
WR008	Payment refused by operator: user blocked/blacklisted
WR020	No layoutcode
WR021	No transaction ID
WR022	No transaction with this ID
WR023	Layoutcode doesn't match transaction
WR024	Still processing. Partial: <partial payment> / <total price>
WR999	Already checked

WR024 is of particular interest, as it indicates that the user has made a partial payment of the total product cost. This can be due to a variety of causes, like the user having enough money for the first portion of the payment but not the remaining. It can also mean that the payment is delayed, or that the unpaid portion was a failed payment. This status code allows you to decide for yourself what you want to do with the customer and his partial payment.

Note that the meaning of each errorcode (first 5 digits) will remain the same, but the texts after that may be subject to change.

Also note that the expiration of transactions is set to happen after 1 hour of inactivity on the transaction in the case of "real" content-billing. In case of SMS-billing, this expiree is increased to 72 hours to account for delays with status data in the SMS networks.

5.2 checkpayment

Aside from using checktransaction.php5 to see the status of a transaction, it is also possible to pull the payment status information from another script. This is mainly intended to validate whether a followup payment has succeeded or not. Make a HTTP GET or POST call to:

<http://www.targetpay.com/wap/checkpayment>

With the parameters:

Parameters	Explanation
rtlo	The layoutcode/subaccount
paymentid	The payment batch identifier that is returned when a followup payment has been created (see section 7).

Example:

<https://www.targetpay.com/wap/checkpayment?rtlo=12345&paymentid=123713>

The response (if the call was correct and the records exist), will be in the following format:

<#successful>|<#still open>|<#failed>/<#total>

Example:

2|0|0/2

The above example would mean that the original payment was broken into 2 payments (this happens depending on payment tariffs per operator) and that both of the payments were successful.

In case of an error, one of the following resultcodes is returned:

Resultcode	Explanation
WR020	No layoutcode
WR023	Layoutcode doesn't match transaction
WR025	No paymentid
WR026	No payments with this paymentid
WR027	No transaction associated with this / these payment(s)

6. Using notifications (push)

Instead of requesting the status for the transaction you had to specify a notification URL when the transaction starts. When the status of the transaction changes we'll call this URL to notify you of this change.

We will call the notify URL, for example:

[http://<notifyURL>/?
trxid=1651556156&status=fail&reason=WR002+Transaction+cancelled+by+user&unique=23
ASEF342](http://<notifyURL>/?trxid=1651556156&status=fail&reason=WR002+Transaction+cancelled+by+user&unique=23ASEF342)

[http://<notifyURL>/?
trxid=1651556156&status=confirmed&reason=00000+OK&unique=23ASEF342](http://<notifyURL>/?trxid=1651556156&status=confirmed&reason=00000+OK&unique=23ASEF342)

Parameters:

Parameters	Explanation
status	Can be one of the following: confirmed; Subscription is active. Followup payments are allowed. processing; One time payment is now being processed. closed; The one time payment was successfully completed, or the subscription was closed. fail; The transaction failed; for example, there was no credit. open; The user has confirmed their payment or subscription via the TargetPay.mobi orderscreen. start; A new transaction for a one time payment or subscription has been made, but the user has not confirmed it yet via the TargetPay.mobi orderscreen.
reason	A more detailed reason (WRxxx code), conform the list of resultcodes in section 5.
unique	This will be a unique userID so you can identify your customer

Please respond with and only with the text:

45000

If not, 3 more attempts will be made to call the notify URL. 1 attempt every minute.

Take note that the notification URL will never be called with the partial payment status, which is only available by "pull".

7. Sending follow-up payments to members

When you have started a subscription service you will want to charge the end-user more than once after the signup.

7.1 Request

To initiate a follow-up payment, call this URL:

<http://www.targetpay.com/wap/followup>

With the following parameters:

Parameters	Explanation
trxid	The transaction ID. You received this parameter when the signup was completed succesfully.
service	The ID of your service (for security)
rtlo	Layoutcode (for security)
description	Description of the payment (max. 255 chars)
amount	Amount to be charged in eurocents, e.g. 100 = € 1,-. Naturally, this has to lie within the limit that is defined in the subscription transaction per frequency, which receives it's limit from your original service. The followup script will reject your followup payment if it exceeds the amount that can be charged this frequency.
pnotifyurl*	Enter the URL we should call as soon as we know the status this follow-up payment (optional). See section 5 for more information on status pull.

* the pnotifyurl is optional.

Example:

*http://www.targetpay.com/wap/followup?
trxid=1651556156&service=1&rtlo=1&description=Your+subscription+has+been+extended+f
or+another+week&amount=10&pnotifyurl= http%3A%2F%2Fwww.mysite.nl%2F
%pnotifyurl.ph*

7.2 Response

The response will be either an error code (like: *WB011 No rtaff found for rtlo*) or if succesful: 00000 + <paymentid>

For example:

00000 32094898

Actions to undertake:

- Store the paymentid! This is the payment batch identifier that you can use to ***pull*** payment status information (see section 5).
- Don't use this paymentid to create records for the status of the payment because when you use our push notifications with the status of the payment you receive the push status earlier than you will receive the paymentid from followup.php5

7.3 When status is known

As soon as the status is known, the *pnotifyurl* URL will be called with, for example:

http://<pnotifyURL>/?trxid=1651556156&pid=25732&paymentid=257328&status=fail&errorcode=5&reason=No+Credit

Parameters:

Parameters	Explanation
trxid	The transaction ID (which also is the memberid)
pid	Unique payment identifier.
paymentid	Non-unique payment batch identifier. While the <i>pid</i> represents a portion of the total amount for which you issued a billing request, these portions are grouped together by the <i>paymentid</i> , which is always the same as the first <i>pid</i> of the payment batch. An example would be: You bill the customer for an <i>amount</i> of 150. The WAP Billing API then checks the tariffs for that specific operator and breaks the payment into 100 and 50. If the <i>pid</i> 's would be 12345 and 12346 or these respective payments, the <i>paymentid</i> would be 12345 for both. In your own system and administration you can opt to log all the <i>pid</i> 's or simply the <i>paymentid</i> , but do note that every <i>pid</i> has a status and it is in theory possible that 1 payment will succeed and 1 payment will fail.
errorcode	This the errorcode. This could be used instead of "reason".
reason	A more detailed reason (WRxxx code), conform the list of resultcodes in section 5.
amount	The amount for which this particular payment part was billed.
piece	The number of this particular payment in this "paymentid" batch.
totalpieces	The total number of payments in this "paymentid" batch.

Please respond with and only with the plain-text (HTTP headers will not be followed):

45000

If not, 3 more attempts will be made to call the notifyurl. 1 attempt every minute.

8. Specific issues regarding SMS payments

As mentioned above, not all operators support “real” content billing yet. In these cases the payment can be made by Premium SMS. You can choose between 2 methods:

- budget
- plus

8.1 Budget

The “budget” method works as follows:

- The end-user fills in his phone number (this field can be automatically filled, see section 3.2)
- The customer is then asked to send WAP* to 3010 to confirm the payment or subscription.
- After sending the keyword, a link or WAP push (depending on what the handset supports) to the Return URL will be send back.

Note that with this method the end-user must exit the WAP browser and send an SMS himself. We will display a link to “sms:3010?body=WAP” and ask the end-user to click on that link. This should direct the user to his SMS composer. However, in most cases this doesn’t work.

8.2 Plus

The “plus” method works as follows:

- The end-user fills in his phone number (this field can be automatically filled, see section 3.2)
- An SMS is sent to the end-user originating from the 3010 shortcode requesting him to reply with the keyword WAP*
- After sending the keyword, a link or WAP push (depending on what the handset supports) to the Return URL will be send back.

Note that with this method the end-user doesn’t have to leave the WAP browser himself. He’ll get an SMS message (probably in front of the WAP browser). This makes it easier to reply. The downside is that sending the free SMS messages cost you 7 cents each. This option has to be turned on by TargetPay before you can use it.

*: “WAP” and 3010 are defaults. This can also be your own keyword/shortcode. For subscriptions the keyword must be “OK”

9. Unsubscribe subscription

As soon as the status is known, the *notifyurl* URL will be called with, for example:

`http://www.targetpay.com/wap/checkout?trxid=1651556156&service=25732&rtaff=257328&ok=true`

Parameters:

Parameters	Explanation
trxid	The transaction ID (which also is the memberid).
service	The ID of your service (for security).
rtaff	The account number of rtlo owner.
ok	If you want to test if the checkout should be done.

Possible responses:

Resultcode	Explanation
45000	The unsubscribe action was successful.
WB601	Transaction does not exists or trxid missing.
WB602	Transaction already checkedout.
WB603	This is not a subscription
WB604	State is closed, but missing close date...
WB605	This transaction does not belong to the given servicenumber
WB606	This transaction does not belong to the given rtaff
WB607	Failure with checkout.