BUSINESS

My Bill 3.8 February 2019

User manual

User Manual My Bill

Remark

Telenet BV is not liable for possible mistakes in this manual or for damages directly or indirectly resulting from the use of My Bill.

Disclaimer
My Bill is an online service for professional customers only.
Data in the My Bill application, including charges, are provided for information purposes only. Moreover, all amounts which appear on the bills or elsewhere in My Bill are provided on a temporary basis and are subject to changes at any time. For the avoidance of doubt it is clarified that those amounts can vary in function of the manner in which they are regrouped

The customer will be held liable for not using the information provided by My Bill in compliance with the applicable legislation comprising amongst other things the laws regarding data privacy, employment contracts, labor, and telecommunications.

The customer shall defend, indemnify and hold Telenet BV harmless against all claims and proceedings arising from alleged infringement of any third parties' rights by reason of the customer's use of the My Bill service.

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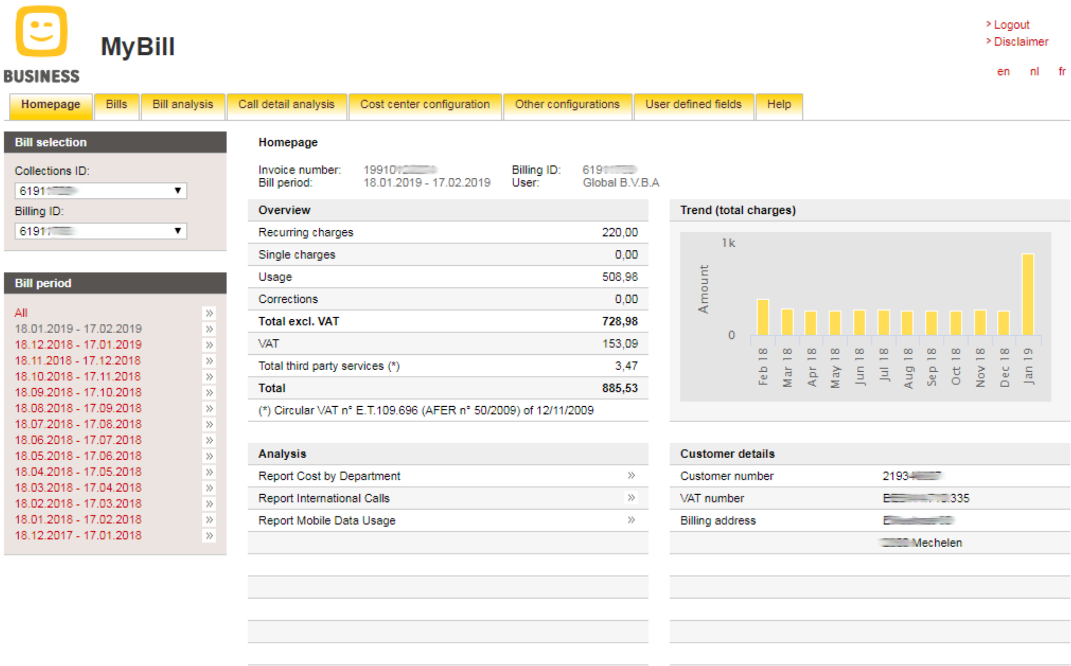
1. Introduction



Controlling costs and optimizing tasks for telecommunications services is the goal of every company nowadays. Many different services, various pricing plans and numerous service offers make this a difficult and, more importantly, a time-consuming job. This work is often performed by manually filling out Excel spreadsheets or database applications cobbled together by users themselves.
Telenet My Bill is an interactive Internet-based application designed to relieve business clients of this burden. It generates analyses that are clear and user-friendly, and delivers a series of detailed information on cost structure, where it comes from, and who causes it.

The arguments in favor of online costing include:

- Electronic filing of bills in PDF and HTML formats with drilldown options. This allows selection of a deeper costing level to access more details
- Flexible cost centers to depict complex business structures in multi-tiered hierarchies.
- Distribution of costs and discounts among various cost centers.
- Interactive bill analysis with a host of predefined search criteria (time periods, communication types, connection count, time of day, duration, etc.).
- A very clear overview of search results in tabular or graphic form (as bar, line and pie charts), as well as downloads in the most important data formats.
- Automatic trend analysis showing the composition of overall costs at a glance

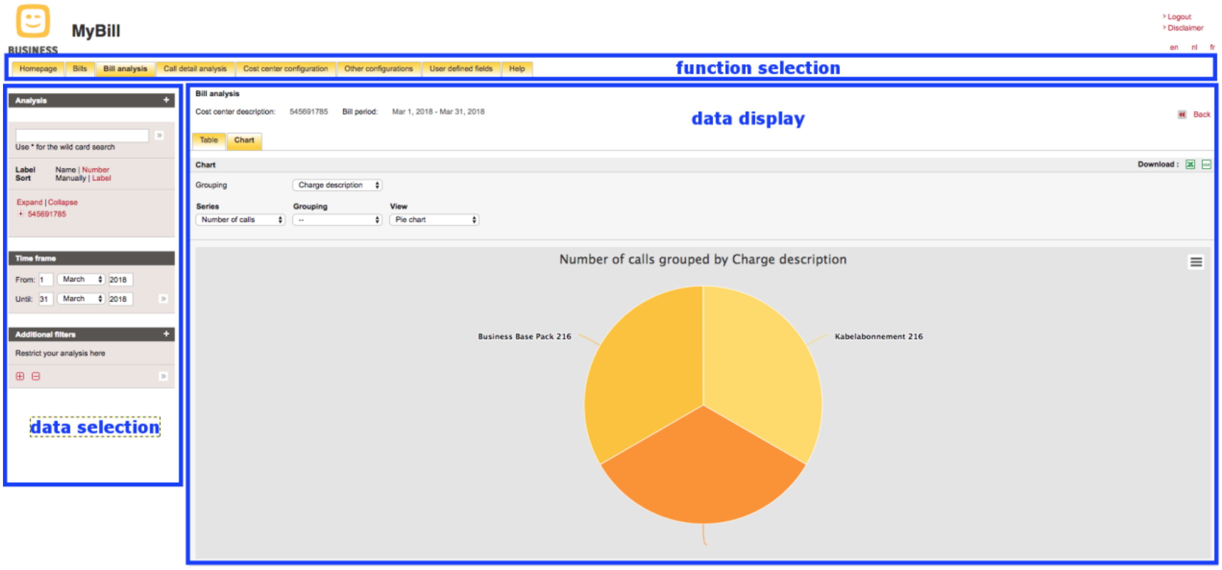
1.1 How to use this guide

After the general introduction in this chapter, the remaining chapters describe the main uses of online costing in greater detail:

- Cost Display: A convenient way of viewing phone bills on a computer with navigation through various levels of detail and for downloading.
- Invoice Analysis: Analyzes all individual connections and any other type of cost according to various criteria. The analysis can be performed over a time period spanning multiple bills or months. Typical focal points for analysis include investigating abuse and identifying general trends. Analysis reports can be saved and optionally sent by email on a regular basis.
- Cost Management: Printed bills usually reflect products and orders as well as their aggregation to produce a total, but not the client’s corporate structure. This function presents cost components within the corporate structure, thus generating a “personal” bill.

1.2 User interface

Specific controls are outlined in the following chapters. Overview of the general user interface layout:



The user interface for online costing is split into three main areas:

1.2.1 Function selection

The main areas appear on this tab. Just click on the function you want. The meaning and function of these areas will be explained in greater detail in the following chapters.

1.2.2 Data selection

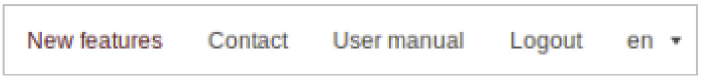
The selection boxes are located on the left side of the screen. A selection is made from the amount of available data using a number of different criteria. These criteria vary depending on the tab, but they are always activated using the double arrow.

1.2.3 Results display

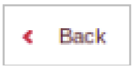
The largest area is occupied by the list of resulting data. The selection fields in this area determine how results are displayed (e.g., grouping, sorting), without reducing them in any way. An exception to this is drilldown; see the description of this function for more information.

1.2.4 General user elements

Links to the contact form, the user guide, and the link to log out of the application appear in the upper right of the window.



Underneath is the “Back” button, depending on the situation.



This button reverts to the previous result, e.g., in the case of drilldowns or consecutive analyses. Never use the browser’s “Back” button, since this puts the browser and server out of sync. If you do happen to use the browser’s “Back” button, a message will appear the next time you click the mouse and the application in the browser will resynchronize with the server. You can then continue working.

1.2.5 Tables

Summary								
	Bill no.	From	To	Due date	excl. VAT	VAT	incl. VAT	Actions
›	316336683	01.09.2011	30.09.2011	25.10.2011	150.45	12.03	**162.50**	

All tables taken together comprise the following controls:

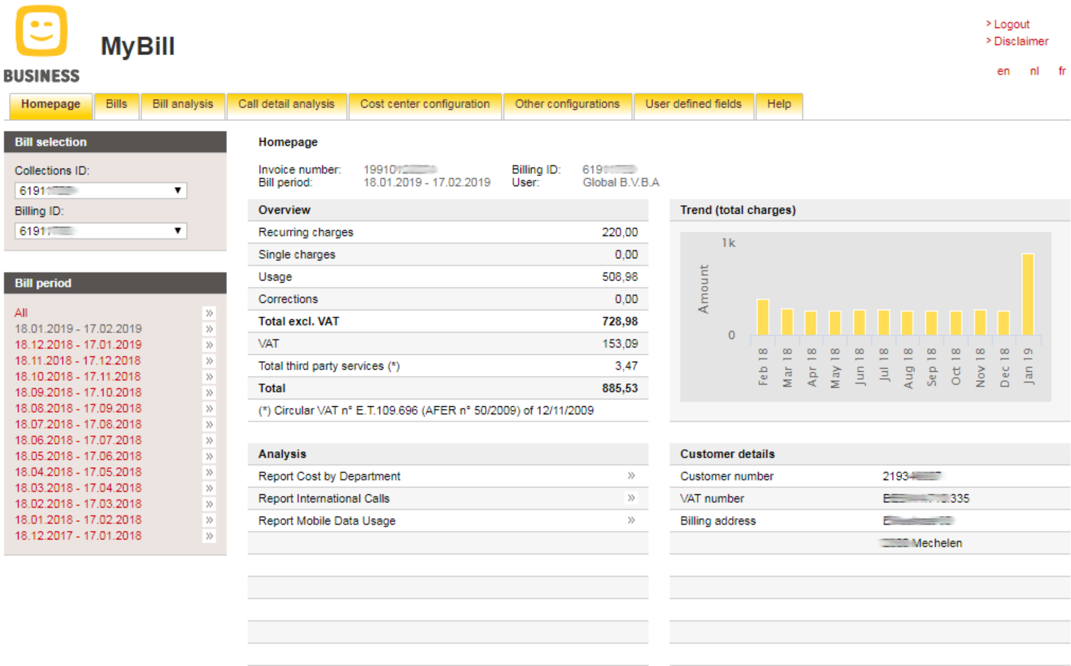
The right arrow is used to drill down to a more detailed level. This opens a more detailed display of a table element and in effect places a filter on the selected value.

This element sorts the column by increasing or decreasing value. The type of sorting currently selected is shown with a bold arrow.

This element is used to navigate through the table pages.
Telenet My Bill is designed to make scrolling unnecessary at normal screen resolution. Use the page navigator to view additional results. The current page is shown in bold (like the "1" in the above example). Clicking on a number jumps directly to that page. Clicking on the single right arrow advances one page, while the outermost right arrow takes you to the last page. The left arrow works similarly. To see how many pages there are in total, position the cursor over the outer right arrow and after a moment, a tooltip appears with the information.

2. Cost Display

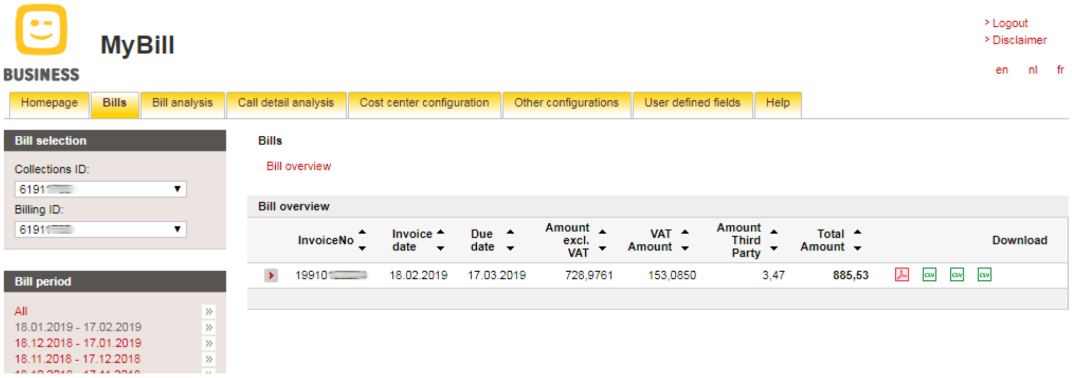
2.1 Start page



The start page automatically shows a brief overview of costs as well as their development over the last several months. Select an bill to display by entering the billing period in the Data Selection area on the left side.

2.2 Bills

2.2.1 Level 1: Bill Overview



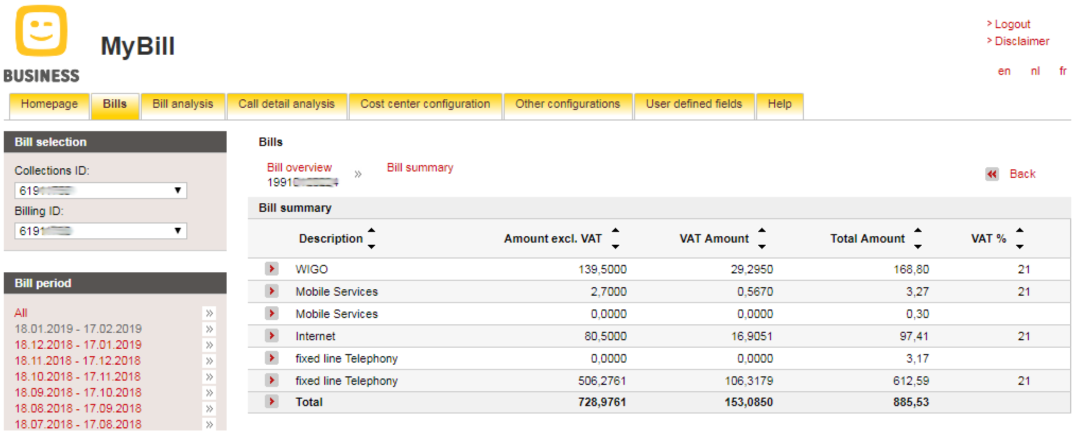
Bills from the past 24 months can be viewed in the "Bills" area.
For each bill, online costing offers the following additional options:

- Downloads of paper bills in Adobe PDF format.
- Downloads of invoice positions in CSV (comma-separated values) format for automatic processing in Excel or a compatible database application.

Note that depending on how your version of Excel is configured, directly opening a CSV file in Excel may result in the initial "0" in phone numbers being automatically deleted. You can prevent this by importing the data into Excel and manually setting the formatting of the column you import to as "Text". A much more convenient way to accomplish the same thing would be, of course, to use the original format in the analysis tabs.

The drilldown function lets you navigate step-by-step through all levels of the bill, from the whole printed bill to single calls.

2.2.2 Level 2: Bill Summary

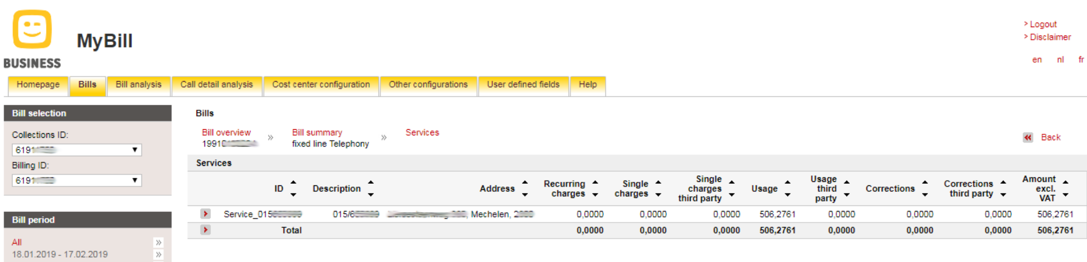


The bill summary gives a summary of the selected invoice and shows costs per product line. For example: costs for internet, costs for telephony, etc. The following invoice information is displayed:

- **Description** – Indication of the product line.
- **Amount excl. VAT** – Charges (in Euro) for the product line, without taxes.
- **VAT amount** – Amount (in Euro) of taxes on the charges for the product line. The amount of taxes (in %) is shown at the end of the line.
- **Total Amount** – Charges (in Euro) for the product line, including taxes.

2.2.3 Level 3: Services

Clicking the drilldown button opens the next level of detail: a breakdown of all costs including descriptions.



The data found here serves as a basis for invoice analysis. It contains all costs except VAT.

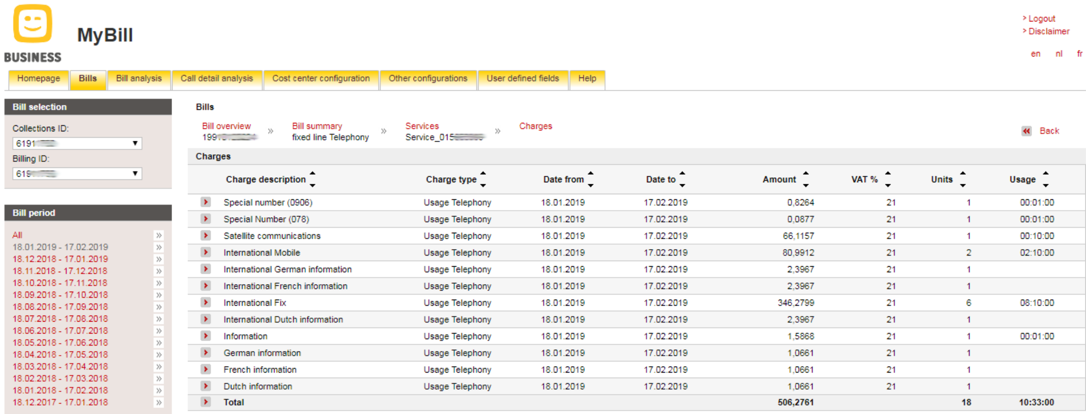
The services overview shows invoice data per specific service. For example: costs for a telephone number range, costs for an internet range, etc. The following information is displayed for every service:

- **ID** – Service's unique identification, for example a telephone number or range.
- **Description** – Service's description. Another description can be given by editing the service's **First name** and **Last name** fields in the **Inventory** tab, following the procedure **Edit the Inventory** (page 59).
- **Address** – Billing address, to which the invoice is sent.
- **Recurring charges** – Periodical costs (in Euro) that every invoice contains, for example

subscriptions to certain services.

- **Single charges** – Occasional costs (in Euro), for example installation costs.
- **Usage** – Variable costs (in Euro) for use of services, for example for telephone calls that are made.
- **Corrections** – Reductions that apply to the invoice.
- **Amount excl. VAT** – Charges (in Euro) for the product line, without taxes.

2.2.4 Level 4: Charges

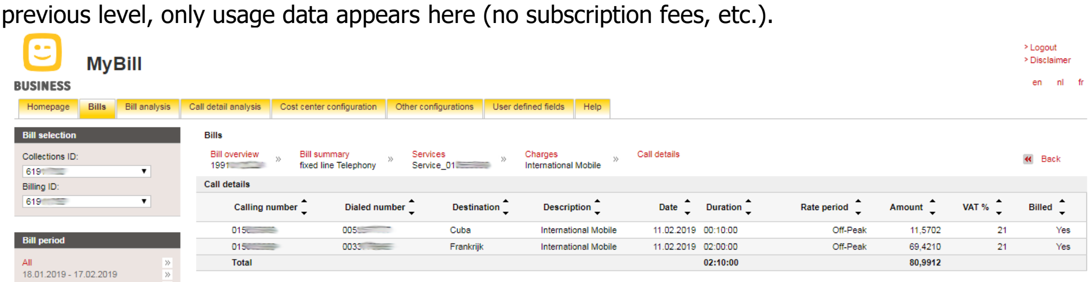


The charges overview shows types of charges. For example: costs for calls to Telenet numbers, costs for calls to Mobistar numbers, etc. The following information is displayed for all charges:

- **Charge description** – Brief description of the cost/discount/etc.
- **Charge type** – Type of the charge that is taken into account.
- **Date from** – Starting date of the invoice period.
- **Date to** – End date of the invoice period.
- **Amount** – Cost (in Euro) for the charge. The amount can be negative for discounts.
- **Units** – Number of calls for which the charge is valid.
- **Usage** – Number of hours, minutes and seconds for which the charges are taken into account.

2.2.5 Level 5: Call details

This is the deepest level of detail and contains data relating to individual connections. In contrast to the previous level, only usage data appears here (no subscription fees, etc.).



The call details overview shows data for every telephone call. The following information is displayed for every telephone call:

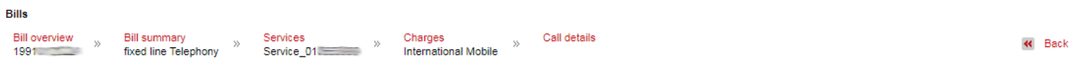
- **Calling number** – Telephone number from which the telephone call was made.
- **Dialed number** – Telephone number to which the telephone call was made, or name of the

person who made the telephone call (if it has been edited in the inventory).

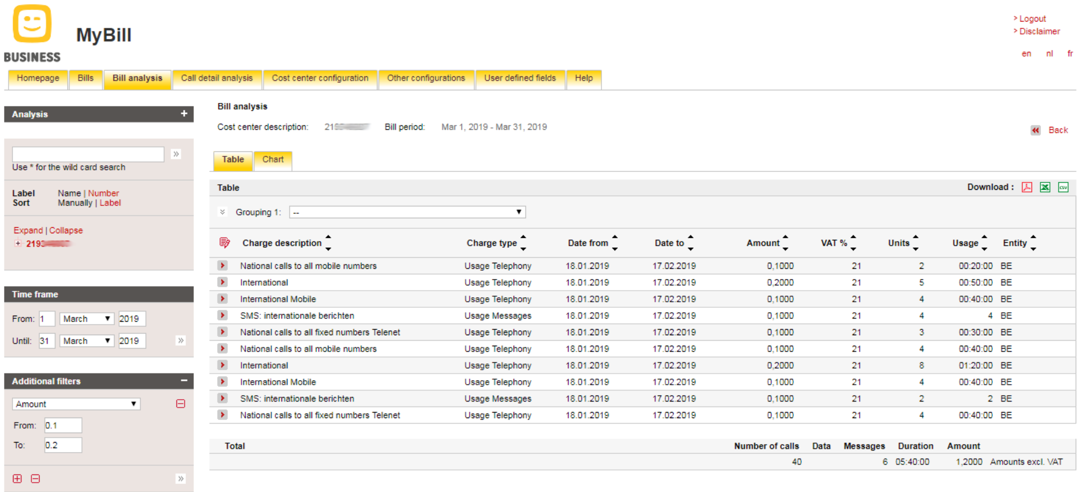
- **Destination** – Region to which the telephone call was made, for example Antwerp or Brussels.
- **Description** – Type of telephone call that was made, for example international, mobile, etc.
- **Date** – Date and hour on which the telephone call was made. Format of the date is dd.mm.yyyy. Format of the hour is hh:mm:ss.
- **Duration** – Number of hours, minutes and seconds that the telephone call lasted.
- **Rate period** – Type of rate that is used for billing the telephone call, for example peak period.
- **Amount** – Cost (in Euro) for the telephone call.
- **Billed** – **Yes** for telephone calls for which you have already received an invoice, and **No** for telephone calls for which you have not received an invoice yet.

2.2.6 Breadcrumb trail

This navigation tool is the easiest way to navigate through the table. Simply click on the title to jump between any of the various levels and display the relevant page.



3. Invoice analysis



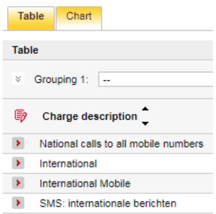
The "Invoice Analysis" and "Individual Connections Analysis" tabs are used to evaluate invoice data according to various criteria. The difference lies in the type of analysis performed.
Put simply, "Invoice Analysis" answers the questions "What?" and "How much?" whereas "Individual Connections Analysis" answers the questions "Who?" and "Where to?".
For instance, "Invoice Analysis" generates data about all calls made within a given pricing zone (number, duration, costs). "Individual Connections Analysis" can be used to establish who made the calls and what numbers they dialed.
Important: Only "Invoice Analysis" contains all costs including individual connection fees, discounts, etc.

Discounts can be represented in two ways. The "Charge" corresponds to the gross values on the printed bill. Discounts are listed separately. In contrast, the "Charge after discount" option applies the discounts to the costs before listing them. Discounts in the second column are then listed as "0" so that the total sum is correct.

The controls explained below apply to all forms of analysis. The differences lie only in the fields and values in each form of analysis and the data used for the analysis itself.

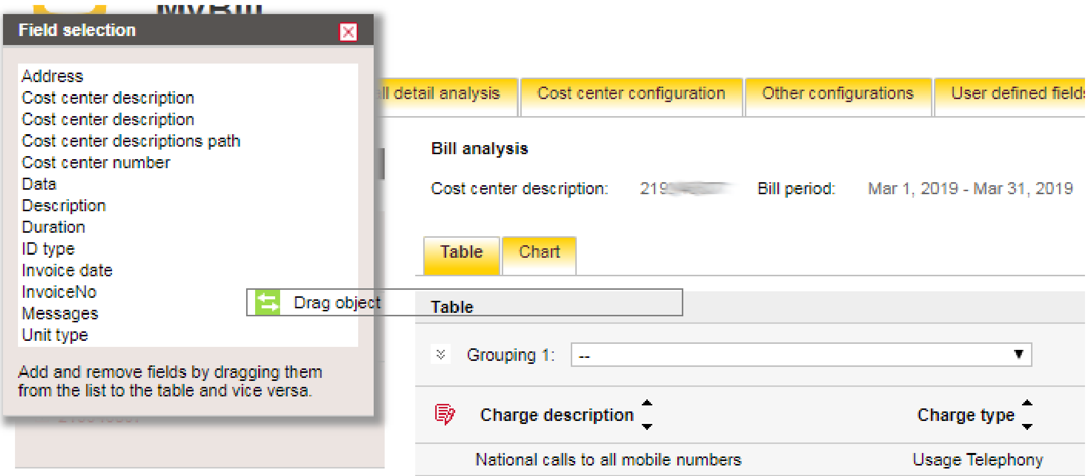
3.1 Chart of results

The fields displayed in the chart can be selected individually. This selection will also be applied to the different download formats.



Clicking the "Edit column" button switches to design mode.

In this mode, the column can be dragged and dropped from the selection list into the table or vice versa. The sequence of columns can also be altered by drag and drop.



Once you've made all your changes, click "Close" to return to normal mode.

This function works the same way for aggregated fields (i.e., according to a grouping).

3.2 Graph of results

Telenet My Bill lets you view all results as a graph. Data can be presented as a area, bar, line, pie or column chart. Values can be freely assigned to the x- and y-axes.

3.2.1 Chart usage

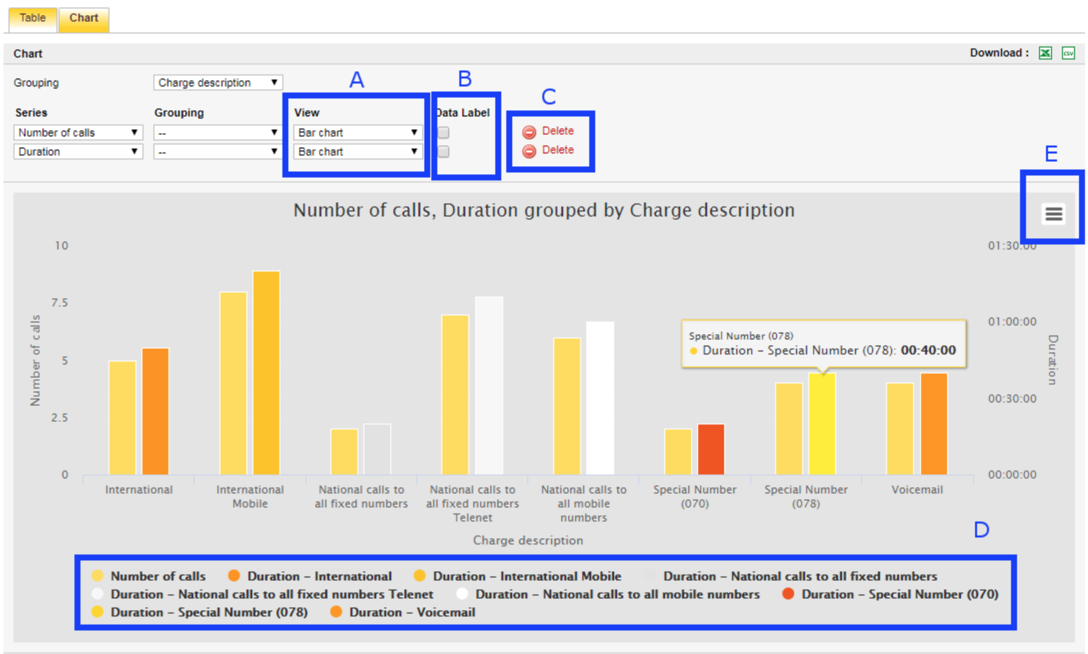
A - Display: Different chart types are available: Area chart, Bar chart, Line chart, Pie chart and Column charts. These can be specified for each data series.

B - Data Label: Data values can be displayed directly on the chart. The corresponding values are also displayed when the mouse pointer is positioned over a data field.

C - Data series: One to two data series can now be displayed. By using the "Add Data Series" function, you can add a second data series and remove it with "Delete".

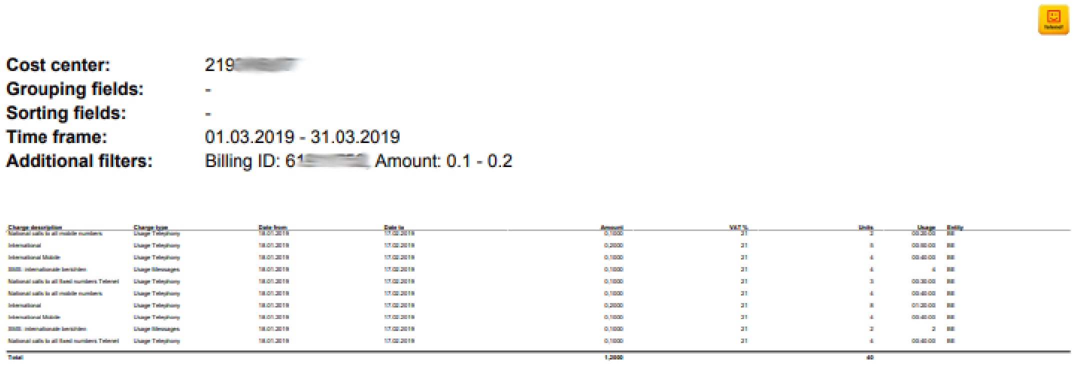
D - Legend: The associated legend is displayed below the graphic. Individual data series can be shown or hidden by clicking on them.

E - The graphic can be downloaded as an image file or printed out directly



3.3 Download results

Telenet My Bill directly supports three different data formats. In a PDF, the result is formatted as a report complete with breaks between group subtotals for multiple groupings.

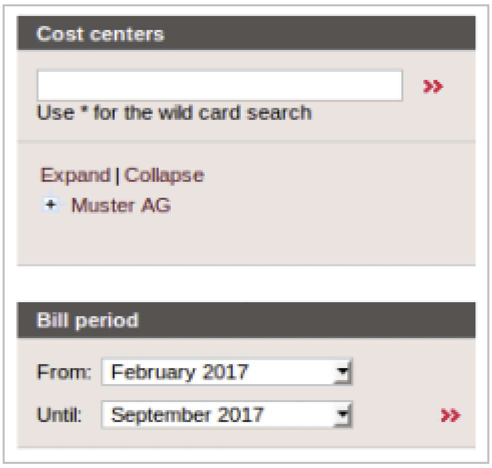


Cost center: 219
Grouping fields: -
Sorting fields: -
Time frame: 01.03.2019 - 31.03.2019
Additional filters: Billing ID: 61 Amount: 0.1 - 0.2

Charge description	Charge type	Date from	Date to	Amount	VAT %	Units	Usage	Entity
National calls to all mobile numbers	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	2	00:20:00	BE
International	Usage Telephony	18.01.2019	17.02.2019	0,2000	21	6	00:60:00	BE
International Mobile	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	4	00:40:00	BE
SMS: internationale berichten	Usage Messages	18.01.2019	17.02.2019	0,1000	21	4	4	BE
National calls to all fixed numbers Telenet	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	3	00:30:00	BE
National calls to all mobile numbers	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	4	00:40:00	BE
International	Usage Telephony	18.01.2019	17.02.2019	0,2000	21	8	01:20:00	BE
International Mobile	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	4	00:40:00	BE
SMS: internationale berichten	Usage Messages	18.01.2019	17.02.2019	0,1000	21	2	2	BE
National calls to all fixed numbers Telenet	Usage Telephony	18.01.2019	17.02.2019	0,1000	21	4	00:40:00	BE
Total				1,2000		40		

The Excel format XLS is also directly supported, which alleviates problems with data formatting such as the omission of the “0” in phone numbers mentioned above. The machine-readable CSV format is also included. In contrast to formatted files, there is no limit of 65,000 data lines.

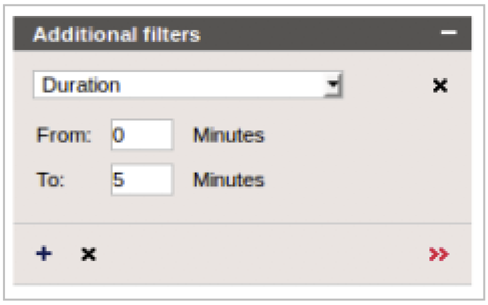
3.4 Controls – Cost centers and invoice periods



As in Cost Display, the controls on the left are used to select data. Naturally the options are far wider in the analysis.

Analysis is always performed on data that has been allocated to a cost center. Because of this, the very first step is generally to select the correct cost center (for more, see Chapter 4 but leave the default setting as it is for now). The next step is to select the time period and perhaps filters that will be applied to the data during analysis.

3.5 Controls – Filters

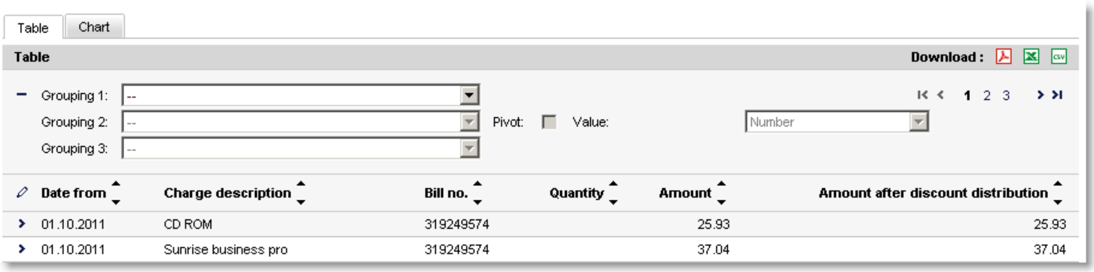


The analytical tools contain a powerful filter component. Filters are used to limit the amount of data that is analyzed by ensuring certain criteria are met first.
Usually the additional filters tab is closed. This menu is opened and closed using the button on the right side of the title bar (circled in blue in the screenshot).
The second step in the filter selection process is to choose the criteria that define the filter from the dropdown list, then to enter the filter values. The means of entering values varies depending on the type of filter.

Several filters can be applied in the same analysis. Use the ⊞ button to access other filters. In the case of multiple filters, only data that meets the criteria of all filters will be included. One exception to this is filters that apply to the same fields. In this case, values that meet any of the criteria will be included in the analysis. For instance, a filter "Day = Saturday" and a filter "Day = Sunday" can be configured to select all data from the weekend. To remove a single filter, click the "x" button next to it, and "x" on the lowest line to remove all filters. As in all areas, the filter must be applied using the double arrow » .

3.6 Controls – Grouping

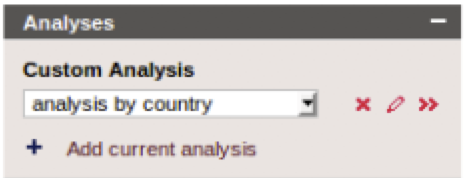
The “Grouping” function does not select any data, but merely changes the view. The analyzed data can be listed using different criteria like invoice number, type of cost (list of services used), duration of connection, amount, etc.
Advanced users can open a panel for pivot groupings and up to three grouping fields by clicking the “+” symbol next to the grouping.



As with all analyses, groupings can be downloaded in various formats for the purpose of archiving or further processing. Pivot groupings, however, are an exception to this, as they cannot be formatted in CSV.

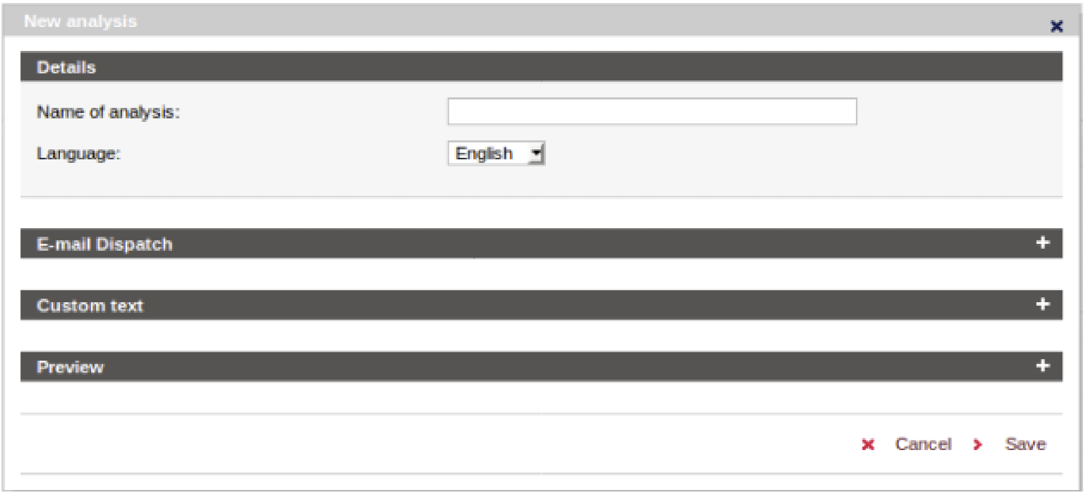
3.7 Automating analyses

Telenet My Bill offers a variety of options for reusing an analysis carried out ad hoc, be it for interactive use or to be sent by e-mail with a new bill.



3.7.1 Saving an analysis

The current analysis (filter, grouping, sorting and set fields) can be saved for later use using "Add current analysis".



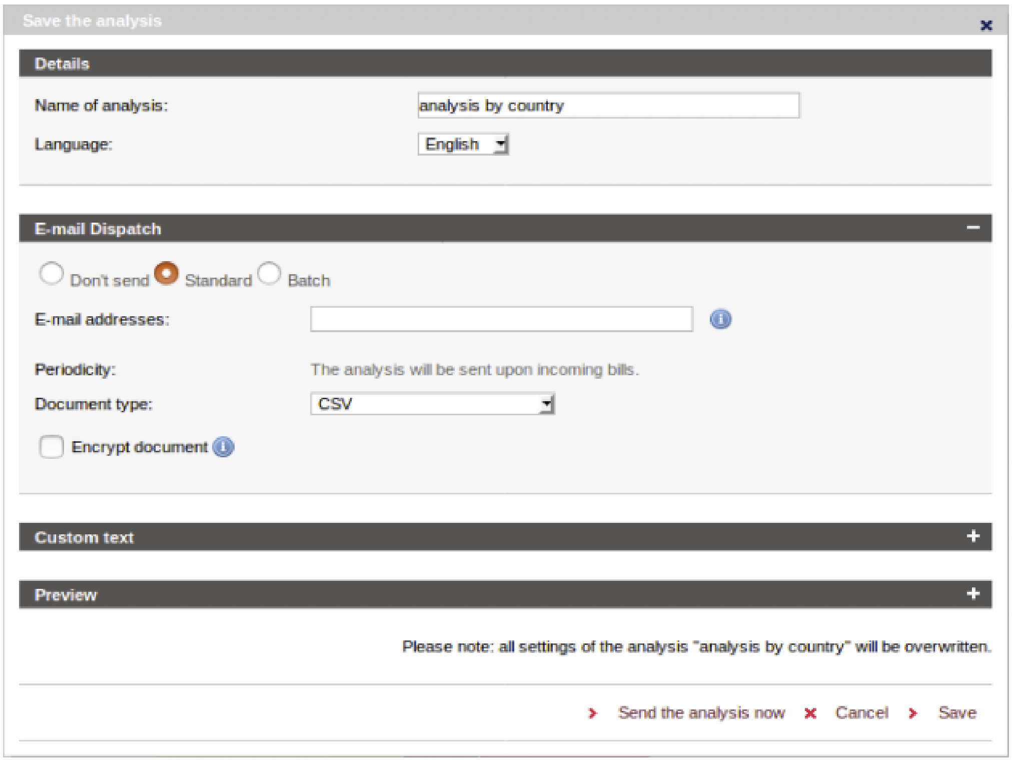
For this, just choose a name and confirm with "OK". The analysis of bills and individual connections is managed separately. Saved analyses are also listed on the start page for direct application.

To carry out an analysis again, select it in the dropdown menu and apply it by clicking on the double arrow.

Saved analyses can be manipulated using the two buttons to the right of the analysis' name . The left button deletes the set analysis, the right one overwrites it and therefore is also used to change values set in the analysis dialog.

3.7.2 Standard e-mail dispatch

Besides performing the saved analysis interactively, this function can also be used to automatically analyze billing data and send the result by e-mail when a new bill is received.



An analysis can be sent to several comma-separated recipients. As with downloading, the document type can be selected from the analysis table. Coding can be selected as an option, which sends the document in an encrypted ZIP file.

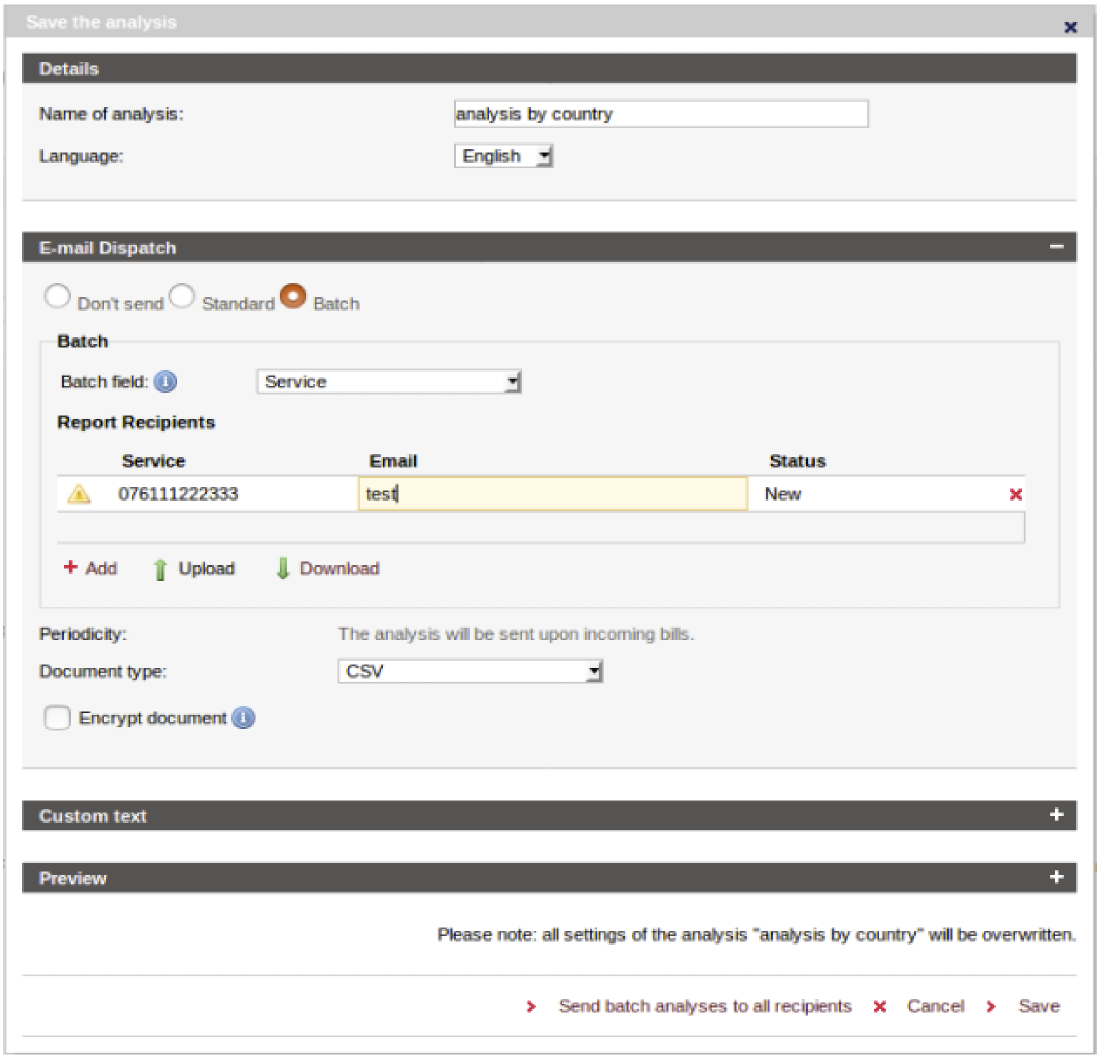
To avoid sending an analysis with incomplete data, Telenet My Bill waits until data has been supplied from all registered customer numbers for a billing run. This would not apply in the following cases:

- Customer numbers which no longer receive bills
- Customer numbers on another billing run, i.e. with a different invoice period
- Customer numbers which do not receive bills regularly, e.g. bimonthly bills

Therefore the analysis is still sent after a waiting period of a few days, however with the note that bills are not available for all customer numbers.

3.7.3 Batch e-mail dispatch

Another option for having an analysis sent to several recipients is a batch dispatch. In contrast to the version with comma-separated e-mail addresses described above the analysis content is different here for every recipient. As a result, for example, evidence of individual connections can be sent to each individual employee without working with countless analyses that only differ in the relevant service filter.



For this, the batch field is selected first that contains the key for information specific to recipients. This may also be a user-defined field (see chapter 6). The "service" field has been selected in the example above.
In the second step "Report recipients", the correct e-mail address is stored for the desired value of this field. In the above example, this is "test@telenet.com" for the service 0763011234 and "test@telenet.com" for the service 0763012345.

With automatic e-mail dispatch, an analysis is then generated for every line of the report recipient list where this value is set as a filter and it is sent to the mail recipient.

This e-mail dispatch can also be triggered immediately using the button › Envoyer l'analyse à tous les destinataires . In the above example, the recipient "test@telenet.com" would therefore receive data for the service 0763011234 and "test@telenet.com" for the service 0763012345. The rest of the analysis (other filters, grouping, sorting and column selection) would be identical.

In order to create the list easily, Telenet My Bill also supports the uploading of data from existing lists in XLS format, where the filter value must be in the left-hand column and the e-mail address must be in the right-hand column:

	A	B
1	0763011234	test@[illegible].ch
2	0763012345	test2@[illegible].ch
3	0763012321	mytest@[illegible].ch

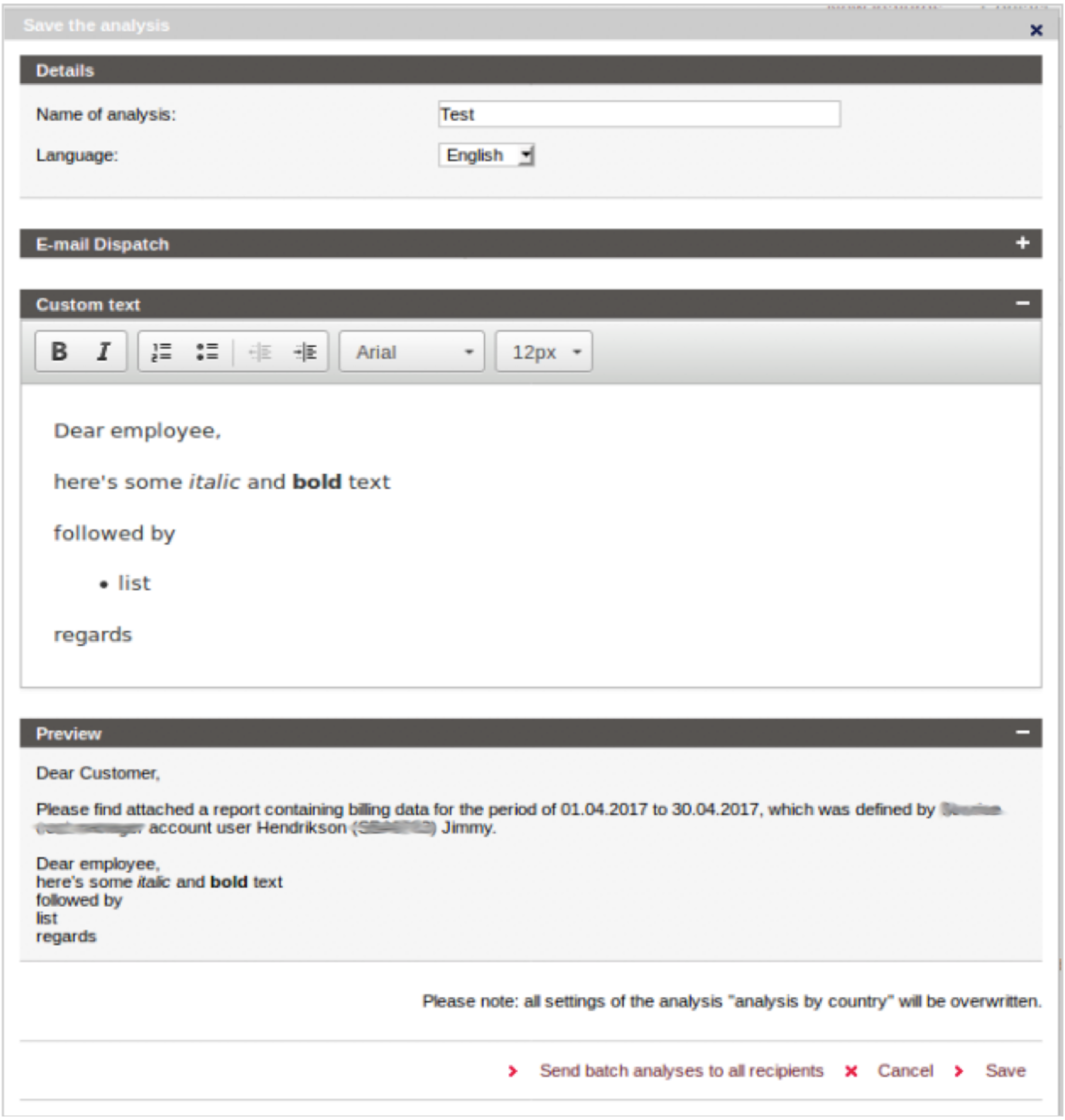
Comment: Then note the "0" in front for phone numbers. This can be enforced by an inverted comma at the start of the number, for example.

Successful dispatch is then displayed by an entry in the status column.

Status	
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×
Zuletzt versendet: 09.04.2013	×

3.7.4 E-mail user-defined text

In order to give the dispatched e-mail a personal touch or provide the recipient with information, user-defined text can be added to the text set out in the accompanying e-mail. Various formatting is available for this. The result can be checked in the preview window.



The set text is not replaced by this as it contains important dynamically calculated information.

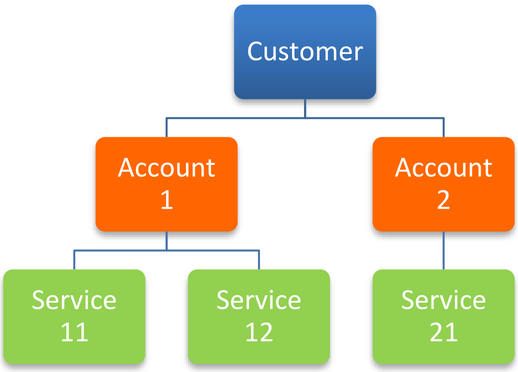
4. Invoice management

Invoices are usually sent in a structure optimized for order entry and invoicing in billing systems. This structure is either not included in or very difficult to integrate into the customer's corporate structure, which itself is subject to nearly constant adjustments. One could attempt to somehow mimic the corporate structure in the billing system using invoice accounts and contracts. However, it is much better to leave the optimized billing system structure in place and simply import its data into the corporate structure. Telenet My Bill supports this process by using invoice management with cost centers.

4.1 Introduction to cost centers

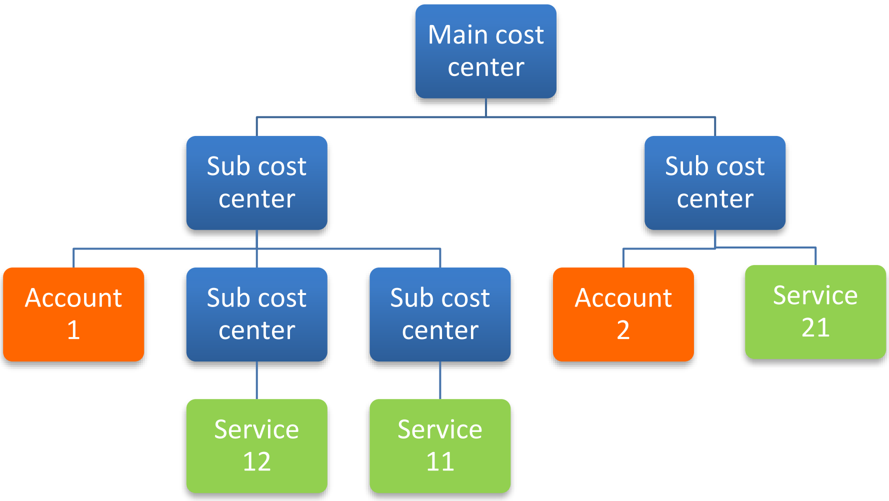
The term "cost centers" is used in the following text to refer to a customer-specific, optional hierarchical structure. This need not correspond exactly to actual cost centers. It could, for instance, represent a geographically arranged structure or something similar.

4.1.1 Billing system structure



A greatly simplified customer billing system structure is depicted above. Steps irrelevant to the transformation such as "Services", "Products", etc. have been omitted. The two steps (or "Cost centers") remaining are "Customer number" and "Service", which are essential in examining the cost breakdown. These two elements are used in invoice management to distribute costs.

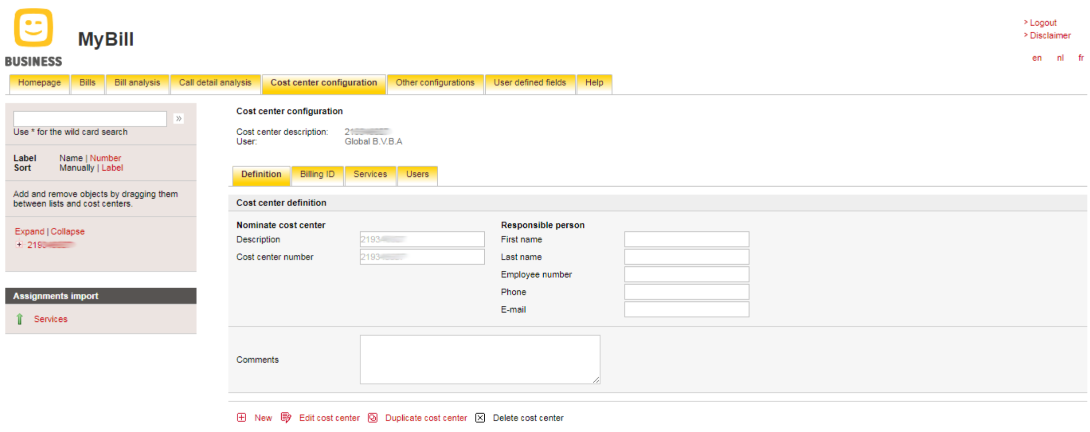
4.1.2 Online invoice structure



Online invoices support a hierarchical structure with an unlimited number of levels. This structure can now be applied to the aforementioned cost centers "Customer number" and "Service".

Here it's important to note that services can only be entered into the hierarchy below the corresponding customer number. This ensures that the cost center containing the customer number actually contains all associated costs in a viewable form. This has an impact on the optimal structure of cost centers. If customer numbers have already been created with (unchangeable) allocations to cost centers – for instance, one customer number per store – it is recommended that the customer number be allocated to a sub-cost center that corresponds to the store. This ensures that all costs corresponding to the customer number are in fact billed to the correct store. In the other cases, maximum flexibility in the distribution of services is targeted and customer numbers stored under the main cost center.

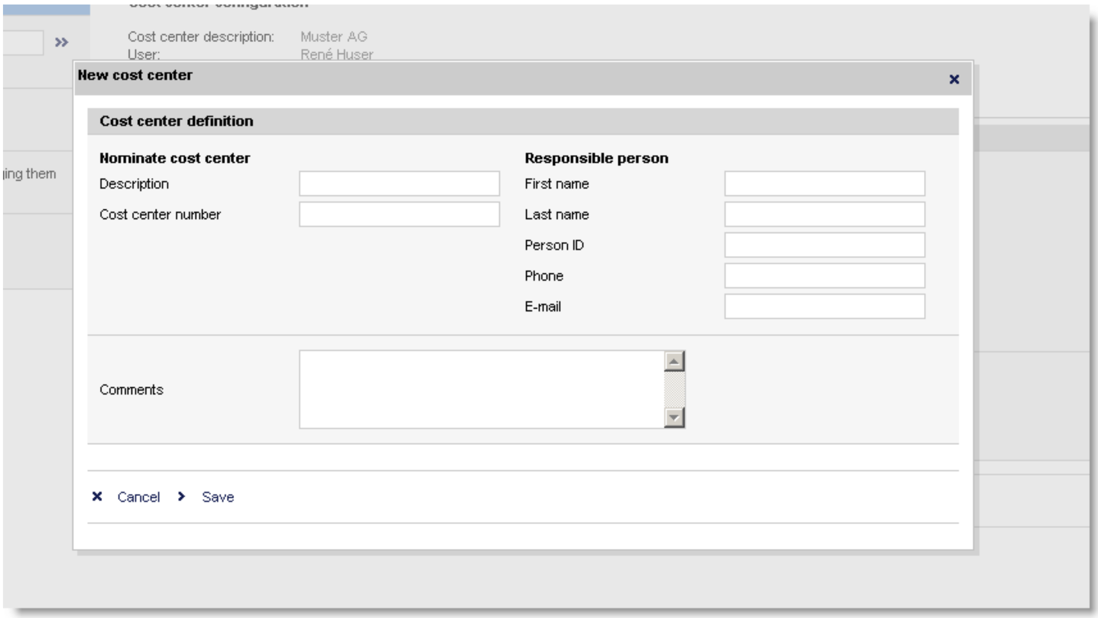
4.2 Creating a new cost center – Step 1



Creating a new cost center in Telenet My Bill is very simple. To begin the creation process, click the "New" button. To copy specific details from the currently selected cost center, use the "Duplicate cost center" function.

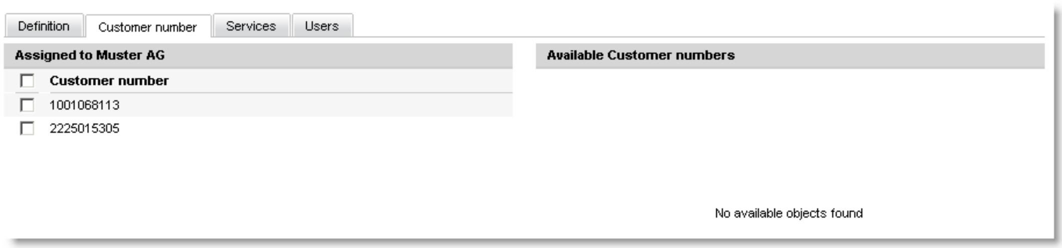
Note: If the new cost center is not in the right place in the cost center hierarchy once you've completed all the configuration steps, simply drag and drop it to its correct position. As with the aforementioned column configuration in the analysis, simply move the cost center by clicking and holding the mouse. If you drag it directly onto an existing cost center, it will be placed below the existing cost center within the hierarchy. If the cost center is dragged onto a space, it appears on the same hierarchy level as the neighboring cost centers.

4.3 Creating a new cost center – Step 2



In the second step, all required details about the new cost center are entered on the "Definition" tab. These are a name and a cost center number, which are optionally viewable on the left side of the cost center hierarchy. In addition, all entries about the person responsible for the cost center as well as comments can be made here. This additional data is not used in the remaining areas of online costing. Click "Save" to end this process.
To maximize efficiency when allocating services directly in the cost center diagram (see next step), it's recommended that all cost centers be entered completely before allocating any services.

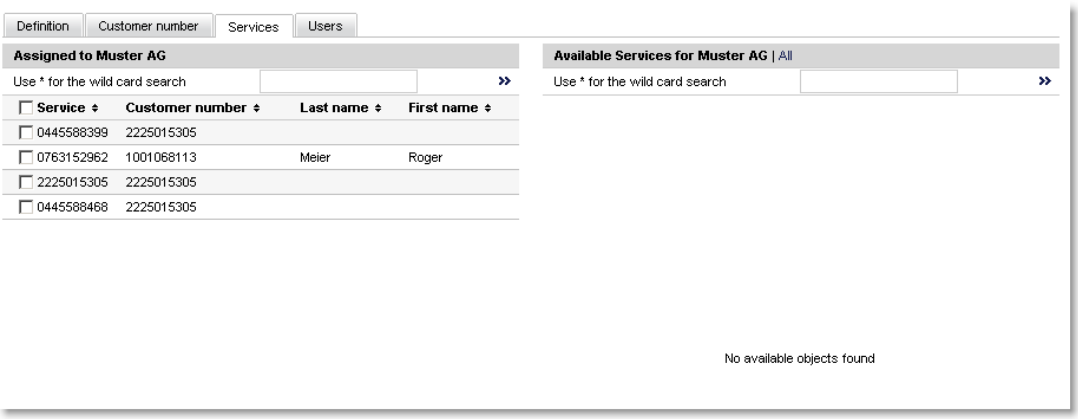
4.4 Creating a new cost center – Step 3



The next step is to allocate the customer number(s) to the correct cost center(s). See the note on this in the introduction to this chapter.

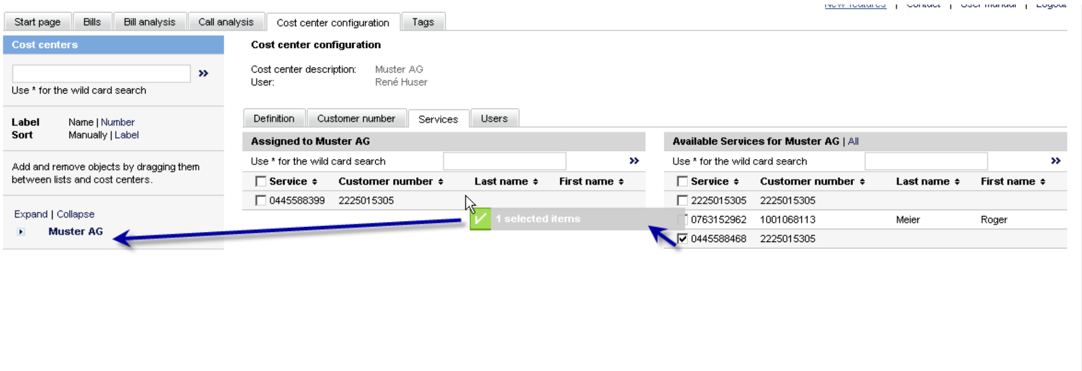
The next chapter explains how to do this in detail.

4.5 Creating a new cost center – Step 4

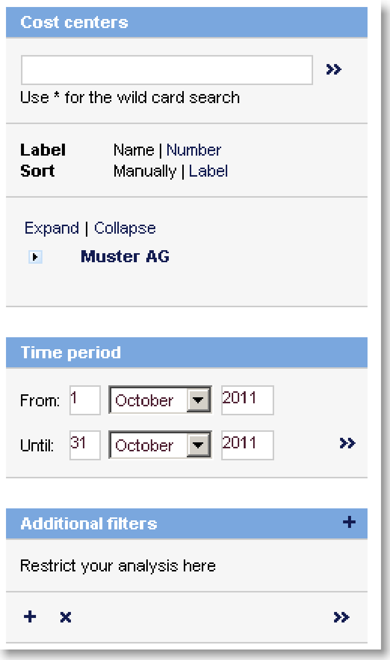


In this step, services are allocated to each cost center. On the right side is a list of all available services. Using drag and drop, these can be moved into and out of the table on the left. It's also possible to mark several or all items and move them en masse.
Fifty entries are displayed in each of the two tables. To see the next 50 entries, go to the next page, as with any table. Individual entries can be located with a search function. As usual, use the double arrow to begin the search.

Alternatively, you can pull services directly into the cost center diagram and move them to a cost center that is not currently selected. This is shown in the following screenshot (the path of the mouse is marked in blue):



4.6 Navigation, search and find

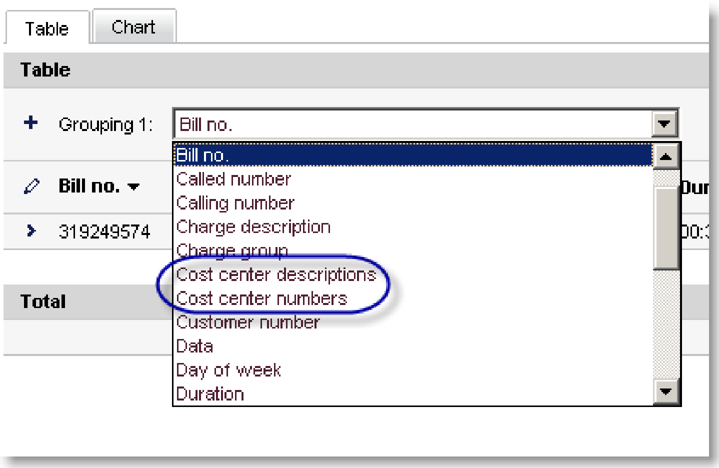


Click "Numbers" to display the cost center numbers instead of the names in the tree view.
You can switch between two sort methods: (1) sorting based on the sequence created with drag and drop and (2) alphanumeric sorting based on the name.
Use "Open" and "Close" to expand and hide parts of the tree diagram.
Searching within the tree diagram is just like searching for services. In this case, allocated elements are searched for in the entire tree. This is especially useful if you have forgotten which node a service was allocated to.
Use the "Down arrow" to open or close individual nodes.

4.7 Application in the analysis

Cost centers and allocations created in the above steps can be applied in the different analyses.
First, the data can be limited to the currently selected cost center. Unlike the other fields with filtering applied, it is not necessary to click the double right arrow for cost centers.

Secondly, cost centers and allocations can be used in distributing unallocated costs to the correct cost center. This is achieved by grouping:



As in the tree diagram, names or numbers can be used here.

Naturally, this analysis can be saved and regularly sent to simply distribute telecommunication costs automatically to the cost centers.

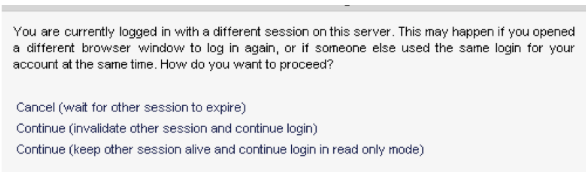
You may ask yourself what happens to the costs of unallocated services? Do they simply vanish? No: these costs are collected in a virtual cost center in the analysis. This has the name "(Not allocated)" and is naturally not visible in the cost center configuration, since only real cost centers are displayed there. Since unallocated costs can lead to errors in the big picture, all services should be allocated in the cost center configuration. Newly added services make it necessary to repeat this step periodically.

5. Login and user administration

If you have gotten as far as downloading the user guide, then you have already successfully logged in. We will therefore say no more about the normal login procedure.

5.1 Several concurrent sessions

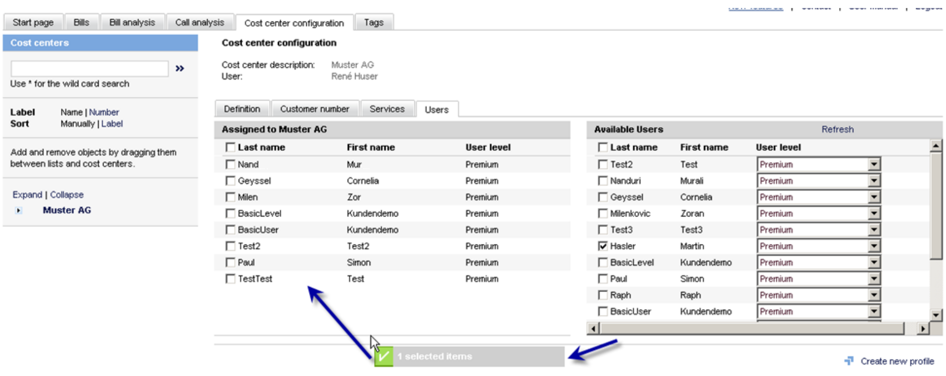
You may receive the following message after selecting the My Bill in the Telenet account:



To avoid conflicting input, only one session is allowed per write-authorized login. If you receive this message, you have to decide how to proceed. If you have just re-logged in due to browser problems, then the second option is probably the one you want.

5.2 Registering users

In the cost center configuration, you can tell My Bill which users have access to which data. To do this, open the "User" tab at the end. As with allocating services, registered users can be allocated by simply dragging and dropping them to the appropriate cost centers.



The only difference is that allocated users always appear in the table "Available", so that they can be allocated to other cost centers. Let's assume that our cost center structure has locations on one level (North, South, East, West, etc.) and departments on a second level (Marketing, Sales, Development, etc.). A user allocated to the "South" cost center can view all data at this location. A sales manager should, however, only be able to see the sales department's data. This can be realized by allocating the user only to the "Sales" cost centers in all four locations. When this user logs in, he sees a "virtual company" comprised of the sales departments at the four locations, but without data from Marketing, Development, etc.

6. Tags / user-defined fields

The most important innovation by Telenet My Bill 3.7 is the user-defined fields or tags' function. It is basically a further development of cost centers and addresses the following issues:

- Simple uploading of assignments
- Categorizing of data using several criteria
- Fields other than phone number and customer number can be used as the basis

The basic principle of tags should be well-known to most users of various websites. They are a simple option for providing basic data with additional information. For example, an image is given the attribute "Summer 2012", "Italy" and "Simon" in order to easily find all images from Italy or which Simon is in later on.
In Telenet My Bill, it is not images of course but the previous data fields, i.e. services, cost descriptions etc. that receive new attributes. See below for an example of which information could be added for phone number "044 123 45 67):

In order to be able to work optimally with these attributes, Telenet My Bill goes one step further and allows for the tags to be categorized. As well known as it is that "044 123 45 67" is a phone number (Rufnummer), we also know that London is a place (Ort), marketing is a department (Abteilung) etc.

With this addition, we can now purposefully search for data which has the attribute "London" in the "Ort" (place) field without running the risk of finding all employees with the surname London. Categorization also allows for neat grouping.

One small improvement can still be made to our model. Departmental (Abteilung) affiliation is generally not a property of a phone number (Rufnummer) but of a person. This can be illustrated as follows:

This means, a tag cannot only be based on the previous data fields but also on other tags making hierarchies possible.

If the structure is set up accordingly, the newly created categories can be used like the existing fields as filters, grouping fields and data fields.

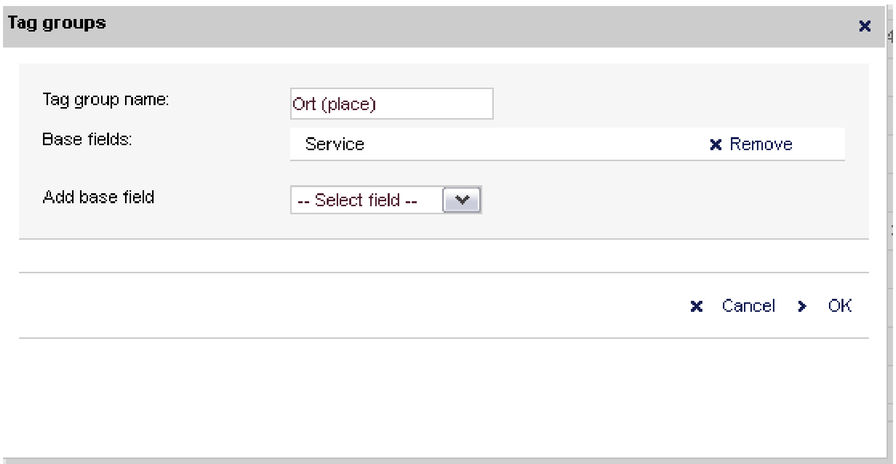
The following shows how these user-defined fields can be realized in Telenet My Bill.

6.1 Tag groups

The first step for creating a tag structure is to establish relationships between the fields. In the example above, the person and place would be based on the phone number, the department on the person. What is important in the process is to differentiate the relationships between categories and values. For example, there is not a relationship between "John Doe" and the "phone number" but between the "person" and "phone number", i.e. between "John Doe " and "044 123 45 67". The former relationship is called "tag group", the latter "tag assignment".

A new relationship can be created between categories using the "Add tag group" button.

A tag group was configured as follows for the place in the above example:



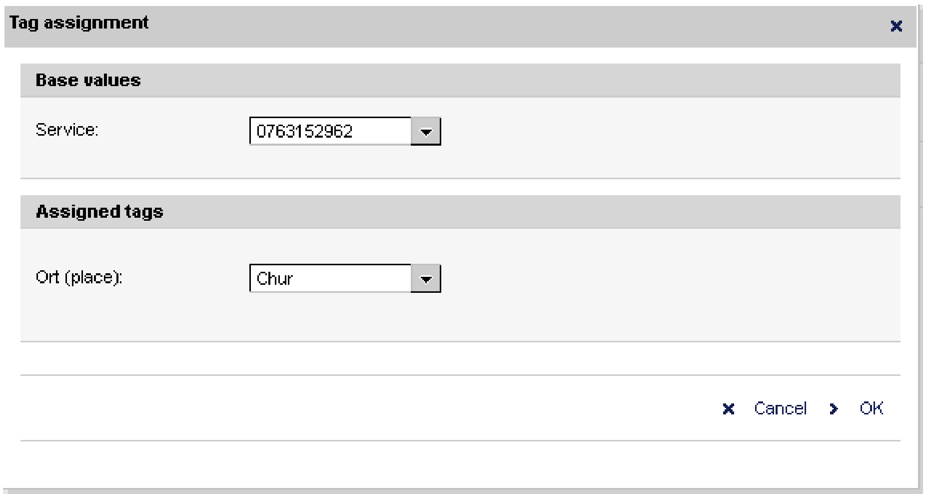
A new tag group can be built on one or several basic fields, one basic field is sufficient in this example.

6.2 Tag assignment

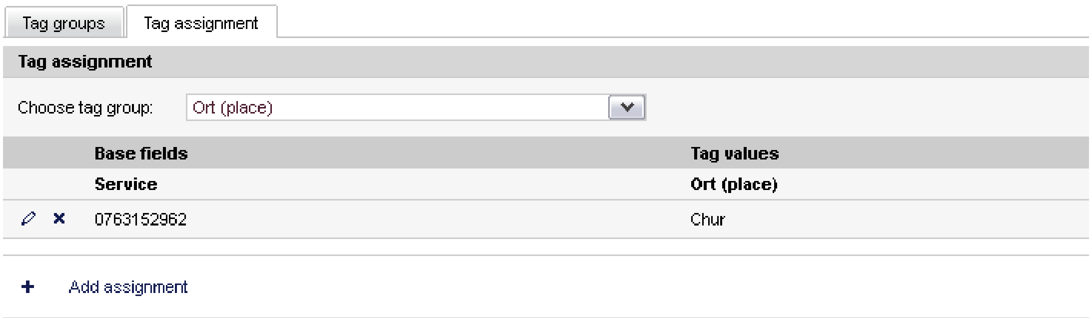
The values are assigned (linked) in the second step. This can be done interactively or by uploading a file. It is always recommended to make at least one assignment online first to be able to download a previously completed file afterwards. In this way, you can see from an example what the data would have to look like to be able to upload it without any problems

For this the required tag group is selected first:

The following dialog is then opened by clicking on "Add assignment" and the required values are filled in or selected from the dropdown list:



After confirming with OK, the list of assignments is updated:



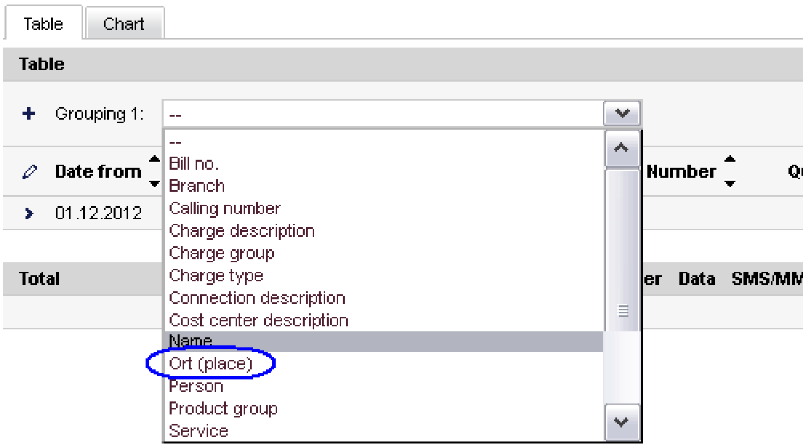
6.3 Uploading and downloading tags

Generally, it is more convenient to upload the assignments from an XLS or CSV file that already exists ( ). For this it is recommended that a file is downloaded first ( ) using the manually created example and this is then edited. Make sure that exactly the same format is kept. With phone numbers in Excel in particular, the "0" prefix may be lost depending on the settings. This can be avoided by putting an inverted comma in front or formatting it as text.

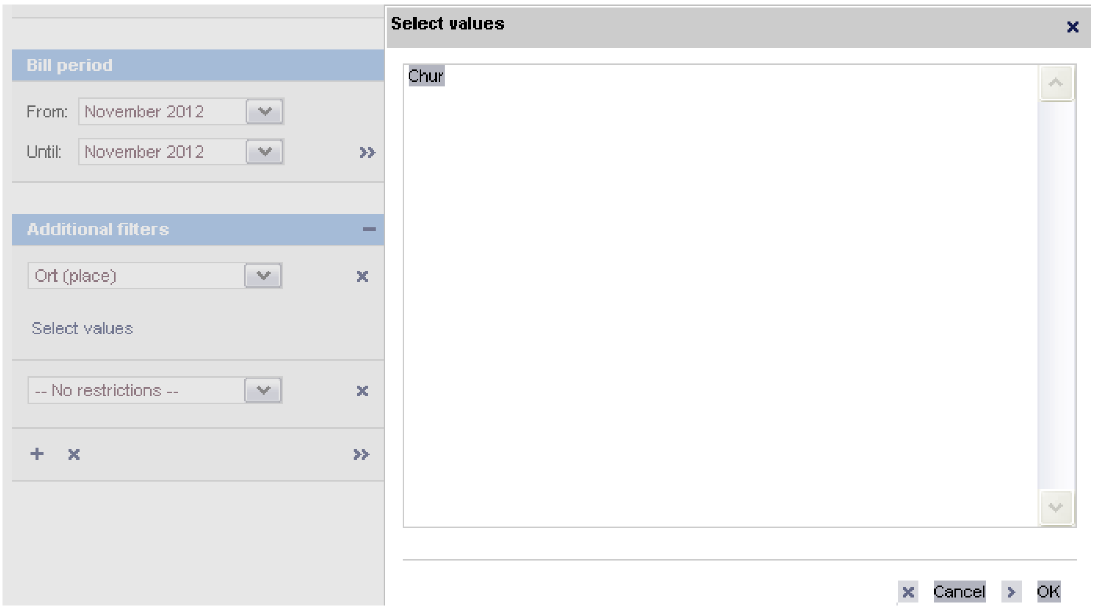
6.4 Tag use

Once the tags are set they can then be used in the analysis like any other field.

As grouping field:



As filter:



...and of course as a normal column in tables and reports.

Thanks to this powerful function, data can be adapted totally to your own needs. This is illustrated using several examples in the following section. The tagging of called numbers to detect internal calls, the tagging of destinations for own regions and much more are mentioned as several other applications. As tag groups may also be based on other tag groups, hierarchies are possible although the simple and uploadable structure is also preserved here.

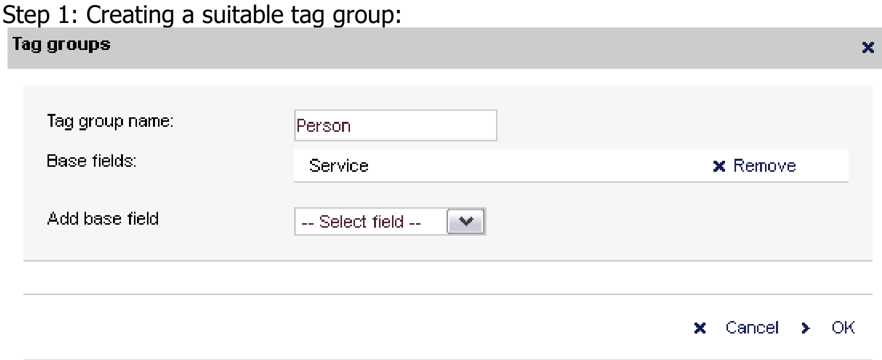
Whilst tags offer more flexibility than cost centers, cost centers are still advantageous with hierarchical structures and for the faster selection of data.

6.5 Examples

Example 1: Phone book

This example is about adding phone numbers to names already in your own phone book to use the people instead of services in the analysis.

Step 1: Creating a suitable tag group:



Step 2: Creating a manual assignment (link) as an example:

Comment: As the user-defined fields are processed as simple text, the style "Müller Hans" is recommended for sorting according to surnames.

Step 3: Downloading the Excel file

There is a button to download the Excel file in both tabs. The result looks like the following:

	A	B
1	xls-1.0	
2	Person	ServiceID
3	Müller Hans	0763152962
4		

Comment: In order to keep the language neutral, the translated field names are not used in the download file but the originals are. Therefore in this example, "ServiceID" instead of "Dienstleistung".

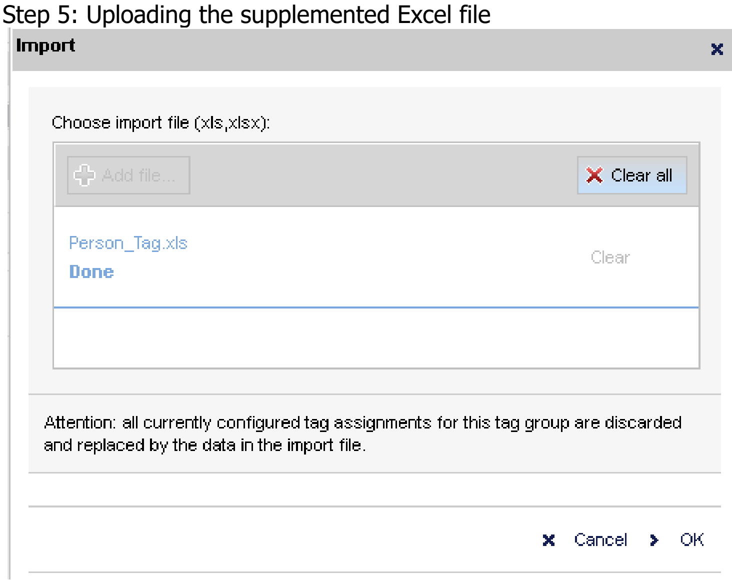
Step 4: Adding to the Excel file

The data from the electronic phone book can now be added to the Excel file. As it is assumed that the data is available to the customer, not all services are specified, just those for which there is already an entry.

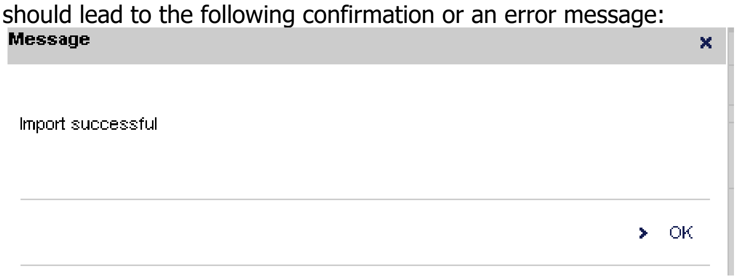
	A	B	C
1	xls-1.0		
2	Person	ServiceID	
3	Müller Hans	0763152962	
4	Müller Hans	0761234567	
5	Meier Peter	0761234568	
6	Muster Fritz	0761234569	
7	Doe John	0761234570	
8	Dupont Jean	0761234571	
9	Rossi Mario	0761234572	

Comment: The triangle with phone numbers means that Excel was "forced" to treat the number as text, e.g. using an inverted comma in front.

Step 5: Uploading the supplemented Excel file



Comment: Selecting "New file" on the local disc and then confirming the window at the top with "OK" should lead to the following confirmation or an error message:



Step 6: Using in the analysis

Table | Chart

Table Download :

+ Grouping 1: Person

Person	A	Number of calls	Data	Duration	Amount excl. VAT	Ø Duration	Ø Amount excl. VAT
Doe John	91	12'268	00:07:11	39.91	39.91	00:00:47	
Dupont Jean	19		00:15:54	39.44	39.44	00:01:26	
Meier Peter	52	10'960	01:23:35	39.48	39.48	00:03:47	
Muster Fritz	175	33'960	01:13:48	42.87	42.87	00:01:38	
Müller Hans	261	320'859	09:15:39	40.08	40.08	00:05:36	
Rossi Mario	911	883'340	04:33:15	54.35	54.35	00:02:54	

Total	Number of calls	Data	SMS/MMS	Duration	Amount excl. VAT
	0				Amounts excl. VAT

Once the services have been provided with a person, this can be used in all analyses which have the "Service" field.

Example 2: Branches

This example is about analyzing calls between branches. For this the "Called Number" are also provided with phone book information.

In contrast to the first example, only the important steps are shown here, the details remain the same.

Step 1: Creating the tag groups

Tag groups | Tag assignment

Tag groups

Tag group	Base fields
Branch	Service
Person	Service
target branch	Called number

+ Add tag group   Export all

Two new tag groups are created: Branches and target branches. Branch is the name for the branch from where the outgoing call is made, the target branch is where the incoming call is received. The "target branch" is therefore based on the "Called number"

Step 2: Assignment (link)

As the same assignment of phone numbers to branch names can be used for dialed and received numbers, uploading information is the ideal approach. As a result, only one file needs to be created in principle:

	A	B
1	xls-1.0	
2	Branch	ServiceID
3	Zürich Paradeplatz	0761234567
4	Basel Steinenvorstadt	0761234568
5	Chur Kornplatz	0761234569
6	Bern Spitalgasse	0761234570
7	Thun Hauptgasse	0761234571
8	Luzern Weggisgasse	0761234572

As the names in line 2 are checked when uploading, this has to be adapted for the second assignment:

	A	B
1	xls-1.0	
2	Target branch	CalledNumber
3	Zürich Paradeplatz	0761234567
4	Basel Steinenvorstadt	0761234568
5	Chur Kornplatz	0761234569
6	Bern Spitalgasse	0761234570
7	Thun Hauptgasse	0761234571
8	Luzern Weggisgasse	0761234572

both files are uploaded as described in example 1.

Step 3: Using in the analysis

Table Chart

Table Download :

Grouping 1: Branch
Grouping 2: target branch
Grouping 3: --
Wert: Betrag exkl. MwSt.

1 2 3

Branch	target branch	Number of calls	Data	Duration	Amount excl. VAT	Ø Duration	Ø Amount excl. VAT
Zürich Paradeplatz	[Nicht definiert]	2'559		274:20:07	5'662.5667	00:06:25	2.2128
Bern Spitalgasse	Chur Kornplatz	14		01:56:50	7.4353	00:08:20	0.5310
Bern Spitalgasse	Thun Hauptgasse	14		01:11:59	36.8612	00:05:08	2.6329
Bern Spitalgasse	Basel Steinenvorstadt	38		04:53:27	17.0372	00:07:43	0.4483
Thun Hauptgasse	Luzern Weggisgasse	21		01:01:53	12.0092	00:02:56	0.5718

Example 3: Rules

This example is about illustrating a simple rule to differentiate between private calls and business calls ("Split billing"). The rule should be as follows: Calls from Monday to Friday between 7 am and 8 pm are considered to be business calls, the rest as private calls.

In order to be able to assign a call, the week day and time have to be considered as all calls at the weekend are considered to be private.

Step 1: Creating the tag groups

There are two approaches here: You could base a tag group on the week day and hour fields and then state whether it is a private call for all combinations. However, it is easier and more maintainable to work with an intermediate step:

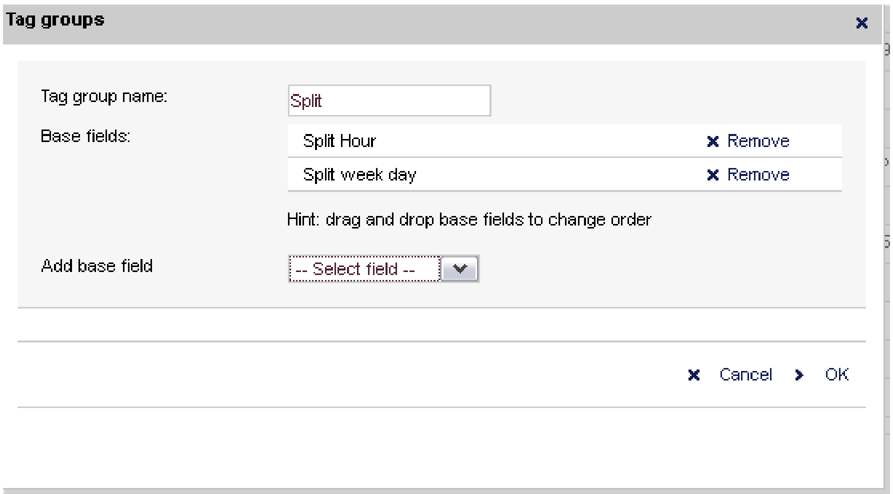
Tag groups Tag assignment

Tag groups

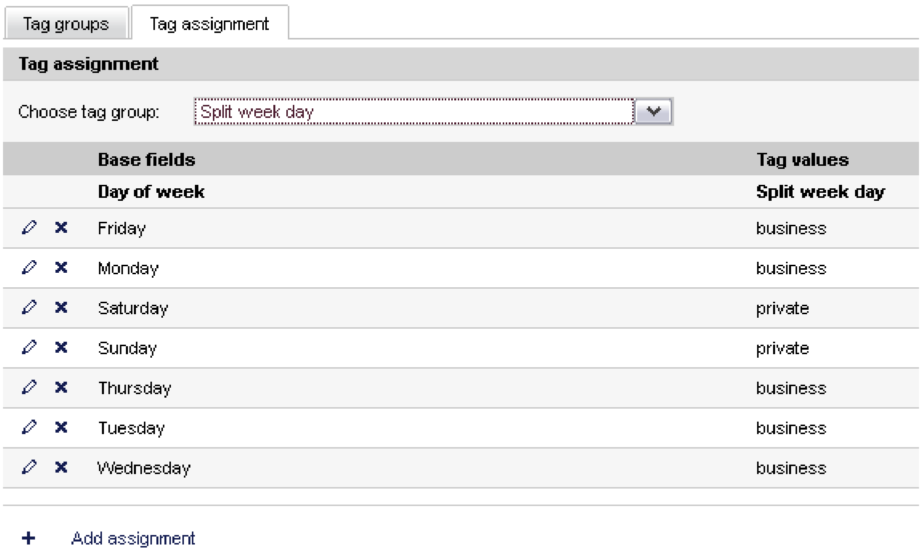
Tag group	Base fields
Split	Split Hour, Split week day
Split Hour	Hour
Split week day	Day of week

+ Add tag group Export all

"Split hour" states the potential business hours, "Split week day" the potential business week days, "Split" combines both together and is therefore based on both basic fields:



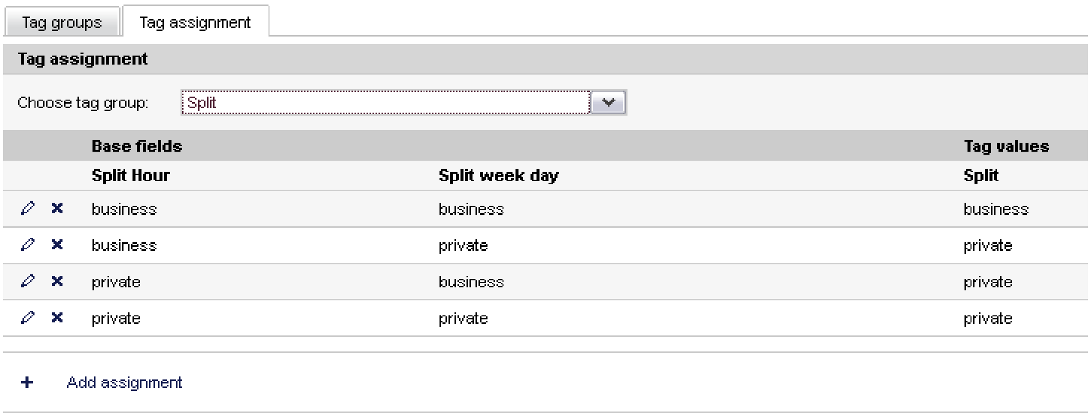
when looking at the values it becomes clearer how the rule is developed, so let's continue to Step 2: Assignment



Base fields	Tag values
Day of week	**Split week day**
Friday	business
Monday	business
Saturday	private
Sunday	private
Thursday	business
Tuesday	business
Wednesday	business

Here all work days are called business and in line with the hours 7 am to 7 pm, which include all calls until 19:59:59.

Step 3: Logic
It is clear from the definition that business calls only exist if they are made on a work day during working hours. All other combinations lead to private calls. This is represented using the following assignment diagram:



Step 4: Using in the analysis
As with the previous examples, the "Split" field can now be used in the analysis, for example to break down falls into private and business for each employee. This can of course also be defined on the basis of the dialed numbers using another rule.

Comment
Although the examples all result from concrete issues with customers, they will hardly be transferable 1:1 to your company. However, they provide insight into the options of user-defined fields and should motivate you to experiment with them yourself.

The basic principle applies here, as in all other areas of online billing, that there is no back end interface to the billing system, therefore you cannot do any damage by experimenting.