
QueryOptimizer

Total acceleration and efficient management
of iSeries queries

User manual



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Screens

The screen shots displayed in this manual apply to the real layout up to a certain extend.

Data carrier

If you are receiving an update during servicing, we like to ask you to return the old data carrier to us.
Thank you!

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1.0 General Information

1.1 Targets and Profit

With QueryOptimizer you are receiving a useful tool, which enables you to efficiently manage and massively accelerate you queries out of Query/400

In order to be able to get the optimal use out of QueryOptimizer, your first step should be the take-over of your already existing queries into the management of the QueryOptimizer. By using the intelligent choices and search functions you can get a overview of you queries. There are two functions to be emphasised:

Minimize the options of the displayed queries successively by giving generic details of the directory name, file name, query name, as well as the description text of the query.

Use the search function which enables you to effectively search by using extensive criterions as e.g., author, date, amount of files, fields etc., when last used, periods and others. Especially the last two named criterions make it easy on clearance work.

Either out of the Management or over the deductive menu points and commands, you can identify the long running jobs and CPU-Killers under the queries and optimize them afterwards. Accelerations by hundreds folds have been achieved at Beta-customers!

Not a minor important function is the classification of queries to users and user groups. It should be pointed out that the classification happens by free definable names. The defined user doesn't need to be a registered user on the iSeries. The advantage is, that you can assign queries to departments e.g. Purchasing Department, Invoicing Department, Sales Department. This function has a command ready (API), which can be linked into your applications or menus. For the first time you can display to your user an overview of only „his“ queries.

1.2 Terms of Use

The software QueryOptimizer can only be used on the machine (serial number, model, processor) which has been defined on the ordering form. A system change, respectively an upgrade, requires a new password and if applicable a licence fee. Please request an written offer. The licence of the QueryOptimizer is only bounded to the iSeries, not to the quantity of users which are working with it.

1.3 Technical Requirements

Your system iSeries, respectively AS/400 requires Operating System OS/400 from Version 4 Release 2 (RISC) and the IBM Licence program Query/400.

1.4 Extension of Testing period

If you have not been able to test the software extensively during the testing period, please give us a call and we can extend the testing period over the phone.

1.5 Comments / Improvements to the manual

This menu is a new edition, past experience has shown **that spelling mistakes**, as well as **printing errors** can occur or even that some sections are not described thoroughly enough out of your point of view.

If you find that improvements or additions would be of use, **please correct the pages of the manual accordingly and send them to us..**

Actuality

We are trying to be as up to date as possible. It could happen though, that the manual is not in accordance with the latest Software-Level. In this case, you will always find the most actual information under document Neuerungen Version x.xx, which is enclosed with the respective data carrier

Screens

The iSeries masks displayed in this manual only correspond to the real layout up to a certain extend.

1.6 Functioning keys

The function keys used in the program correspond to the SAA-Standard. In order to avoid repeating the most common used keys are described below:

F1 – Help key

Shows the online user help for the actual mask

F3 - Escape program

Exits the actual program and displays the menu

F4 - Selection/User guide

Displays all possible entries within this field.

F5 - Updating

Updates the display with the newest data

F6, F7, F8

Various functions, depending on the single **Teilmasken**

F9

Displays all parameter of the command

F10 – File sort, User sort, Query sort

Displays query analogous of the menu points 5, 6, 7

F11 - More Information

Display of detailed information, depending on the single **Teilmasken**

F12 - Back

Jumps back one step within the program..

F15 - Search

Choice of extensive criterions

F17 – Unlock/lock text

With the help of this function key, the description line is being identified with a query in order to unlock or lock it for alterations.

F20 – Print list

D Prints a list of all actual chosen queries

F21 – Command line

Links up a command line for entering an OS/400 command

F22 – Multi Delete

Deletes the queries of the actual choices out of the QueryOptimizer's overview

F23 – Further Details

If there are more options within the selection line, as displayed on the screen, you can have the additional ones displayed by using F23.

F23 – Link-/Unlink-Mode

Displays en- and excludes logical files for Service and Update purposes.

F24 – Further Keys

If there are more functioning keys within the functioning key line, as displayed on the screen, you can have the additional ones displayed by using F24.

1.7 Quick Entry

For the „impatient and the system familiar users“ we recommend the quick entrance with

- Installation of the Software as described in chapter 2 **Installation**
- Enter command **QRYOPT**

2.0 Installation

The installation of QueryOptimizer requires the installation of the Software on the iSeries, there is no configuration of the Software necessary.

During an upgrade, the installation program takes existing data into consideration. Even the passwords are being maintained.

2.1 Software-Installation

Please log on as **QSECOFR** on the iSeries.

Update: In case of an Update, please make sure that nobody is working with the QueryOptimizer or is active in the menu

Insert the CD-ROM into the according unit and type in the following command:

LODRUN DEV(xxx)

For xxx please enter the name of your installation unit (e.g. OPT01).

The command LODRUN is installing the objects on the iSeries. You will be informed of the installation progress in the status line. After the installation of the objects the following installation mask will appear::

```
QueryOptimizer Installation (QRYOPTINS)

Make choice and press enter

Language . . . . . DE                EN, DE
separate Data library . . . . . *YES   *NO, *YES
Library for QRYOPT-Command . . . . . QGPL   Name
Determine Query Information . . . . . *NO   *NO, *YES
Start Query Optimisation . . . . . *NO    *NO, *YES
Update of Version . . . . . *NONE       Zeichenwert, *NONE

                                                                 Ende

F3=Verlassen   F4=Bedienerf.   F5=Aktualisieren   F12=Abbrechen
F13=Verwendung der Anzeige   F24=Weitere Tasten
```

Installation mask QueryOptimizer

Language

Here you enter the language which you would like to use. You can choose between DE (German) and EN (English).

Separate File Library

Enter here if the data and program objects should be memorised separately. If *YES is entered the library AGXFQYDTA XE is being opened and the Data bank (administration data) will be created within this library. While carrying out QueryOptimizer AGXFQYDTA is being automatically pre-adapted

Library for QRYOPT- Command

Choice of library, in which the start command of the QueryOptimizer (QRYOPT) is being memorised. Under normal circumstances the library QGPL is a component of the library list of all users and therefore useful as default value

Determine Query-Information

If *YES is entered here, after successful installation all the information of the existing queries are being taken over into the administration of the QueryOptimizer. This step is being recommended to do be done separately after the installation process..

Start Query-Optimising

If *YES is entered here, all existing queries will be optimized after the successful installation. Mandatory for the optimising process is - First installation, then optimization. Therefore do this step after the installation process and the analysis.

Update of Versions

If QueryOptimizer had already been installed on the machine, the existing libraries in AGXFQYOLD respectively AGXFQYDOLD have been renamed. Out of this, the version number is automatically being determined. If despite of the existing installation, the data files have not been carried over or if it happens to be a new installation you can enter the special value "**NONE".

Library with old data

Here you can find the name of the library out of which the data with already analysed and optimized queries is being taken

2.2 Password

After the first installation, the included provided **passwords** must be entered into the system according to the instructions, which you find in the letter (command INSPSW). In case the password has not been included, please request it by phone (see page 2 for contact information).

2.3 Deinstallation

In case you no longer wish to use QueryOptimizer on your system, you must first close all activities with the QueryOptimizer. In case you have entered the library name AGXFQY in your job description (JOB) or in the system value (system values) (for example QUSRLIBL), it needs to be deleted from there. Afterwards you log out of the system and back on as QSECOFR. By using the following commands

```
DLTLIB AGXFQY
```

```
DLTLIB AGXFQYDTA
```

```
DLTCMD QGPL/QRYOPT
```

all existing QueryOptimizer objects will be deleted. The deletion is only possible if no job is using the library AGXFQY (therefore exit menu prior!).

Diese Seite bleibt frei!

3.0 The menus of the QueryOptimizer

3.1 The QueryOptimizer main menu

By using the following command, after the successful installation of the program, you can call up the QueryOptimizer-menu:

QRYOPT

The following menu will appear:

```
QRYOPT                      QueryOptimizer Menu

Choices:

      ** commands **                      ** User view **
1. Analyse Query                        9. . Display user Query
2. Optimise Query
3. Determine Query CPU-capacity
4. Update Index Information

      ** Query-Administration **          ** Other **
5. Sorting by Query name                99. Display program versions
6. Sorting by File name
7. Sorting by user
8. Index-Administration

Enter choice or command
===>

F3=Verl.  F4=Bed.frg. F9=Auffinden  F12=Abbrechen
F13=Unterstützende Informationen  F16=AS/400-Hauptmenü
```

Main menu QueryOptimizer (Administer-View)

The menu is being subdivided in 4 sections:

1. Sector „Commands“

At this point the existing queries are being taken over into the management of the QueryOptimizer, the CPU-capacity of the queries are being determined, queries are being optimized and the Index information of the queries is being updated. For these actions the following commands are available:

- | | |
|------------------|----------------------------------|
| QRYOPTMDB | Analyze Query |
| CROPTQRY | Optimize Query |
| GETQRYCPU | Determine query for CPU-capacity |
| UPDOPT | Update Index-Information |

2. Sector „Administration“

Within the Query-Administration, the queries are being displayed and managed by query- or file name without library limit

3. Sector „User-view “

On using the user-view, you can either assign a query to one user or to a group of users, as well as have the query displayed. To your availability is the following command (**QRYOPTUSR**), which enables you to integrate the display of user-queries into own applications or Start programs. The user-views can either be pulled up by menu options 5,6 and 7, or changed into out of the menu points by using function key **F10**.

4. Sector „Other“

This function enables you to display the actual installed version of the QueryOptimizer within the status line.

Following the choices of the QueryOptimizer-Menu are being described more thoroughly.

4.0 Sector „Commands“

With the help of “Command“ you are, so to say, getting the queries prepared for „real usage“. You are taken over the on you system existing Queries into the administration of the QueryOptimizer.

Herewith you begin with the „analysis“ of the existing systems, with the menu point **1** of the main menu.

4.1 Analize Query

After calling up the first menu, the following screen will appear

```
QueryOptimizer Datacollector (QRYOPTMDB)

Make choice and press enter

QRY-Name . . . . . Name, generic*, *ALL
Library . . . . . Name, *CURLIB, *LIBL, *ALL
Choice . . . . . *ALL *ALL, *NEW
SQL-Extrakt . . . . . *NO *NO, *YES, *SEU, *EDTF
JOB-queue . . . . . *JOB Name, *JOB
```

Analyze Query

In this screen mask (or as an alternative by using the command **QRYOPTMDB + F4**) you decide which Queries, are being taken over into the administration of the QueryOptimizer

QRY-Name

Here choose the queries, which should be taken over into the administration of the QueryOptimizer.

Valid values are:

Name By giving the name of an single query, only a single query will be analysed

Name* By giving a generic name, all queries beginning with this particular name part will be analysed

***ALL** If you wish to analyse all queries of one library, or all queries of the system choose *ALL

For the first run the use of ***ALL** for Query-Name and Library is being suggested, this will ensure that all on the system existing Queries are being taken over into the administration of the QueryOptimizer.

Comment:

On the Query-Definition and the existing Objects (*QRYDFN) themselves, nothing is being changed or exchanged through the take over process into the administration.

Library

Please enter here the library name (s) in which the Queries are supposed to be analysed.

Valid values are:

- | | |
|---------------|---|
| Name | The name of a library which queries are to be analysed |
| *LIBL | The queries of all libraries listed in the library list of the active job are being analysed. |
| *CURLI | The queries of the actual library of the job are being analysed. |
| *ALL | All Libraries are being searched by the in the parameter QRY named queries. |

Selection

With the help of this parameter you control if all or only one query is being taken into the analysis.

Valid values are:

- | | |
|-------------|---|
| *ALL | All given queries within the parameter QRY and Library are being analysed. |
| *NEW | For this Analyzis, only the new created queries since the last run, are being taken into consideration. |

Please note:

The use of the option ***ALL** is being recommended on a regular basis. That way it is being assured that deleted queries also disappear out of the administration.

SQL-Extract

This parameter gives you the possibility, to create SQL-Anweisungen along to the queries

Valid values are:

- | | |
|--------------|--|
| *YES | The SQL-Statements of the analysed query are being saved under the file "QRYOPTSQL" (under the query-library). |
| *SEU | The SQL-Statements are being created and displayed under the system editor (SEU). In these cases it is important, that within the parameter job queue INTER is being given / named. |
| *EDTF | Enables the filing of the SQL-Statements into a IFS-file with following call up of the ASCII-File-Editors. Here it is also important to give INTER within the parameter Job queue. |

Job-Queue

Please enter here the name of the job queue, over which this job is supposed to be worked off.

Valid values are:

- Name** The name of an existing job queue within your system. Please make sure that you are using a job queue which is assigned to a Subsystem and which (if possible) only allows to run one job at a time, in order to avoid a parallel processing.
- *JOBID** The job queue of the actual job description is being used.
- INTER** The job is being processed inter active on the screen. If a Screen display connected with command (through SQL-Extract *SEU or *EDTF), the following setting needs to be chosen.

4.2 Optimize Query

While optimising, the system creates Index files for the chosen queries, which are responsible for acceleration of the queries. The acceleration which is needed, depends on the complexability of the query, as well as the therefrom arising formation of intelligent, logical files.

Similar as on the screen „analysing Query“ the queries which are supposed to be optimized are being specified here.

```
Optim. Query-Index erstellen (CRTOPTQRY)

Auswahl eingeben und Eingabetaste drücken.

QRY-Name . . . . . Name, generisch*, *ALL
Bibliothek . . . . . Name, *CURLIB, *LIBL, *ALL
CPU-Belastung ermitteln . . . . *BOTH *NONE, *AFTER, *BOTH
Bibl. für Index . . . . . QGPL Name, *PF, *QUERY
JOB-Warteschlange . . . . . *JOBID Name, *JOBID
```

Optimize Query

QRY-Name

Please choose the queries, which are supposed to be optimized.

Consider / Bear in mind, that through giving the information *ALL in „QRY-Name“ and „library“ all on your system existing query are being optimized. This can lead to long waiting periods, as well as to a high CPU-capacity

Furthermore there are logical files being created in order to optimize queries. Depending on your system surrounding you need to decide if the advantage of a quicker query makes up for the disadvantage of higher maintaining effort of the logical files during the continuation of the files, do to for each writing operation of an physical files the logical files need to be updated as well.

Valid values are:

- Name** By giving the name of an single query, only a single query will be analysed.
- Name*** By giving a generic name, all queries beginning with this particular name part will be analysed.
- *ALL** If you wish to analyse all queries of one library, or all queries of the system choose *ALL.

Library

Please enter here the library name (s) in which the Queries are supposed to be analysed.

Valid values are:

- Name** The name of a library which queries are to be analysed
- *LIBL** The queries of all libraries listed in the library list of the active job are being analysed.
- *CURLIB** The queries of the actual library of the job are being analysed.
- *ALL** All Libraries are being searched by the in the parameter QRY named queries.

Determine Query CPU-Capacity

One aspect of the optimising process is the improvement of the terms / periods of queries. This term / period is being measured by the simulation of the query and as information adapted into the analysed queries. Here you can give details on how the determination of the running time should take place.

Valid values are:

- *NONE** No determination of the CPU-capacity takes place.
- *AFTER** After successful optimization, the CPU-Capacity is being determined and the information is being placed into data record of the query.
- *BOTH** By choosing this function you can either start a simulation run prior or after the optimization process and are able to see directly the performance improvement in the overview of the queries.

Comment:

The CPU-Capacity is being determined through the carry out process of the referred query. Do you have so called "long running jobs" in your system, the

system will be - particularly through the *BOTH function - heavily strained. Postpone such „actions“ into the more quiet evening hours of your business day.

Library for Index

Here the library is being chosen, in which the (through the optimising process) automatically created Index files are being kept.

Valid values are:

- QGPL** The logical files OPTI... are being accumulated in the library QGPL.
- *PF** The logical files are being stored in the same libraries where also the matching physical files are being accumulated
- *QUERY** The logical files are being stored in the same libraries as the queries..

Job-Queue

Please enter here the name of the job queue, over which this job is supposed to be worked off.

Valid values are:

- Name** The name of an existing job queue within your system. Please make sure that you are using a job queue which is assigned to a Subsystem and which (if possible) only allows to run one job at a time, in order to avoid a parallel processing.
- *JOB** The job queue of the actual job description is being used.
- INTER** The job is being processed inter active on the screen.

4.3 Determine CPU-Capacity

This function serves the measurement of the CPU-Capacity of analysed queries. As explained in the previous command, these queries are being simulated and the determined running time information is being placed into the data record of the respective query.

This command can also be called up, while entering **GETQRYCPU + F4**

```

                                Query-CPU-Belastung ermitteln (GETQRYCPU)
Auswahl eingeben und Eingabetaste drücken.
QRY-Name . . . . . Name, generisch*, *ALL
Bibliothek . . . . . Name, *CURLIB, *LIBL, *ALL
JOB-Warteschlange . . . . . *JOB Name, *JOB
```

Determine CPU-Time of Queries

QRY-Name

Please choose the queries, for which you like to simulate a CPU-capacity.

Comment:

Bear in mind, that through giving the information *ALL in "QRY-Name" and "library" all on your system existing queries are being simulated. This can lead to long waiting periods, as well as to a high CPU-capacity.

Valid values are:

- | | |
|--------------|--|
| Name | By giving the name of an single query, only a single query will be simulated. |
| Name* | By giving a generic name, all queries beginning with this particular name part will be simulated. |
| *ALL | If you wish to simulate all queries of one library, respectively all queries of the system, choose *ALL. |

Library

Please enter here the name of the library(s) of which the queries are to be simulated.

Valid values are:

- | | |
|----------------|--|
| Name | The name of the library of which the query is to be simulated |
| *LIBL | The queries of all libraries on the library list of the actual job are being simulated. |
| *CURLIB | The queries of the actual library of the job are being simulated. |
| *ALL | All libraries are being searched for the named queries as given in the parameter QRY-Name. |

Job-Queue

Enter the name of the job-queue over which this job is supposed to be worked off.

Valid values are:

- | | |
|--------------|--|
| Name | The name of an existing job-queue in your system. Please make sure that you are using a job-queue which is assigned to a subsystem and if possible only allows one job at a time, in order to avoid a parallel processing. |
| *JOBQ | The job queue of the actual job description is being used. |
| INTER | The job is being processed interactive on the screen. |

4.4 Update Index Information

In this screen you are updating the Index-Information of the logical files created by the optimising process (OPTI...-files)

You are able to call up this command by **UPDOPT + F4**. You can display the out of here resulting information by entering **CALL XQ40000**, respectively by using function 8 of the main menu.

```
Index-Informationen updaten (UPDOPT)
Make choice press enter.
JOB-Queue . . . . . *JOBBD          Name, *JOBBD
```

Update Index-Information

Job-Queue

Enter the name of the job-queue over wich this job is supposed to be worked off.

Valid values are:

- Name** The name of an existing job-queue in your system. Please make sure that you are using a job-queue which is assigned to a subsystem and if possible only allows one job at a time, in order to avoid a parallel processing.
- *JOBBD** The job queue of the actual job description is being used.
- INTER** The job is being processed interactive on the screen.

Diese Seite bleibt frei!

5.0 Sector „Administration“

After you have incorporated your queries into the administration of the QueryOptimizer, you are able to administrate the queries within this Menu-Sector, in a very comfortable and divers manner.

5.1 Sorting by Query Name

By using menu point **5** „Sorting by query name“ you receive an overview of all queries, which you have incorporated into the Administration of the QueryOptimizer. This display is without library limit, which means you have all the queries of your system in one view

```
Sortierung nach Query-Name                                XQ10000
15.01.02                                                    10:53:52

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung
AGXFQY      XQ10000      Liste für Programm XQ10000
AGXFQY      XQ20000      Liste für Programm XQ20000
AGXFQY      XQ21000      Liste für Programm XQ21000
AGXFQY      XQ40000      Liste für Programm XQ40000
TESTDATEN   QRYOUT1
TESTDATEN   TEST1
TESTDATEN   TEST1QRY

F3=Verlassen F6=Neu F10=Dateisort F11=Sicht 2 F12=Abbrechen F15=Suchen
F17=Text öffnen F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete
```

Sorting by Query Name

From this „central program“ you control and administrate your queries. You will find the description of the search and choice functions in this chapter further down below.

5.2 Sorting by File Name

Menu point **6** „Sorting by file-name“ will display the sorting of the queries by file-name. The screen content is mainly in accordance with the representation of the previously introduced menu „Sorting by Query Name“.

```

Sortierung nach Datei-Name                                XQ20000  15.01.02
                                                         10:55:58

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRV
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Lib.Datei  Dateiname  Qry-Name  Beschreibung

AGXFQYDTA  XQKOPP    XQ10000  Liste für Programm XQ10000
AGXFQYDTA  XQKOPP    XQ20000  Liste für Programm XQ20000
AGXFQYDTA  XQKOPP    XQ21000  Liste für Programm XQ21000
AGXFQYDTA  XQOPTP    XQ40000  Liste für Programm XQ40000
QTEMP      XQLSTP    XQ10000  Liste für Programm XQ10000
QTEMP      XQLSTP    XQ20000  Liste für Programm XQ20000
QTEMP      XQLSTP    XQ21000  Liste für Programm XQ21000
QTEMP      XQLSTP    XQ40000  Liste für Programm XQ40000
TESTDATEN  AUFTRAEGE  QRYOUT1
TESTDATEN  TEST1     TEST1QRY
YKUBOTA    WEVC001   TEST1
YKUBOTA    ZLZBEK    TEST1
+
F3=Verlassen F6=Neu F10=Usersort F11=Sicht 2 F12=Abbrechen F15=Suchen
F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete

```

Sorting by Query File Names

Please note that queries containing of more then 1 file, will appear in this view several times, which means once per file/library.

The description of the possibilities of choices can be found further down in this chapter.

5.3 Sorting by User

The QueryOptimizer offers you the possibility to assign existing queries to users or groups. This is being achieved through using menu point **5** „Sorting by Query Name“ or **6** „Sorting by File Name“ by entering the choice „**U**“.

```

Sortierung nach Benutzer                                XQ21000  15.01.02
                                                         10:56:40

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRV
U=Benutzerzuordnung E=Einstellungen 4=Zuordnung aufheben

A User      Qry-Lib    Qry-Name  Beschreibung

GOERING     AGXFQY     XQ21000  Liste für Programm XQ21000

F3=Verlassen F6=Neu F10=Qrysort F11=Sicht 2 F12=Abbrechen F15=Suchen
F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete

```

Sorting by User Classification

The description of the possibilities of choices can be found further down in this chapter

5.4 Alternative Views

All Administrator-displays have functioning key **F11** activated, which displays alternative views of the queries, as an further information option, already within the overview.

```

Sortierung nach Query-Name                                XQ10000  15.01.02
                                                         11:00:13

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung
AGXFQY  XQ10000  Liste für Programm XQ10000
           D:2  F:7  S:2  O:2
AGXFQY  XQ20000  Liste für Programm XQ20000
           D:2  F:9  S:2  O:4
AGXFQY  XQ21000  Liste für Programm XQ21000
           D:2  F:8  S:2  O:3  G:1  U:1
AGXFQY  XQ40000  Liste für Programm XQ40000
           D:2  F:8  S:2  O:2  G:1
QSYS    QSECAF   D:1  F:14
QSYS    QSECCA   D:1  F:23
F3=Verlassen F6=Neu F10=Dateisort F11=Sicht 3 F12=Abbrechen F15=Suchen
F17=Text öffnen F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete
  
```

```

Sortierung nach Query-Name                                XQ10000  15.01.02
                                                         11:00:45

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung
AGXFQY  XQ10000  Liste für Programm XQ10000
           Typ      Ersteller  Erstellt  Geändert  Benutzt  Tage
AGXFQY  XQ20000  Liste für Programm XQ20000
           *QRYDFN  GOERING   06.04.01  28.12.01  00.00.00
AGXFQY  XQ21000  Liste für Programm XQ21000
           *QRYDFN  GOERING   07.04.01  28.12.01  00.00.00
AGXFQY  XQ40000  Liste für Programm XQ40000
           *QRYDFN  GOERING   07.04.01  25.09.01  00.00.00
QSYS    QSECAF   *QRYDFN  *IBM      25.01.96  03.08.98  00.00.00
QSYS    QSECCA   *QRYDFN  *IBM      25.01.96  03.08.98  00.00.00
F3=Verlassen F6=Neu F10=Dateisort F11=Sicht 4 F12=Abbrechen F15=Suchen
F17=Text öffnen F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete
  
```

```

Sortierung nach Query-Name                                XQ10000  15.01.02
                                                         11:01:13

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung
AGXFQY  XQ10000  Liste für Programm XQ10000
           CPU vorher CPU nachher Beschleunigung %
AGXFQY  XQ20000  Liste für Programm XQ20000
           ----  ----  ----
AGXFQY  XQ21000  Liste für Programm XQ21000
           ----  ----  ----
AGXFQY  XQ40000  Liste für Programm XQ40000
           ----  ----  ----
QSYS    QSECAF   ----  ----  ----
QSYS    QSECCA   ----  ----  ----
F3=Verlassen F6=Neu F10=Dateisort F11=Sicht 5 F12=Abbrechen F15=Suchen
F17=Text öffnen F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete
  
```

```

Sortierung nach Query-Name                                XQ10000  15.01.02
                                                         11:04:02

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung
      Laufzeit vorher      nachher  Beschleunigung %
AGXFQY  XQ10000  Liste für Programm XQ10000
      -----
AGXFQY  XQ20000  Liste für Programm XQ20000
      -----
AGXFQY  XQ21000  Liste für Programm XQ21000
      -----
AGXFQY  XQ40000  Liste für Programm XQ40000
      -----
QSYS    QSECAF
      -----
QSYS    QSECCA
      -----
      -----
F3=Verlassen F6=Neu F10=Dateisort F11=Sicht 1 F12=Abbrechen F15=Suchen
F17=Text öffnen F20=Liste drucken F21=Befehlseingabe F22=Multi-Delete

```

Alternative View

Here you will be displayed an overview for each query of the number of files, fields, Selection features (marks), etc., Information about query type, User-ID of the creator, date of creation, date of last change, date of last usage, number of days of use, CPU-capacity before and after the optimization process, as well as the complete running time of the query before and after the optimising.

5.5 Intelligent Search Mechanism

There are two methods for intelligent search to your availability:

5.5.1 Limitation of the Overview

In the sorting view, the choose line is being offered, with which you are able to limit the quantity of queries which ought to be displayed in a intelligent manner.

5.5.1.1 Sorting by Query Name

You can reach this view by using functioning key **F10** either from the menu points 5, 6 or 7

```

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance A=Analyse 4=Löschen Q=Query auf Display

A Bibliothek Name      Beschreibung

```

Choose line by Sorting by Query Name

Library

Please enter here the name of a library, in order to limit the extent of the to be displayed queries.

Valid values are:

Name The name of a library of your system, in order to display only the queries out of this specific library.

Name* The generic name of a group of libraries, in order to display only the queries of libraries which start with the provided string.

Name

Here you can limit the search for query names

Valid values are:

Name The name of a query in your system, in order to only display one query.

Name* Generic name of a group of queries, in order to display queries which start with the provided string.

Description

In the field description, you are able to limit the display of queries by using the Zeichenfolge within the query description.

Valid values are:

+Name All queries which have the provided string, somewhere in the description, should be displayed.

-Name All queries which have the provided Zeichenfolge somewhere in the description should NOT be displayed..

Please note:

The inputs of the choose line (Auswahlzeilen) are Additive, which means, if you are searching in field library by using **DIR*** and in the field query by using **HU***, you will be displayed all queries which start with HU of libraries with start with DIR.

This also applies for the field description, for which an additional subtractive search is possible, by which the search series **+AUS +KUND -ZU** display all queries which have the terms AUS and KUND, but not the Zeichenfolge ZU within the field Description.

Also a combination of library, query and description can be used in order to limit the display.

5.5.1.2 Sorting by File Name

You can reach this view by using functioning key **F10** either from the menu points 5, 6 or 7.

Lib.File

Please enter here the name of a library, in order to limit the extent of the to be displayed queries.

Valid values are:

- Name** The name of a library in your system, in order to only display the queries out of this library.
- Name*** Generic name of a group of libraries, in order to display queries which are stored in libraries which start with the provided string.

File Name

Here you can limit the search for file names. Please note that queries which have the same file names but which have been used in different libraries, may appear several times.

Valid values are:

- Name** The name of an file of your system, in order to only display the queries in which this particular file was used.
- Name*** Generic name of an group of queries, in order to only display the queries in which files starting with the provided string had been used.

Description

In the field description you can limit the display of the queries by using the string within the query description.

Valid values are:

- +Name** All queries which have the provided string somewhere in the description should be displayed.
- Name** All queries which have the provided string somewhere in the description should NOT be displayed.

Please note:

The inputs of the choose line (Auswahlzeilen) are Additive, which means, if you are searching in field library by using **DIR*** and in the field query by using **HU***, you will be displayed all queries which start with HU of libraries with start with DIR.

This also applies for the field description, for which an additional subtractive search is possible, by which the search series **+AUS +KUND -ZU** display all queries which have the terms AUS and KUND, but not the Zeichenfolge ZU within the field Description.

Also a combination of library, query and description can be used in order to limit the display.

5.5.1.3 Sorting by User Name

You can reach this view by using functioning key **F10** either from the menu points 5, 6 or 7.

User

Please enter here the name of an user or an user group, in order to limit the extent of an to be displayed query

Valid values are:

Name The name of an user in your system in order to display only the queries of that particular user.

Name* Generic name of an group of user in order to display only queries which have been assigned to this particular group of user and which start with the provided string.

Description

In the field description you can limit the display of the queries by using the string within the query description.

Valid values are:

+Name All queries which have the provided string somewhere in the description should be displayed.

-Name All queries which have the provided string somewhere in the description should NOT be displayed.

Please note:

The inputs of the choose lines are Additive, which means, if you are searching in field library by using **DIR*** and in the field query by using **HU***, you will be displayed all queries which start with HU of libraries with start with DIR.

This also applies for the field description, for which an additional subtractive search is possible, by which the search **+AUS +KUND -ZU** display all queries which have the terms AUS and KUND, but not the string ZU within the field Description.

Also a combination of library, query and description can be used in order to limit the display.

5.5.2 Searching with F15

By using function key **F15**, you have extended search functions and criteria to your availability, which are beyond the choose line function. After pressing the function key the following search mask will appear:

Selektion verwalten		XQ50000 15.01.02	
		11:09:01	
Erstellt durch			
Erstellt ab		bis	15.01.02
Geändert ab		bis	15.01.02
letzte Verwendung		bis	15.01.02
n Tage verwendet	0	bis	99.999
Laufzeit (sec.)	0	bis	9.999.999
Verwendete Dateien			
Verwendete Felder			
Anzahl Dateien	0	bis	999
Anzahl Felder	0	bis	999
Anzahl Selektionen	0	bis	999
Anzahl Sortierfelder	0	bis	999
Anzahl Gruppierungen	0	bis	999
Anzahl Benutzer	0	bis	999
Anzahl Variablen	0	bis	999
Anzahl Indizes	0	bis	999
F3=Verlassen F12=Abbrechen			
+			

Search mask

The search fields are combined with each other through AND-terms, which means through filling more fields you will achieve an Additive limitation. For example through MEIER and number of files 3 to 9, displays only queries created by MEIER and consisting of only 3 to 9 files.

An exception here are the fields „Used files“ and „used fields“ which include each 4 with OR-terms combined fields.

Created through

Limit the display of the query further, by entering the User ID of the employee which supposedly created the query.

Created since/Changed since/Last Use

Please enter here the date limitation of which the queries have been created, changed or last used.

n days used

Here you are able to filter how many days the to be displayed queries have been used.

Running time in sec

With the use of this limitation you can determine the "CPU-Killer-Queries". After the simulation of the CPU-capacity, the value of the running time is to your availability which you can limit here in order to display for example all queries with a running time of more then 300 seconds.

Used files

Here you can limit the display of queries which are defined with particular files, by using 4 with OR-terms combined fields.

Used fields

Here you can limit the display of queries, which are defined with particular fields, by using 4 with or-terms combined fields.

Amount of Files, Fields ...

Through choosing from – until, you can limit the display of the queries on a basis of amount of used files, fields, selections, sorting fields, groupings, assigned User, variables and indexes.

5.6 Choices

As choice function, a row of functions are to your availability for the menu points **5** and **6**, whereas you can mark more then one query. By pressing the **F12** key the information of the next marked query will be displayed:

5.6.1 Files

By using selection D before a query you will be displayed the information of the used files

verwendete Dateien anzeigen		XQ11000	15.01.02
TESTDATEN / QRYOUT1			11:11:44
Auswahl treffen und Eingabe drücken			
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY			
U=Benutzer V=Variablen P=Performance analysieren			
Asw	Bibliothek	Datei	Alias
	TESTDATEN	AUFTRAEGE	T01

File display

5.6.2 Fields

By using selection F before a query, respectively with **F8** in the display „files“ the used fields of an query will be displayed .

verwendete Felder anzeigen		XQ12000	15.01.02			
TESTDATEN / QRYOUT1			11:12:24			
Auswahl treffen und Eingabe drücken						
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY						
U=Benutzer V=Variablen P=Performance analysieren						
Asw	lfd	Feld/Funktion	Bezeichnung	Län	Dez	Typ
	1	KUNDE		7		A
	2	AUFTRAG	MIN_AUFTRAG	10		A
	3	AUFTRAG	MAX_AUFTRAG	10		A
	4	AUFTRAG	ANZAHL_AUFTRAG	10		A

Field display

5.6.3 Selections

By using selection S before a query, respectively with **F8** out of the display „fields“ the selection criteria of the query will be displayed:

```

Selektion anzeigen                                XQ13000  15.01.02
TESTDATEN / QRYOUT1                               11:17:01

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance analysieren

Asw Selektionsbegriff
WHERE      KUNDE = 'EIGEN'

```

Selections

5.6.4 Sorting

By using selection **O** before a query, respectively with **F8** out of the display „selections“ the sorting fields for the query will be displayed.

```

Sortierung anzeigen                                XQ14000  15.01.02
TESTDATEN / QRYOUT1                               11:17:34

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance analysieren

Asw lfd ASC/DESC   Feld/Funktion
1 ASC             KUNDE

```

Sorting

5.6.5 Grouping

By using selection choice **G** before a query, respectively with **F8** out of the display „sorting“ the grouping fields will be displayed.

```

Gruppierungen anzeigen                            XQ15000  15.01.02
TESTDATEN / QRYOUT1                               11:18:41

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
U=Benutzer V=Variablen P=Performance analysieren

Asw Lvl Feld/Funktion
1      KUNDE

```

Grouping

5.6.6 Variables

By using selection **V** before a query the used Variables of a query will be displayed. Variables are a possibility of adding parameter to a query from outside during the carrying out process. The definition succeeds by using the mask „select records“ while placing a parameter name leading “:” into the column „value“ after a field name and comparison operator. e.g. KNDNUM EQ :PARM1.

This query can not be made interactively, receptively over RUNQRY; it must be passed on by using the command STRQMQRV and by giving the variables name and variables value.

5.6.7 RUNQRY

By using selection **R** before a query, this will be started interactively on the screen.

5.6.8 SBMQRY

By using selection **X** before a query, this will be passed on to and carried out by the pile processing. For this the command submit job (SBMJOB) will be **linked up (eingebledet)** in which you can change the job description, job-queue etc.

5.6.9 Query on Display

Independent of the set output definition of the query, it will be carried out and the result is being displayed on the screen, if selection **Q** is being entered before the query process.

5.6.10 User classification

By using selection **U** before a query, you can assign these queries to users which are entitled to carry them out. After the carry out process of this function, each user can start the command **QRYOPTUSR** with his user ID and will only be able to view queries for which he has been entitled to. Extensive CL-Programs and own user menus are more or less belong to the past.

```
Benutzer definieren                                XQ17000  15.01.02
TESTDATEN / TEST1                                11:22:28

Auswahl treffen und Eingabe drücken
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY
4=Benutzer löschen V=Variablen P=Performance analysieren E=Einstellungen

Asw Benutzer      S Ausführungsoptionen (ändern mit "E")
  ANDI            J Drucker *PRINT
  HUGO            N Ausgabe auf Bildschirm
  NENA           N Datei DATEN/OUTFILE (*FIRST) Option: lt. Query-Definition

Ende

F3=Verlassen  F5=Aktualisieren  F6=Erfassen  F12=Abbrechen
```

Define User

If a user should no longer be entitled for the queries, he can be deleted off the list with choice **4**. By using key **F6** new users may be added.

5.6.11 Performance

By using choice **P** before a query, the display of the Index Information, as well as the performance data is being called up.

Index anzeigen		XQ18000	15.01.02
TESTDATEN / TEST1			11:27:57
Letzte Query-Analyse	2002-01-08	13.45.55	
Ergebnisse			
	vor Opt.	nach Opt.	Beschleunigung %
CPU-Belastung (sec)	100	80	25,00
effektive Laufzeit	00:10:00	00:00:50	1.100,00
Auswahl treffen und Eingabe drücken			
D=Dateien F=Felder S=Selektion O=Sortierung G=Gruppierung R=RUNQRY X=SBMQRY			
U=Benutzer V=Variablen P=Performance analysieren			
Aw Physische Datei	Sätze	Indexdatei	Keyfelder (mehr:F11)
YKUBOTA/ZLZBEK	< 100	QGPL/OPTI000010	ZSTAT
YKUBOTA/ZLZBEP	< 100	QGPL/OPTI000011	PSTAT
YKUBOTA/WEVC001	< 10.000	YKUBOTA/WEVC002	WVADVN
YKUBOTA/ZLZBEP	< 100	QGPL/OPTI000012	PRENR
YKUBOTA/ZLZBEK	< 100	QGPL/OPTI000013	ZBELN
YKUBOTA/ZLZBEP	< 100	QGPL/OPTI000014	PSTAT, PBETE, PBELN
			Weitere ...
F5=Aktualisieren F6=Optimierung F17=Zeit-Reset F18=CPU-Last ermitteln			

Display Index-/Performance data

Last Query-Analyzis

Here you will see the date and time of the last analysing run of this query.

CPU-Capacity unoptimized

If simulating a CPU-Capacity, before the optimising of an query has been made, you see the original values, which means CPU-Time in seconds is being displayed here

CPU-Capacity optimized

If simulating a CPU-Capacity, after the optimising of an query has been made, you see the newly determined comparison values, which means CPU-Time in seconds is being displayed here. *SAME means, that no changes of the running time have occurred.

Acceleration %

Here you will be displayed the factor of how many per cent the speed has managed to be increased.

Effective running time unoptimized

If you make a running time analysis before the optimising of an query has been made, you see the original values, which means the effective running time in hours / minutes / seconds.

CPU-capacity optimized

If you make a running time analysis after the optimising of an query has been made, you see the newly determined comparison values, which means

the effective running time in hours / minutes / seconds. *SAME means, that no changes of the running time has occurred here.

Acceleration %

Here you will be displayed the factor of how many per cent the speed has managed to be increased / improved.

5.6.11.1 Functioning Keys

F6 – Optimising

Here you can start the optimising out of the screen, which means if applicable the creation of logical files.

F17 – Time reset

By using this Functioning key, the measured performance data is being set back to 0.

F18 – Determine CPU-Capacity

Here you can determine the CPU-Capacity of the just displayed query.

5.6.12 Analyzis

By using choice A before a query, start command **QRYOPTMDB** in order to newly analysed a query. The parameter for this function have been described earlier in this manual.

5.6.13 Delete

By using choice 4 before a query, this query can be deleted. After pressing the enter key a confirmation message will be displayed prior to the final deletion:

```
! .....
% Löschauswahl angeben                                     &
%                                                         &
% QueryOptimizer-Einträge entfernen :      J               &
% Query-Objekte vom System entfernen:     N               &
%                                                         &
% Bitte bestätigen Sie dies durch die Taste F10          &
% Sind Sie versehentlich hier gelandet brechen Sie      &
% den Vorgang mit F12 ab.                               &
%                                                         &
% F10=Bestätigung  F12=Abbruch                    &
%                                                         &
#((((((((((((((((((((((((((((((((((((((((((((((((((((($
```

Confirmation of Deletion

Delete QueryOptimizer-Entries

Here the information for queries out of the QueryOptimizer overview is being deleted. This choice will be activated under key J and this function can not be assigned to a different key.

Delete Query-Objects from the system

By using this option, a solution of the physical queries beyond the QueryOptimizer can be made. If the standardised parameter marked with N is being changed to J, all chosen queries will be deleted physically.

F10 Confirmation

In order to avoid an deletion by accident, the **F10** key function has been activated as deletion confirmation instead of the enter key.

5.7 Index-Management

In Index-Management you will receive an overview over the Index-files, which have been generated due to the Performance optimization.

```
Index-Verwaltung                                XQ40000  15.01.02
*Normalmodus*                                  11:31:48

Auswahl treffen und Eingabe drücken
4=Index löschen  L=link Index  U=unlink Index

A Name      phys.Datei      Keyfelder      n Tage benutzt S
Bibliothek  erstellt  zuletzt am
OPTI000006  YKUBOTA/ZLZBEK  ZRENK          0
OPTI000010  YKUBOTA/ZLZBEK  ZSTAT          0
OPTI000011  YKUBOTA/ZLZBEP  PSTAT          0
OPTI000012  YKUBOTA/ZLZBEP  PRENR          0
OPTI000013  YKUBOTA/ZLZBEK  ZBELN          0
OPTI000014  YKUBOTA/ZLZBEP  PSTAT, PBETE, PBELN  1
OPTI000015  YKUBOTA/ZLZBEP  PBELN          0

F3=Verlassen  F6=Indexinfo aktualisieren  F11=Weitere Daten  F12=Abbrechen
F20=Druck    F21=Befehlseingabe  F22=Multi-Delete  F23=Unlink-Modus
```

Index Overview

5.7.1 Intelligent Search functions

As customary for administration masks, you can limit the size of the displayed index-files by using the Choose line.

Name

Please enter here the name of an Index file, in order to limit the size of the to be displayed query.

Valid values are:

Name The name of an Index file in your system, in order to display only the index file.

Name* Generic name of an group on Index files, in order to display only the index files which start with the provided string.

Phys. Files / Key Fields

Here you are able to limit the search for names of physical files, respectively names of the key fields.

Valid values are:

+Name All queries which have the provided string somewhere in the description, should be displayed.

-Name All queries which have the provided string somewhere in the description should NOT be displayed.

Please note:

The inputs of the choose line are Additive, which means, if you are searching in field Name by using **OPTI001*** and in field phys. File with **HU***, all Index files which start with OPTI001 and have HU in the name of the phys. files, respectively contain key fields will be displayed.

5.7.2 Choices

Delete Index

By using selection **4** before an Index, you are able to permanently delete an logical file out of your system

Unlink Index

By using selection **U** before an Index, the logical file can be deleted temporary, in order to be re-produced by using selection **L** for „Link Index“ at a later time.

Please note:

This function has been integrated in order to avoid problems during the update of User data. Some of the Update programs delete own logical files during software changes, in order to be able to also delete the appropriate physical file. If there are Index-files existing of QueryOptimizer which are based on this file, the user program, of course, is not aware of theses files and would possibly create an abort error. This is the reason why you should discuss this with you Software-House and if applicable delete the Index files with Unlink

Link Index

By using selection **L** before an Index, you can re-generate temporary deleted Index files.

5.7.3 Functioning Keys

F6 – Actualising Index Information

By using this functioning key, the Index information will be newly generated.

F11 – Further Information

Herewith further information for each query is being displayed in a second line such as library name, creation date and date of last use.

F20 – Print

Herewith you print out a report of the generated logical files

F22 – Multi Delete

By using the functioning line, limit the display of the Index files to the required extend and delete all selected at once Index files by using **F22**.

After pressing key **F22** a confirmation receipt is being displayed prior to the final deleting process:

```
Hinweis!  
  
Diese Aktion löscht alle Index-Dateien  
für die aktuelle Auswahl  
  
Bitte bestätigen Sie dies durch die Taste F10  
Sind Sie versehentlich hier gelandet brechen Sie  
den Vorgang mit F12 ab.  
  
F10=Bestätigung F12=Abbruch
```

Confirmation of Deletion

F10 Confirmation

In order to avoid an deletion by accident, the **F10** key function has been activated as deletion confirmation instead of the enter key.

F23 – Unlink-Mode

Herewith you only view Index files which have an active status and have not been temporarily deleted by the Unlink.

F23 – Link-Mode

Herewith you only view Index files which have an Unlink status, meaning they have been temporarily deleted.

F23 – Standard-Mode

Herewith you view all Index files, either active or in Unlink status. The U status at the right site of the screen displays if the file is in Unlink status

6.0 Sector „User view“

Within the User view, you have the possibility to display queries which have been assigned to a prior defined user, respectively a group..

6.1 Display User Query

You can also start this function by using command **QRYOPTUSR** which can be „fed“ with the parameter **USER**. The pre-occupation of ***AUTO** means that the User-ID of the registered users will be taken-over.

The command is suitable, in a ideal manner, for the integration into existing applications. Herewith, for example, you can display his queries to the users which have been assigned by the administrator out of the application. The search via Query/400 is unnecessary for the user.

```
Abfragen ausführen (User)                                XQ30000  15.01.02
                                                         11:39:15

Auswahl treffen und Eingabe drücken
R=Query ausführen  X=Query im Hintergrund ausführen E=Optionen einstellen

Asw Bibliothek  Name          Beschreibung
                S Ausführungsoptionen (ändern mit "E")
                AGXFQY      XQ21000    Liste für Programm XQ21000

F3=Verlassen  F5=Aktualisieren  F11=Infos anzeigen  F12=Abbrechen  F15=Suchen
```

User view on Queries

By using the selection line, as well as key **F15** the user has also the possibility to use the extensive Search- and Restriction features:

6.1.1 Adjust Options

In order to enable a user to carry out certain settings, regardless of other users, it is possible to change the execution option by selecting E prior to a query. The User settings are being memorised separately from each other and alterations can be made independently from each other.

Selection Mask

Here the user can define, if the Query Selection screen is being displayed for changing selection criteria during the execution of an query, or not. The display of the Selection masks equals the execution of an query with parameter **RCDSL**T (*YES).

Protocol Type

Here the user can define, whereto the output of the query should proceed.

Here the user can define, whereto the output of the query should proceed.

Valid values are:

- Q** The selection as defined in the query is being used

- B** The print-out occurs on the screen

- P** The print-out takes place on a printer which needs to be defined. Therefore a printer free of choice can be used or the standard value *PRINT will be defined.

- F** The print out occurs into a file which needs to be named. Therefore File Name, Library Name and File selection (Q = as defined, N = new file, R = replace file, M = new partial file, T = replace partial file, or A = to be added to a partial file) need to be given.

6.1.2 Run Query

By using selection **R** before a query, this will be started interactively. Changes which have been made under User setting will be taken into consideration.

6.1.3 Run Query in background

By using selection **X** prior a query, it will be passed on to the batch processing. Changes which have been made under User Settings will be taken in consideration.

6.1.4 Display Information

By using key **F11**, the additional set User Options can be displayed for each query in a second line.

Diese Seite bleibt frei!

7.0 Sector „Misc.“

Via menu point **99** „Display program version“ the actual installed version of the QueryOptimizer is being displayed to you in the Status line.

Diese Seite bleibt frei!

8.0 Release notes/Improvements

8.1 Version 1.20

- Additionally to the CPU-time (actual required computer time during the execution of the query) the effective running time from call up until completion of the query is being displayed as well.
- The structure of the logical files has been switched from SQL to CRTLf, in order to also be of assistance to customers without SQL.
- The display function F11 has been expanded in order to be able to display more information within the Overview.
- The Switch option F10 enables the change over between Query-, File-, and User sorting without having to leave the program.
- During the Optimising of queries, the parameter „optimize CPU-capacity“ has been pre-occupied with *BOTH in order to be able to directly compare the running time before and after the optimization.
- During deletion of queries, it is being distinguished between deletion out of the overview and deletion of the physical query.

8.2 Version 1.21

- Correction of the Installation application QRYOPTINS. The required files are no longer being shifted into the file library, they are being copied. Therefore a „New Installation“ with blank data can be repeated at any time.
- Correction of missing objects for the password issuing, respectively password checking.

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