








Solutions from SAP
SAP Business One 2005

How to Define and Use Formatted Search

September 2005



Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, titles of graphics and tables.
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, source code, names of variables and parameters as well as names of installation, upgrade and database tools.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.

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How to Define and Use Formatted Search

Introduction

The Formatted Search function enables SAP Business One users to enter values, originated by a pre-defined search process, to any field in the system (including user-defined fields).

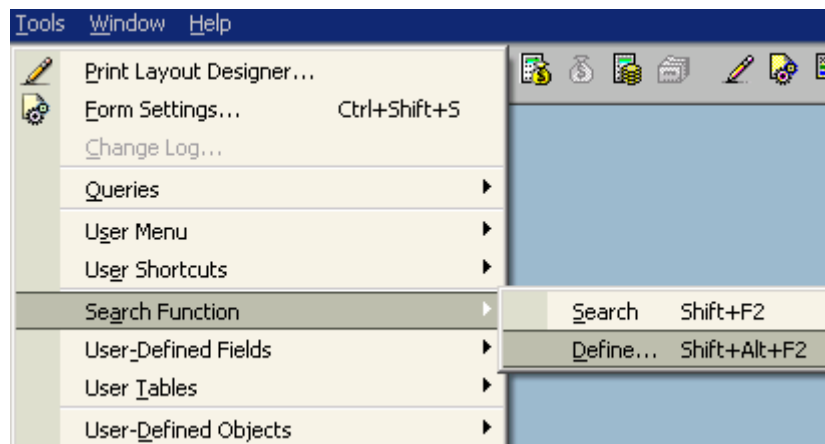
The following are examples of using the formatted search function:


- Automatic entering of values into fields using various objects in the system
- Entering values into fields using a pre-defined list
- Automatic entering of values into fields via pre-defined queries (defined by the user)
- Creating dependence between fields in the system. For example, the value in field X influences the value in field Y.
- Displaying fields that can only be displayed using queries. For example, User Signature, Creation Date, Open Checks Balance (for business partner), etc.

The Formatted Search Menu

Use

Open any window in SAP Business One and select from the menu bar *Tools* → *Search Function*:

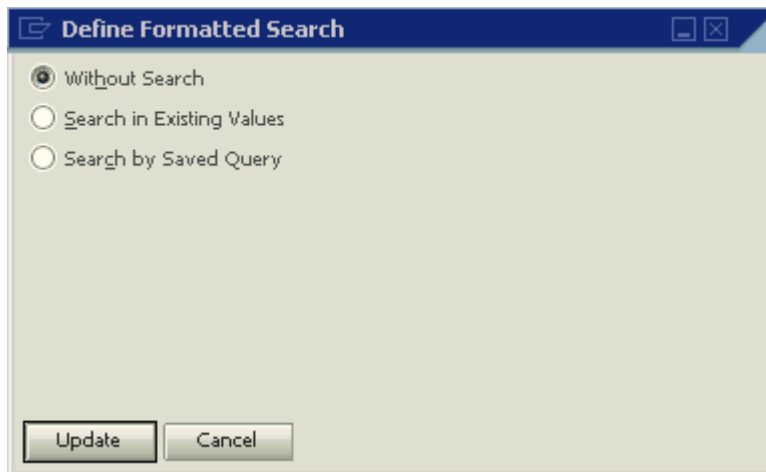


Field	Description/Activity
<i>Search</i>	Selecting this option after placing the cursor in a field, for which a formatted search had been defined, will activate the search.
<i>Define</i>	Select this option to define a formatted search for any field in the current open window. Make sure the cursor is placed in the appropriate field before selecting <i>Define</i> .
<i>Search Field</i>	From the menu bar select <i>View</i> → <i>Search Field</i> . Select this option to display a special icon in fields with formatted search. A magnifying glass icon  will be displayed in all the fields for which a formatted search had been defined. Select this option again to hide the search icon.

Defining a Formatted Search

Procedure

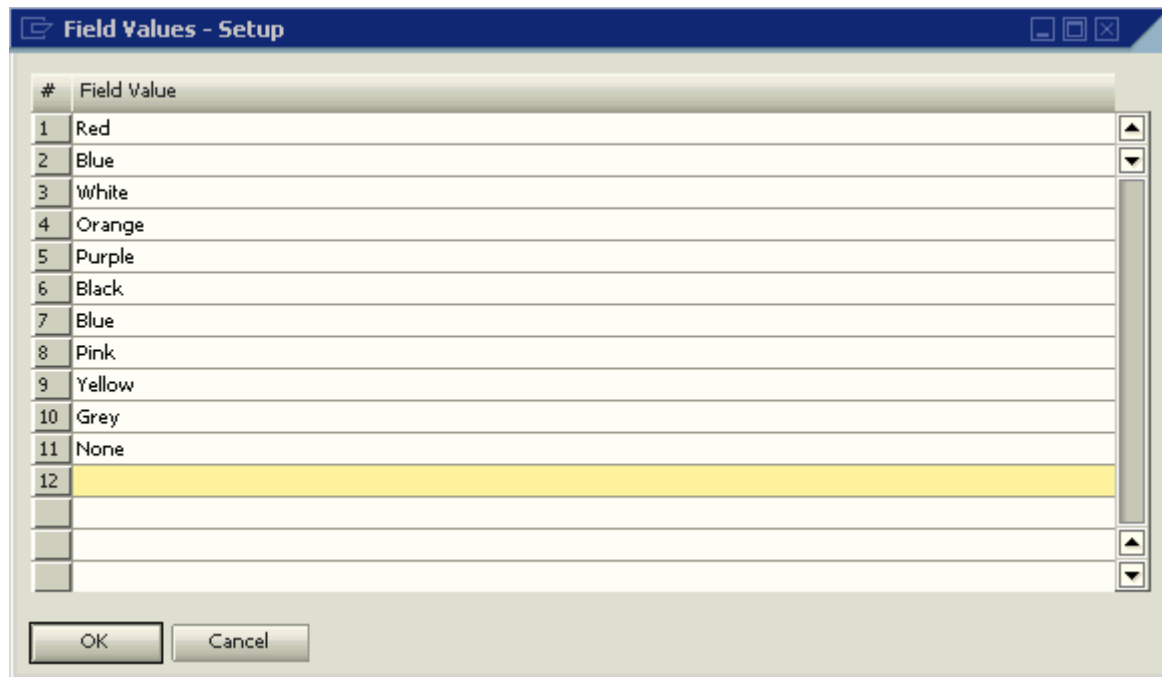
1. Place the cursor in a required field (any field in the current open window) and select from the menu bar *Tools* → *Search Function* → *Define*, or use the key combination Alt+Shift+F2.
2. The *Define Formatted Search* window then opens:



Field	Description/Activity
<i>Without Search</i>	Select this option to indicate that no formatted search is defined for this field. This option will be effective if you want to cancel a formatted search defined for a certain field.
<i>Search in Existing Values</i>	Select this option to define a list of fixed values applicable for this field.
<i>Search in Saved Query</i>	Select this option to link a user-defined query to the search field.

Search in Existing Values

When selecting this option, the icon  is displayed. Choose this icon to open the *Field Values – Setup* window:



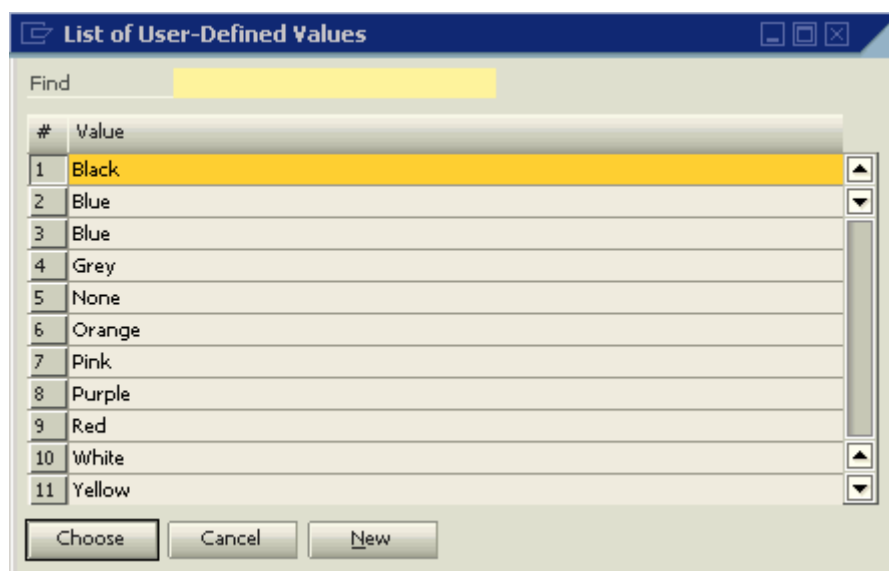
In this window enter a list of values relevant for the field. Choose *Update* and *OK* to confirm the data. This will close the *Field Values – Setup* window. You are now back in the *Field Values – Setup* window. Choose *Update* again to complete the definition.

Now you can search in the existing values you have defined for this field.

Procedure

1. Place the cursor in the field
2. Select from the menu bar *Tools* → *Search Function* → *Search* (or use the key combination Shift+F2).


This action opens a Choose From List window, displaying the values entered in the *Field Values – Setup* window:



3. Choose the appropriate value from the list. The value will be entered automatically in the field.

Adding and Updating Values to a List of Existing Values

Procedure


1. Place the cursor in the search field and select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
2. The *Define Formatted Search* window opens. Choose the  icon.
3. The *Field Values – Setup* window opens. The cursor is placed in the next available row.
4. Enter a relevant value in this row and choose *Update*. You can also updating an existing value and choose *Update* to save your changes.



Another way to add new values to a list of existing values is to choose the *New* button in the *List of User-Defined Values* window which opens as a result of performing the formatted search.

Deleting Values from a List of Existing Values

Procedure

1. Place the cursor in the search field and select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
2. The *Define Formatted Search* window opens. Choose the  icon.
3. The *Field Values – Setup* window opens. The cursor is placed in the next available row.
4. Place the cursor in the relevant row and select from the menu bar *Data* → *Remove* or right click the mouse and select *Remove*.
5. Choose on *Update*. A system message appears: "Are you sure you want to delete this data?" Choose *Yes* to approve the removal.



The existing values reservoir is saved in the CUVV table in the company's database.

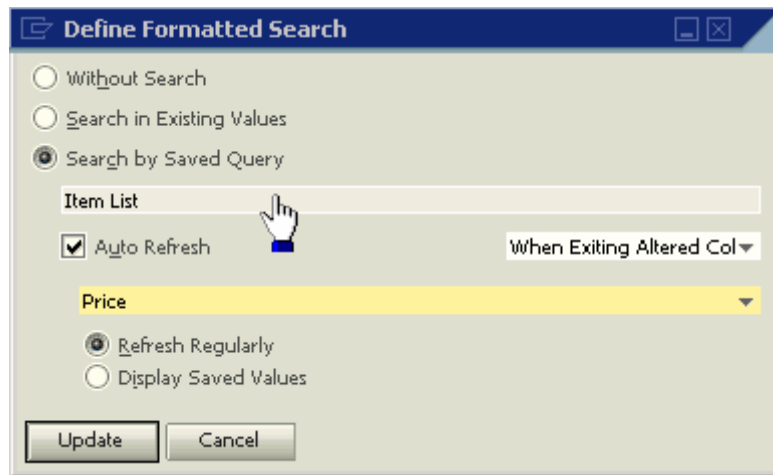
Search by Saved Query

Use

You can use two types of queries in a formatted search:

1. Queries that retrieve data from the current active window
2. Queries that retrieve data from various tables found in the company database

When selecting the *Search by Saved Query* option in the *Define Formatted Search* window, it is possible to link a saved query to the search field:

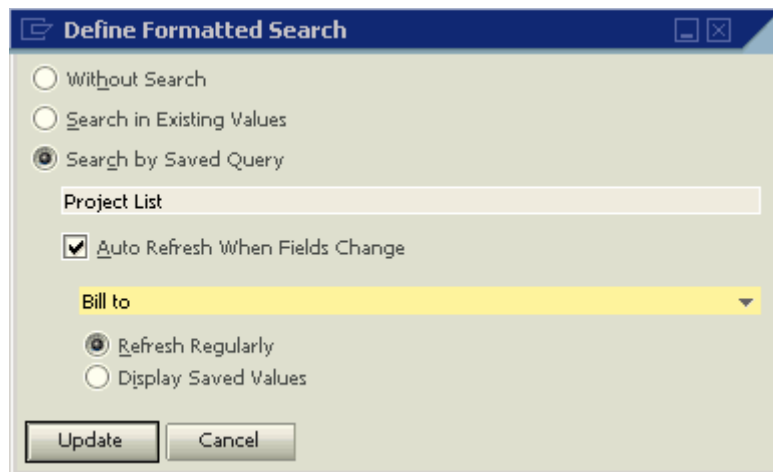


Procedure

1. Place the cursor over the blank field under *Search by Saved Query*.
2. The cursor transforms from an arrow to a palm.
3. Double click the blank field to open the *Query Manager* window.
4. Locate the required query, click it and choose *Open*.
5. The query name is entered in the field.

The *Define Formatted Search* window changes its display for the *Auto Refresh* option according to the selected field type: Title or Table.

Auto Refresh When Fields Change - Title Type Fields

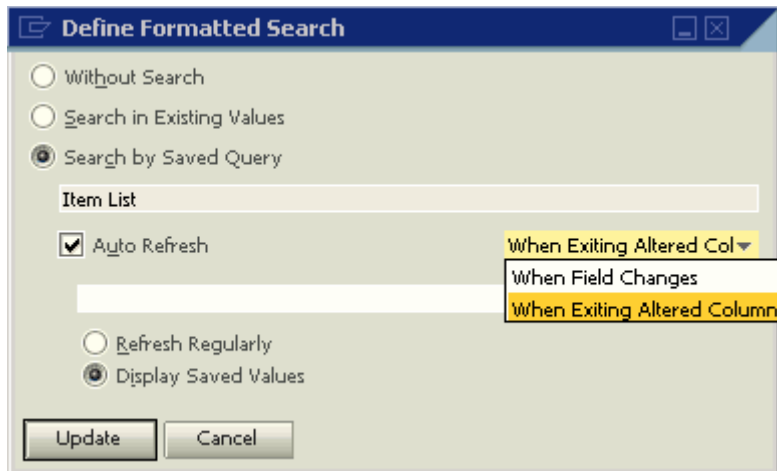


When the box *Auto Refresh When Fields Change* is **deselected**, the query linked to the field will be activated only when placing the cursor in the field and selecting from the menu bar *Tools* → *Search Function* → *Search* (or using the key combination Shift+F2).

Select the box *Auto Refresh When Fields Change* to enable an automatic refresh of the values in a field defined with a formatted search.

The meaning of Refresh is a re-execution of the linked query and the display of its results in the field to which it is linked.

Auto Refresh When Fields Change - Table Type Fields





When the box *Auto Refresh* is **deselected**, the query linked to the field will be activated only when placing the cursor in the field and selecting from the menu bar *Tools* → *Search Function* → *Search* (or using the key combination Shift+F2).




When the box *Auto Refresh* is **selected** an additional field is displayed on the right.

Two elements must be selected to conduct an Auto Refresh for a Table type field:

The first element is the field type used for the refresh operation: by Title field or by Table field.

The second element is the field name.

Field	Description/Activity
<i>When Fields Changes</i>	<p>Select to refresh the field when a Title field changes.</p> <p>Select the required field from the list of Title fields found in the drop down list located below the <i>Auto Refresh</i> box.</p> <p> Any change in the selected field will cause the search field to be refreshed. For example, a change in the selected Title field will refresh all the rows in the table.</p>
<i>When Exiting Altered Column</i>	<p>Select to refresh the field when a Table type field changes.</p> <p>Select the required field from the list of Table type fields found in the drop down list located below the <i>Auto Refresh</i> box.</p> <p> Any change in the selected field will cause the search field to be refreshed.</p>

Field	Description/Activity
<i>Refresh Regularly</i>	<p>Select to refresh the search field each time you open or browse to the document or window containing the formatted search.</p> <p>If the field is linked to a query that opens a multi-row Choose From List window, the first value appearing on the list will be selected.</p> <p> Avoid using the Refresh Regularly option under this type of query since it might affect documents you did not intend to affect.</p> <p></p> <ul style="list-style-type: none"> • The Refresh Regularly option should be used in specific cases only, since each time you browse to an existing document, all the formatted searches defined in the document are activated. This might cause the document to be displayed very slowly. • If you manually change a value retrieved by a formatted search and save the document, the next time the document is displayed, the manually changed value will be calculated again!
<i>Display Saved Values</i>	<p>Select to display the value saved in the field during the addition/update of the document. That is, the value saved in the database.</p> <p> The field will be refreshed only if you replace the field linked to the query.</p>



- Auto Refresh will not be implemented in fields that cannot be updated. For example, the G/L Account Code in an existing journal entry, the Item Number in an existing Delivery and so on.
- Auto Refresh + Refresh Regularly is similar to Auto Refresh + Display Saved Values, apart from the fact that the last one will not refresh the value when browsing or finding the document.



Limitation: When browsing through editable documents (such as Sales Orders), fields with Auto Refresh will be refreshed, however the document status will not change from *OK* to *Update*.

Updating a Linked Query

The link to the query is saved even if the actual query sentence is updated.

Procedure

To replace a linked query:

1. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2) to open the *Define Formatted Search* window.
2. Place the cursor over the query name, hold down the Ctrl key and double click the field.
3. The *Query Manager* window opens.
4. Select a new query by clicking its name and choose *Open*.
5. The new query name is entered in the *Define Formatted Search* window.
6. Choose *Update* to save your changes.



Retrieving Data by Linking a Query to a Search Field

Data can be retrieved in two ways by linking a query to a search field:

1. Data from the various database tables
2. Data from the current active window (form)

Data from the Current Active Window (Form)

You can retrieve two types of data from the active window:

Type	Description/Activity
<i>Table Data</i>	Refers to any table inside SAP Business One documents.  The Items table in sales and purchasing documents or journal entry rows in a journal entry.
<i>Title Data</i>	Refers to any data outside the table data  Document numbers and business partner codes in sales and purchasing documents or journal entry numbers in the journal entry window.

To retrieve data from the active window, a special query should be created. SAP Business One provides two different syntaxes for this type of query:

1. `${Tablename.Fieldname}`
 - **Tablename** – Indicates the table to which the active window relates.
 - **Fieldname** – The field from the active window.

2. ``${Field Index.Field Column.Number/Currency/Date/0}`

This syntax uses the field's index instead of the specific document table.

This query syntax includes 3 elements:

- **Field Index** - Each field in the active window can be related by a unique index.
- **Field Column** - If the required field is a Table field (Item Number, Item Description, Price, Quantity in sales and purchasing documents and so on) it has to be related by

index and column numbers. If the required field is a Title field, this element should be set to 0.

- **Number / Currency / Date / 0**
 - Use **Number** if the required field includes a number + a currency symbol (item price, document total), to retrieve the number (without the currency symbol or the unit of measurement). This separation is essential when the user wishes to use the price for arithmetic expressions.
 - Use **Currency** to retrieve the currency symbol or the unit of measurement.
 - Use **Date** If the required field is a Date field and it has to be used for computation
 - Use **0** if the field contains a single value (Quantity, Item Number, Item Description, Business Partner Code or Document Number)

Example 1

Objective

Retrieve the business partner code from the A/R Invoice window to the *Remarks* field in the A/R Invoice window.

Procedure

1. Open the *Query Generator* window.
2. In the *Select* area type `[$4.0.0]` or `[OINV.CARDCODE]`. The digit 4 stands for the business partner code's index. The first 0 digit indicates that the business partner code is a Title field. The last 0 digit indicates that the business partner code contains a single value.
3. Choose the *Execute* button.
4. Choose *Save* to save the query.
5. Open the *A/R Invoice* window.
6. Enter a business partner code in the *Customer* field.
7. Click the *Remarks* field.
8. To define the *Remarks* field as a search field, select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
9. Select *Search by Saved Query*.
10. Select the saved query.
11. Select *Auto Refresh When Fields Change*.
12. Click the drop down list and select *Customer/Vendor Code*.
13. Select *Display Saved Values*.

To test the search field, change the customer code in the A/R Invoice. Changing the customer code will update the *Remarks* field automatically.



It is recommended to use the string `[$4.0.0]` rather than the string `[OINV.CARDCODE]`, since the first one can be linked to search fields in any sales or purchasing document while the second one can be linked only to A/R Invoices.

Example 2

Objective

Retrieve the item number from an active *Sales Order* window into a user-defined field.

Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. Since the user-defined field properties should be identical to the Item Number properties, the user-defined field has to be alphanumeric, regular and with a length of 20 characters.
2. Open the *Query Generator* window.
3. In the *Select* area type `[$38.1.0]` or `[$RDR1.ITEMCODE]`
4. Save the query. The number 38 stands for the item index. The digit 1 stands for the item column. The digit 0 indicates that the item contains a single value.
5. Open the *Sales Order* window.
6. Type a customer code in the *Customer* field.
7. Type an item number in the *Item No.* column.
8. Locate the user field in the items table and place the cursor in it.
9. To define a formatted search for this user-defined field (step1), select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
10. Select *Search by Saved Query*.
11. Select the saved query (step 4).
12. Select the box *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the field *Item No.* field
15. Select *Display Saved Values*.

To test this search field, change the item number. Changing the item number will update the search field automatically.

Example 3

Objective

Retrieve the item price (the numeric value) from a sales or purchasing document window into a user-defined field.

Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. The user-defined field type - *Units and Totals*. Structure – *Amount*.
2. Open the *Query Generator* window.
3. In the *Select* area type `[$38.17.NUMBER]`. The number 38 stands for the price index. The number 17 stands for the *Price* column. NUMBER indicates the price's numeric value.
4. Save the query.
5. Open any sales or purchasing document window.
6. Type a business partner code in the *Customer* or *Vendor* field.
7. Type an item number in the *Item No.* column.
8. Locate the user-defined field (Step 1) in the document table and place the cursor in it.
9. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
10. Select *Search by Saved Query*.

11. Select the saved query you have created in step 3.
12. Select *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the *Price* field.
15. Select *Display Saved Values*.

To test this search field, change the price. Changing the price will update the search field automatically.



The numeric value retrieved to the user-defined field can be used for arithmetic expressions.

Example 4

Objective

Retrieve the item price currency (the currency symbol) from a sales or purchasing document window into a user-defined field.

Procedure

1. Create a new user-defined field in *Marketing Documents - Rows*. User-defined field type - *Alphanumeric*. Structure – *Regular*. Size – 3.
2. Open the *Query Generator* window.
3. In the *Select* area type `[$38.17.CURRENCY]`
4. Save the query.
5. Open any sales or purchasing document window.
6. Type a business partner code in the *Customer* or *Vendor* field.
7. Type an item number in the *Item No.* field.
8. Locate the user-defined field in the document table and place the cursor in it.
9. Select from the menu bar *Tools* → *Search Function* → *Define* (or use the key combination Alt+Shift+F2).
10. Select *Search by Saved Query*.
11. Select the saved query you have created in step 3.
12. Select *Auto Refresh*.
13. Select *When Exiting Altered Column*.
14. Select the *Price* field
15. Select *Display Saved Values*.

To test the search field, change the price currency. Changing the price currency will update the search field automatically.

Example 5

Objective

Retrieve the document's Posting Date + 20 days from any sales or purchasing document to the *Due Date* field.

Procedure

1. Create the query `[$10.0.DATE] + 20`
2. Link the query to the *Due Date* or *Delivery Date* field (depending on the document type).
3. Select *Auto Refresh*.
4. Select *When Field Changes*.
5. Select the *Posting Date* field.
6. Select *Display Saved Values*.

To test this search field, change the Posting Date. Changing the Posting Date will update the search field automatically.

Example 6

Objective

Retrieve the tax amount per 1 item unit from any sales or purchasing documents to a user-defined field.



To get the tax amount per 1 item unit, the price before tax has to be subtracted from the price including tax.

Procedure



- The string `[$38.17.NUMBER]` represents the price before tax.
 - The string `[$38.20.NUMBER]` represents the price including tax.
1. Create the query `[$38.20.NUMBER] - [$38.17.NUMBER]`
 2. Link the query to a user-defined field. Field type - *Units and Totals*. Structure – *Amount*.
 3. Select *Auto Refresh*.
 4. Select *When Exiting Altered Column*.
 5. Select the *Price* field.
 6. Select *Display Saved Values*.

To test this search field, change the item price. Changing the item price will update the search field automatically.

Example 7

Objective

In this example you will add the currency symbol to the value retrieved in example 6.

Since Tax is a numeric value and the currency symbol is an alphanumeric value, you need to use the SQL function `CAST`.

Procedure

1. Create the query: `CAST($[$38.20.NUMBER] - $[$38.17.NUMBER] AS VARCHAR(20)) + [$38.20.CURRENCY]`
2. Link the query to a user-defined field. Field type - *Alphanumeric*. Structure – *Regular*.
3. Select *Auto Refresh*.
4. Select *When Exiting Altered Column*.
5. Select the *Price* field.
6. Select *Display Saved Values*.



`AS VARCHAR (20)` indicates the size allocated to the subtraction result.

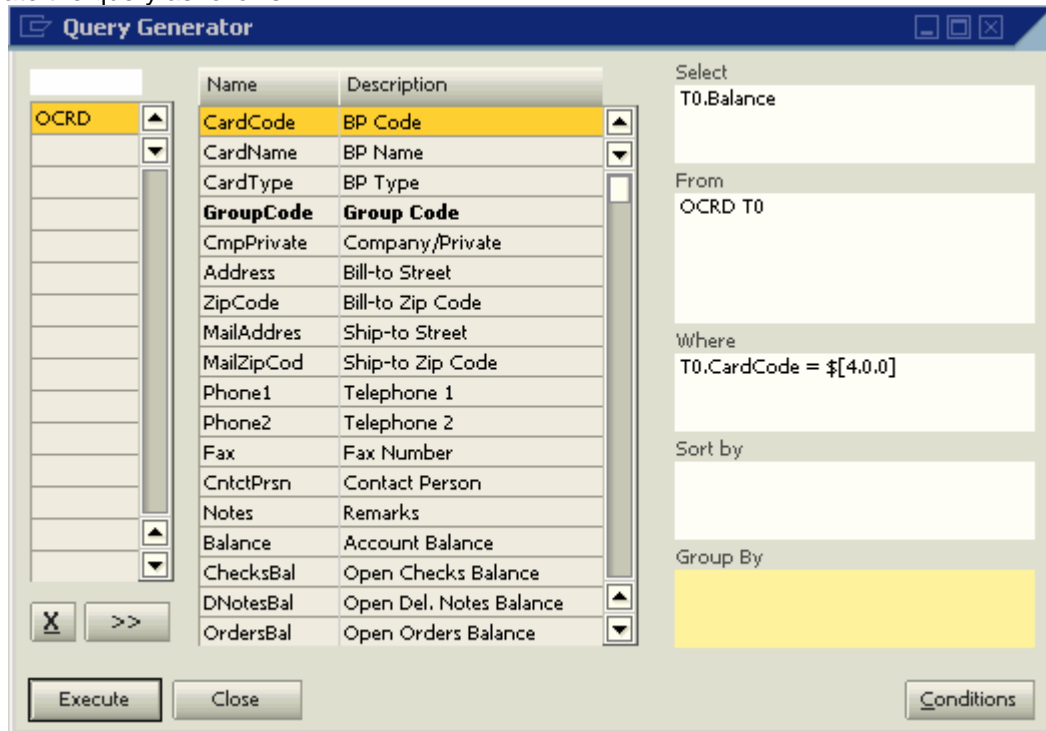
Example 8

Objective

Retrieve the business partner's bookkeeping balance to a sales or purchasing document.

Procedure

1. Create the query as follows:



2. Link the query to a user-defined field. Field type - **Units and Totals**. Structure – **Amount**.
3. You now face three options to refresh the *Balance* field:
 - If you deselect the box *Auto Refresh When Fields Change*, each time you click the *Balance* field and select *Search* from the *Search Function* menu (or use the key combination Shift+F2), the current business partner balance will be entered to it.
 - If you select the box *Auto Refresh When Fields Change* **and** select the *Refresh Regularly* option, each time the refreshed field selected in the *Define Formatted Search* window changes, the *Balance* field will be refreshed. The current business partner balance will be entered to the *Balance* field. The balance will be refreshed each time you browse or find the document. In other words, if the business partner's balance has changed since the document had been issued; the updated balance will be displayed in the *Balance* field each time you enter the document.
 - If you select the box *Auto Refresh When Fields Change* **and** select the *Display Saved Values* option, each time the refreshed field selected in the *Define Formatted Search* window changes, the *Balance* field will be refreshed. The current business partner balance will be entered to the *Balance* field. However, the balance **will not** be refreshed each time you browse or display the document. You can, however, change the *Balance* field manually.

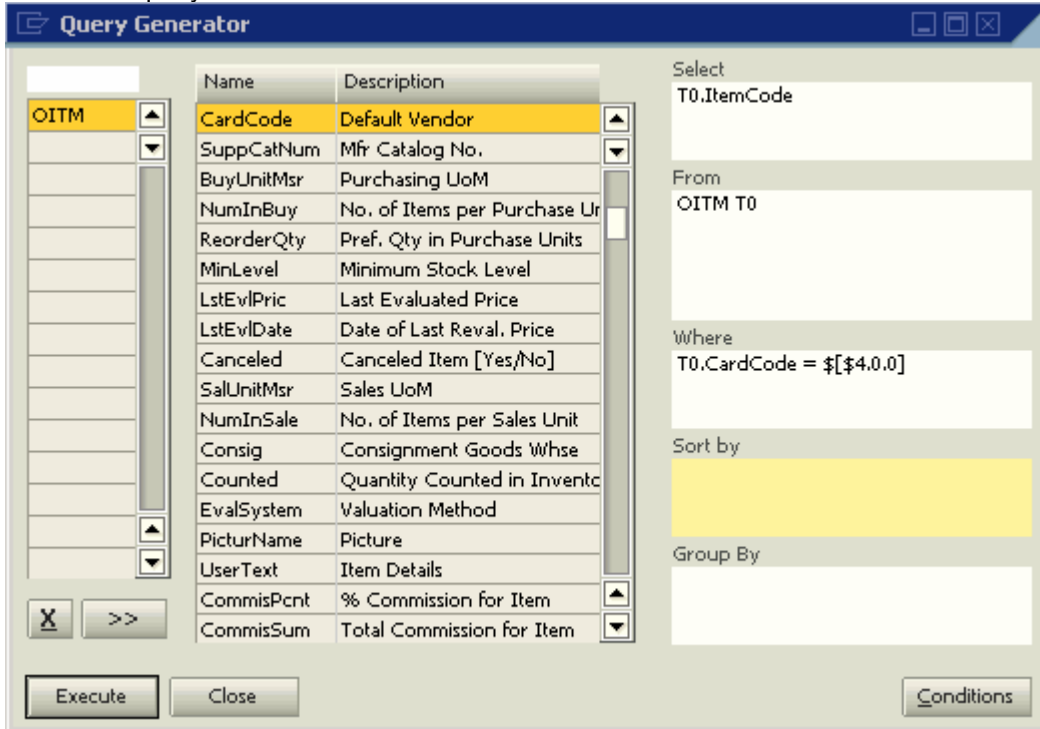
Example 9

Objective

Retrieve to a purchasing document, items from the *Item Master Data* window in which the *Default Vendor* field is identical to the *Vendor Code* selected in the document.

Procedure

1. Create the query as follows:



Name	Description
CardCode	Default Vendor
SuppCatNum	Mfr Catalog No.
BuyUnitMsr	Purchasing UoM
NumInBuy	No. of Items per Purchase Ur
ReorderQty	Pref. Qty in Purchase Units
MinLevel	Minimum Stock Level
LstEvlPric	Last Evaluated Price
LstEvlDate	Date of Last Reval. Price
Canceled	Canceled Item [Yes/No]
SalUnitMsr	Sales UoM
NumInSale	No. of Items per Sales Unit
Consig	Consignment Goods Whse
Counted	Quantity Counted in Inventc
EvalSystem	Valuation Method
PicturName	Picture
UserText	Item Details
CommisPcnt	% Commission for Item
CommisSum	Total Commission for Item

Select
T0.ItemCode

From
OITM T0

Where
T0.CardCode = \${4.0.0}

Sort by

Group By

Execute Close Conditions

2. Link the query to the *Item No.* field in the required purchasing document.

Example 10

Objective

Copy a Sales Quotation to a Purchase Order.



If an item in the Sales Quotation is found in more than one row, the *Quantity* field will be incorrect.

Procedure

1. Select from the menu bar *Tools* → *User-Defined Fields* → *Manage User Fields*. Click on *Marketing Documents* and click on *Title*.
2. Create a user-defined field and name it *QUOTNO*.
3. To retrieve items from the required Sales Quotation, create the following query: `SELECT T0.ITEMCODE, T0.QUANTITY, T1.DOCNUM FROM QUT1 T0 INNER JOIN OQUT T1 ON T0.DocEntry = T1.DocEntry WHERE T1.DocNum = ${OPOR.U_QUOTNO}`
4. Name the query: *Get Items from Quotation to Purchase Order*.
5. To retrieve each item's quantity from the required Sales Quotation, create the following query: `SELECT T0.QUANTITY, T0.ITEMCODE, T1.DOCNUM FROM QUT1 T0 INNER JOIN OQUT T1 ON T0.DocEntry = T1.DocEntry WHERE T1.DocNum = ${OPOR.U_QUOTNO} AND T0.ITEMCODE = ${38.1.0}`
6. Name the query: *Get Quantity from Quotation to Purchase Order*.

7. Open the *Purchase Order* window.
8. Display the user-defined fields (*View → User-Defined Fields*).
9. Link the query *Get Items from Quotation to Purchase Order* to the *Item No.* field.
10. Link the query *Get Quantity from Quotation to Purchase Order* to the *Quantity* field.
11. Select the box *Auto Refresh*.
12. Select the *Item No.* field.
13. Select *Display Saved Values*.
14. Enter the required Sales Quotation number in the *QUOTNO* user-defined field.
15. Click the *Item No.* field in the first row of the table.
16. Press Shift+F2.
17. Select the required items from the list.
18. The *Quantity* field is updated automatically.

Example 11 - Referring to User Tables in Formatted Search Queries

Use

A user table can be used for storing different types of data. Later, the formatted search functionality can be used to retrieve required data from this user table.

Objective

When creating a business partner, the user wishes to select the Zip Code of the business partner from predefined data storage according to the country, city and address.

Procedure

1. Select from the menu bar *Tools → User-Defined Fields → Manage User Fields*, create a User Table. Name it *ZIP*.
2. Add to the *ZIP* table the fields as follows: Country, City, Street, and ZipCode.
3. Fill this table manually (using *Tools → User Tables*) or automatically (by importing data into the *@ZIP* table using an existing list of addresses).
4. The *Code* and *Name* fields are created automatically when creating a user table. You can enter successive numbers into these fields.
5. Create the query:

```
SELECT T0.U_ZipCode FROM [@ZIP] T0 WHERE T0.U_City = ${CRD1.City} and
T0.U_Country = ${CRD1.country} AND T0.U_STREET = ${CRD1.STREET}
```
6. Name the query: *Getting zip code from user table*.
7. Open the *Business Partner Master Data* window.
8. Switch to Add mode.
9. Type a business partner code in the *Code* field.
10. Choose the *Addresses* tab.
11. Choose *Bill to* or *Ship to*.
12. Type the address, city and country.
13. Link the query *Getting zip code from user table* to the *Zip Code* field.
14. Place the cursor in the *Zip Code* field and press Shift + F2 to execute the formatted search.

15. As a result, the required zip code will be retrieved from the user table @ZIP.

Example 12 - Additional Functions for Formatted Search Queries

Use

The current user logged in SAP Business One can be retrieved using the string `$(USER)`.

The current posting period can be retrieved by using the string `$(PERIOD)`.

Objective

When creating a new document, the user wishes to display the document's creator name in the *Remarks* field.

Procedure

1. Create the query:

```
SELECT T0.u_name FROM OUSR T0 WHERE T0.internal_k = $(USER)
```

2. Link the query to the *Remarks* field in the document.



The `$(USER)` string and the `$(PERIOD)` string can be used from any window in SAP Business One.

Example 13 – Entering Line Breaks in a Formatted Search Query

Objective

A user wishes to display the user name in a document along with a proper text and line break between the text and the user name.

The required display: "*This document was created by: User Name*"

Procedure

1. Use the query:

```
SELECT 'This document was created by: ' + char(13) + (SELECT T0.u_name  
FROM OUSR T0 WHERE T0.internal_k = $(USER))
```

Special Notes Regarding the Refresh Regularly Option

The option to refresh a formatted search query regularly should be used very carefully.

The following example demonstrates the consequences of using Refresh Regularly in an unnecessary situation.

Objective

A user wants to open a limited list of items from a certain Item Group named *Printers* as a default in the *Sales Order* window.

Procedure

1. Create the query as follows:

```
SELECT T0.ItemCode FROM OITM T0 INNER JOIN OITB T1 ON T0.ItmsGrpCod =  
T1.ItmsGrpCod WHERE T1.ItmsGrpNam = 'Printers'
```

2. Name the query "*Printers List*".
3. Link this query to the *Item No.* field in the *Sales Order* window.
4. Select the box *Auto Refresh*.
5. Select *When Field Changes*.
6. Select *Customer/Vendor Code*.

The Auto Refresh will cause undesired results in 2 cases:

- When opening the *Sales Order* window, SAP Business One will automatically select the first item retrieved by the query "*Printers List*".
- When opening an existing Sales Order (Status = Open), SAP Business One will replace each existing item in the Sales Order with the first item retrieved by the query "*Printers List*".

The Refresh Regularly option might cause undesired results in some other cases.

Objective

When creating a Sales Order, the user is interested in displaying the customer's account balance.

Procedure

1. Create a user-defined field in *Marketing Documents - Title*. Name it "*Balance*".
2. Field properties: Type – *Units and Totals*, Structure – *Amount*.
3. Open the *Query Generator* and create the query:

```
SELECT T0.Balance FROM OCRD T0 WHERE T0.CardCode = ${ORDR.CardCode}
```
4. Name the query "*Business Partner Balance*".
5. Link the query "*Business Partner Balance*" to the field "*Balance*".
6. Open the *Sales Order* window.
7. Display user-defined fields (*View* → *User-Defined Fields*)
8. In the field "*Balance*" select from the menu bar *Tools* → *Search Function* → *Search* (or use the key combination Shift+F2) to execute the formatted search.
9. As a result, the system displays the business partner's bookkeeping balance.

10. Select items in the Sales Order and add it.

When browsing to this Sales Order after the customer was credited or debited for additional postings, the Refresh Regularly option will change the balance in the Sales Order to the current balance and will not to the balance which was displayed when the Sales Order was issued. However, the current balance will not be saved in the database unless the Sales Order is updated, that is, choosing *Update* in the document window.

To avoid this, use the Display Saved Values option.

Defining Formatted Search in Fields Influenced by Other Fields

There are some fields in the system which might be affected when updating other fields.

Examples in sales and purchasing documents:

- Updating the *Discount* field in a row affects the *Price After Discount* and the *Row Total* fields
- Updating the *Row Total* affects the *Discount* and the *Price After Discount* fields
- Updating one of the *Factors* affects the *Quantity* field
- Updating the *Quantity* sets the *Factor* values to 1

When defining formatted search for this type of fields you should take into consideration that the value which was retrieved by executing the formatted search might be affected by the update of certain fields in SAP Business One, as mentioned earlier.

Troubleshooting

Analyzing Problems when Executing a Formatted Search

When executing a formatted search from a field linked to an incorrect SQL query, SAP Business One might display an error message in the status bar or do nothing while a specific result is expected.

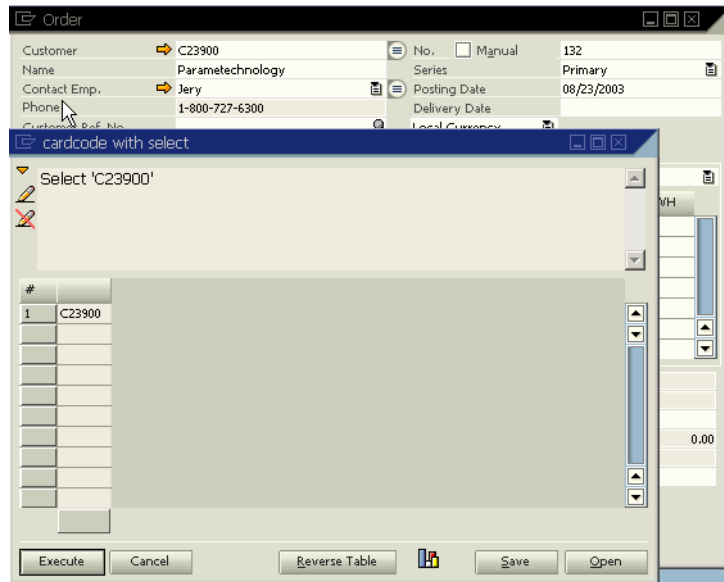
This means that the formatted search does not work.

To get detail information about the cause of the problem you should run the formatted search query manually while the window referring to the formatted search is open.

Common Errors

1. Open Window

When opening a query which refers to a specific window while this window is open, do not save the query since then the field's references will be replaced by the current values.



2. Error Converting Data Type

To simplify this issue, use the query:

```
${RDR1.Quantity} * 2
```

This query is incorrect since it is impossible to multiply the string `${RDR1.Quantity}`, which is a non-numeric value, by the number 2, which is a numeric value.

Correct query syntax is:

```
${RDR1.Quantity.number} * 2
```

3. "Character number is greater than allowed"

This error message is displayed when the result of a formatted search contains a number of characters which is greater than allowed for the field related to the formatted search.

Update the field's size according to the maximum expected result (relevant only to user-defined fields). Otherwise, if the field is a system field, adjust the result to the field's size.

4. "Error -1003"

Several reasons might cause this error:

- The formatted search query refers to a field which does not exist
- A common mistake is to use a user-defined field without the "U_" prefix
- SQL syntax error
- A Space is missing between the Equal sign (=) and the field/string before the Equal sign
- Comparing a field of Alpha type to a variable such as [%0] without using a single quotation mark → ['%0']
- No values were returned after executing a formatted search

Fields Indexes for the Formatted Search Function

Item Type Documents Index Numbers and Column Numbers



The 'text' in the field name indicates the field header (rather than the field content)

Field Name	I	C
Items	3	
Summary Type	75	
Currency Type	70	
Document Currency	63	
Customer/Vendor (text)	5	
Customer/Vendor	4	
Name (text)	55	
Name	54	
Contact Emp. (text)	83	
Contact Emp.	85	
Manual	78	
No. (text)	9	
No.	8	
Posting Date (text)	11	
Posting Date	10	
Due Date (text)	13	
Due Date	12	
Customer Ref. No. (text)	15	
Customer Ref. No.	14	
Series (text)	84	
Series	88	
Code/Catalog no.	79	
Item Number	38	1
Catalog No.	38	2
Item Description	38	3
Bar Code	38	4
Catalog No.	38	5
Serial Number	38	6
Factor 1	38	7
Factor 2	38	8
Factor 3	38	9
Factor 4	38	10

Field Name	I	C
Quantity	38	11
Base Units	38	12
No. of Packages	38	13
Price w/o Dscnt	38	14
Discount %	38	15
Rate	38	16
Price	38	17
Tax Code	38	18
Price Including Tax	38	20
Total (LC)	38	21
Total (SC)	38	22
Total (Doc)	38	23
Whse	38	24
Del. Date	38	25
SE Code	38	26
SE	38	27
Comm. %	38	28
Acct. No.	38	29
Costing Code	38	30
Project Code	38	31
Open Qty.	38	32
On Hand	38	33
Sales Order	38	34
Committed	38	35
COGM	38	37
BOM Type	38	39
Tgt. Tab.	38	41
Target Key	38	42
Base Type	38	43
Base Ref.	38	44
Base Key	38	45
Base Row	38	46
BP Card	38	49
Length	38	53
Width	38	54
Height	38	55
Volume	38	56
Vol. Unit.	38	57

Field Name	I	C
Weight	38	58
Total Tax (LC)	38	82
Total Tax (Doc.)	38	83
Block No.	38	86
Import Log	38	87
Acquis.	38	88
Total Before Discount (text)	23	
Total Before Discount	22	
%Discount (text)	25	
%Discount	24	
Discount Sum	42	
Tax (text)	99	
Tax	27	
Total (text)	30	
Total	29	
Paid/Credited (text)	32	
Paid/Credited	31	
Balance Due (text)	34	
Balance Due	33	
Remarks (text)	17	
Remarks	16	
Journal Remark (text)	19	
Journal Remark	18	
Sales Employee (text)	21	
Sales Employee	20	
Payment Terms (text)	48	

Service Type Documents Index Numbers and Column Numbers

Field Name	I	C
Items	3	
Summary Type	75	
Currency Type	70	
Document Currency	63	
Customer/Vendor (text)	5	
Customer/Vendor	4	
Name (text)	55	
Name	54	
Contact Emp. (text)	83	
Contact Emp.	85	
Manual	78	
No. (text)	9	
No.	8	
Posting Date (text)	11	
Posting Date	10	
Due Date (text)	13	
Due Date	12	
Customer Ref. No. (text)	15	
Customer Ref. No.	14	
Series (text)	84	
Series	88	
Code/Catalog no.	79	
Description	39	1
G/L Account	39	2
Costing Code	39	3
Project Code	39	4
Price w/o Dscnt	39	5
Discount %	39	6
Rate	39	7
Price	39	8
Tax Code	39	9
Tax%	39	10
Price Including Tax	39	11
Total (LC)	39	12
Total (SC)	39	13
Total (Doc)	39	14
SE Code	39	15

SE	39	16
Commission %	39	17
Open Amount	39	18
Tgt Type	39	21
Target Key	39	22
Base Type	39	23
Base Ref.	39	24
Base Key	39	25
Base Row	39	26
Base Card	39	28
Tax Total (LC)	39	32
Acquis.	39	35
Total Before Discount (text)	23	
Total Before Discount	22	
%Discount (text)	25	
%Discount	24	
Discount Sum	42	
Tax (text)	99	
Tax	27	
Total (text)	30	
Total	29	
Paid/Credited (text)	32	
Paid/Credited	31	
Balance Due (text)	34	
Balance Due	33	
Remarks (text)	17	
Remarks	16	
Journal Remark (text)	19	
Journal Remark	18	
Sales Employee (text)	21	
Sales Employee	20	
Payment Terms (text)	48	
Payment Terms	47	

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