SCIENTIFIC CITATION AND ATTACHMENT MANAGER

SCATMAN 1.0

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1 Introduction

1.1 Main Features

SCATMAN 1.0 is designed to manage Scientific Literature. It is **not** just a simple BibTex shell, but a complete database on the basis of Borland Database Engine. The whole data can be exported and imported to and from BibTex format. For users writing their publications with a windows wordprocessor like Word (first of all: my expression of sympathy) a special copy command is provided for copying citations into the desired format. The main features are:

- Data is stored in a **Paradox Database** (no proprietary format is generated)

- Export and Import of Database to and from **BibTex**[1]

- Generation of citations in the clipboard to be added to the word processor. The style of the citation can be defined with stylesheets.

- Multiple Search and Filter functions on the basis of generated **SQL** statements

- Filtering more than one database at once

- Tabular and Form View of the data

- Easy database and file management

- **Attachment function**: arbitrary files can be attached to each record (citation): e.g.: bitmaps, scans, html files, text files, word documents, . . .

- Powerful, but very easy to use **Search, Query** and **Filter** functions with SQL engine for experts

- Full-Text Search in Attachments

- **Fill out help** for Form View with examples

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[1]BibTeX is the bibliographic format used for LaTeX document citations. Even if you do not use BibTeX this function can be useful as BibTeX is an ASCII format an can be used for further processing of the data.

One Normal License	40 US$ (500 ÖS, 70 DM)
License incl. Sources	500 US$ (6000 ÖS, 860 DM)
License 3-5 Persons	30 US$ (380 ÖS, 50 DM) each license
more than 5 Licenses	20 US$ (250 ÖS, 35 DM) each license

Table 1.1: License Fee

- Smart Tutor for "intelligent" help while working with SCATMAN 1.0.

Tip: Please read the `readme.txt` file for last minute information, bug reports, . . . This file yan be viewed by selecting `Info|Show Readme File`.

1.2 LaTeX- Support

As LaTeX is one of the most frequently used word-processing systems for scientist, SCATMAN 1.0 supports the LaTeX literature database format BibTex. With one click or menu command, the LaTeX citation command

`\cite{key}`

is copied to clipboard with the correct BibTexKey of the Selected Dataset. The BibTex-Database is easy generated with the `Export BibTex` command. For more information read [2, 4] or in german [1, 3].

1.3 Getting Help

If you use SCATMAN 1.0 for the first time, activate the SMART TUTOR. He will guide you through (nearly) all available operations and is flexible giving you brief context-sensitive information.
For a more detailed description or referece information (e.g. field types, . . .) read this manual. You can read the manual from SCATMAN 1.0 by selecting `Info|Manual`, but you need to have installed Adobe's Acrobat Reader.
Finally take a look to the Readme.txt file by selecting `Info|Show Readme File`. Last minute information can be found there.

1.4 Registration

The function of the test version is restricted to 100 entries for a table. If you decide to use this software for a longer period of time you have to pay the license fee listed in table 1.1. **Please dont kill the Shareware idea by not paying these moderate fees!**

Part	To Start	To have Fun
CPU	Pentium 75	$\geq$Pentium 130
Ram	8MB	$\geq$32MB
Display	640x480 16C	1152x864 256C
OS	Windows 95	Windows NT 4.0
HDD	$\approx$ 1MB	$\approx$ 1MB

Table 1.2: Hardware Requirements

The form for registration can be found on my webpage and is delivered with the shareware version as Plain-Text, RTF (Winword) and HTML format. Please FAX the filled out form back[2]

1.5   Some Legal Issues

This software is Shareware - all rights are reserved! If you received this product by the way of Internet or by any other way not having had contact to the programmers, you may test this application for 30 days.
As I cannot give any guarantee for the errorless of any function - you have to use this software, all connected tools and the documentation as is. I specifically make no representation or warranty that the software or documentation are 'error free', or meet any user's particular standards, requirements, or needs. If you register this tool, I will constantly inform you about new updates, hints and bugs (!). I strictly prohibit to derive the source code of files Borland or I provided to you in binary form. Please report bugs to me sending an email to AlexanderSchatten@gmx.net.
Provided with the latest Version of SCATMAN 1.0 is a Java Applet for online browsing in the exported HTML data:
You may use this applet for Intra- or Internet browsing purpose, but this applet is no Freeware. So providing this applet in any other way than putting it on your homepage for Inter- or Intranet use is not allowed (e.g. using it as CD-Rom frontend). If you need the applet for some other purpose, please contact me.

1.6   Installation Guide

1.6.1   Hardware and Operating System Requirements

The hardware required to run SCATMAN 1.0 is listed in table 1.2. This software was tested using the operating systems Microsoft Windows 95 and Windows NT 4.0. The recommended

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[2]At the moment online registration via internet is not available, as the online methods are not safe enough at the moment. As soon as safe procedures are available, this option will be added.

OS with the best performance is Windows NT 4.0 using a configuration as described in the right column.

1.6.2 Installation

Two different versions of SCATMAN 1.0 are offered on the Webpage:

1. Application **without** Borland Database Engine (BDE)

2. Application with BDE

Download **version 1** if you are using Borland Delphi **4** or any other application that provides the full BDE Version 5. If you are not sure, you can test this version. If an error occurs at starting SCATMAN 1.0 select one of the other versions.
Download **version 2** if you do not use other applications using the correct BDE version, or if you are not sure, which version to select.
To install SCATMAN 1.0, simply download the disk images from the Webpage, copy them to floppy-disk or into a folder on your harddisk. Then start the installaton routine by double-clicking on `install.exe` in the explorer.

1.6.3 Update SCATMAN 1.0

For updating a running version of SCATMAN 1.0 with a newer version perform the following steps:

1. Download **Version 1**

2. Unpack the zip file in a temporary folder with pkunzip, unzip, winzip, ...

3. If you defined your own templates already with the old version, delete the default template files (*.tpl) from this temporary folder.

4. If you modified the default copy style, delete the copy.sty too.

5. Now finally copy the files of the new version over the old version.

Warning: For update from ScatMan Version <0.93 you need to download the complete version 2 because the following changes were made:

- Update of BDE version

- Change in database format: field definition of BSeries field changed to text

- Minor change in database format: index field added.

This has two consequences:

1. The new BDE version is required, so installation version 2 is required.

2. Old ScatMan databases cannot be read with the new ScatMan directly, but need to be converted.

To convert your old databases use the tool `RestructureTo1.exe`. The use of this application is very simple. Just start it and follow the instructions.

Also a batch conversion is possible (if more than just one or two databases need to be converted). Take a look into the about window in the restructe tool or read the FAQ.

1.7 This Manual

Please read this manual carefully before you start using SCATMAN 1.0. Chapter 2 describes the database type, the definitions and the correct use of the database fields. Furthermore a brief description how to enter certain LaTeX commands correctly can be found there. Chapters 3 to 8 describe the different menu sections and the features of SCATMAN 1.0. In chapter 3 the use of the `table` and `form view` is explained and how new datasets can be entered. Chapter 4 describes how to manipulate databases, how to export or import data. In chapter 5 you can learn how to enter citations to your LaTeX documents and how to copy datasets to other tables. Chapter 6 explains how to filter a database. `Quick Filters` are very useful for fast *on-click* change of filtering. Furthermore `Search in ''all'' fields` and the use of `Structured Query Language` are introduced. Chapter 7 explains the different individual settings and how the configuration files are constructed. SCATMAN 1.0 offers also **powerful file-attachment functions**. To understand this versatile feature read chapter 8.

If you need further information about how performing the most common tasks in managing scientific literature citations take a look at the "How To" Chapter 9. There one can find a set of frequently used manipulations explained step by step. Whereas the other sections offer a more *reference like* approach, this chapter gives a *task specific* information.

1.8 Contact the author, Solve Problems...

If you are using the test-version of SCATMAN 1.0 and want to buy the full version, please take a look at my homepage to the `Software` section!

If you are a registered user and have problems with SCATMAN 1.0, please **read this manual first of all**. This manual will be updated rather frequently, so take a look at my homepage to get updates.

If a problem occurs that seems to be unsolveable try the following steps first of all:

1. Start the `Smart Tutor` by clicking on the button with the question mark, try to follow the offered help.

2. Take a look into this manuals reference chapters (eventually search in the index).

3. Take a look to the "How To..." section.

4. Start your WWW browser and go to my homepage/software page and read the Known Bugs document.

5. A FAQ will be added to my homepage soon: **Read this FAQ list**.

If all these steps do not solve the problem or if you detect a bug **not yet** listed in the known bugs list, please send me an email, and I will try to help you.

Please show understanding for not answering snail-mail or FAX questions, as the "overhead" and costs would be much too high. But as you received this software using internet, sending email should not be a problem.

Furthermore, if you should have considerations for further improvements of SCATMAN 1.0, don't hesitate to write me your comments via email.

Email address and URL of homepage are listed below:

SCHATTEN SOFTWARE
DI ALEXANDER SCHATTEN
Gallitzinstr. 7-13/7/7
1160 Wien
Tel.: 914 29 84
Fax.: +43 1 699 40 862 175
email: AlexanderSchatten@gmx.net
URL: http://www.bigfoot.com/~AlexanderSchatten

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2 Database Type and Fields

2.1 Introduction

This database is designed for giving full access to all fields defined by the BibTex specification. Furthermore a set of fields was added to enhance the functionality in terms of managing scientific papers and books. All BibTex fieldnames can be identified since they start with a "B". For example: `BTitle`, `BAuthor` and so on.

The next section explains the database type and the kind of information you should enter into the fields. Section 2.3 on page"nobreakspace –˝9 explains the BibTex fields and gives an introduction to the correct use of each field. For more details take a look at the literature recommended in the bibliography appendix. Section 2.4 explains the non-BibTex fields and the special functionality of the `Attachment` field (function).

As the database contains 33 fields, it can be confusing for the beginner, what kind of information to add into which fieldtype. So please read the detailed specification in this chapter first of all — as the functionality of BibTex is closely related to correctly entered data — in addition to that two online help functions, that are included in the `Form View` window will give additional support. If the `online field` help is opened, a general description and a few examples for each field are provided.

Furthermore, as different document types (`article`, `book`, `proceeding`, `...`) need different fields, a color labeling is implemented: Fields with **red** labels are indispensable, fields with **blue** lables are optional and fields with **black** labels may be entered, but are ignored by BibTex.

For beginners in BibTex, an example database is located in the program path of SCATMAN 1.0 (if you installed it!) and presents an additional help, or take a look to [2] or the german version [1].

2.2 Database

To ensure, that the data entered with SCATMAN 1.0 can be used also with other applications, or if you are not sure, how long you will use this application, a standard Paradox Database V.7.0 is used to store the records. Many other windows applications and databases can read Paradox databases directly, and furthermore the complete database can be extracted into an ASCII format, namely BibTex, that can be used with LaTeX or manipulated in arbitrary ways.

Fieldname	Field Type	Max Length	Key	BibTex
Subject	A	30	*	
BDocType	A	20	*	B
BTitle	A	250	*	B
BAuthor	A	150	*	B
Owner	A	5	*	
BBibTexKey	A	75		B
BAddress	A	150		B
BAnnote	M	50		B
BBooktitle	A	150		B
BChapter	A	75		B
BEdition	A	15		B
BEditor	A	150		B
Bhowpublished	A	100		B
BInstitution	A	100		B
BJournal	A	200		B
BKey	A	25		B
BMonth	A	3		B
BNote	M	50		B
BNumber	A	35		B
BOrganisation	A	100		B
BPages	A	25		B
BPublisher	A	100		B
BSchool	A	100		B
BSeries	A	150		B
BType	A	100		B
BVolume	A	25		B
BYear	S			B
Keywords	A	255		
Archive	A	50		
BorrowedTo	A	50		
AbstractComment	M	50		
Attachment	A	255		
Tag	A	10		

Table 2.1: Database Fields: `A` is text type, `M` is memo type, `S` is number type

SCATMAN 1.0 accesses this database using an SQL engine, with the consequence that experts can use this SQL engine to create their own queries. Each database consists of eight files with the extensions: `.db, .fam, .mb, .px, .tv, .val, .xg0, .yg0`. **In case of backup, all these files have to be copied.** Otherwise loss of data is the consequence.
Make backup copies at least once a week. As no application is without bugs, a bug in the program, a virus or any other damage at your computer system can destroy all your data!

2.3   BibTex Database Fields

2.3.1   DocType

Document Type	Description	Obligatory fields
article	Article in a scientific journal	author, title, journal, year
book	Book with publisher	author *or* editor, title, publisher, year
booklet	Book, but no publisher or institution	title
inbook	Part of a book (e.g.chapter)	author *or* editor, title, chapter *and/or* pages, publisher, year
incollection	Part of a book with own title	author, title, booktitle, publisher, year
inproceedings	Article in conference proceedings	author, title, booktitle, year
manual	Technical documentation	title
masterthesis	Masterthesis ("Diplomarbeit")	author, title, school, year
misc	for use, if no other type fits	*no*
phdthesis	PhD thesis ("Doktorarbeit")	author, title, school, year
proceedings	Proceedings	title, year
techreport	Report, usually numbered	author, title, institution, year
unpublished	Document with Author and Title, but unpublished	author, title, note

Table 2.2: Document types and obligatory fields

Depending on the *type* of the document, a set of fields are obligatory, others are optional and the rest will be ignored by BibTex. SCATMAN 1.0 will help you in `Form View` by marking obligatory fields with red labels. But it is difficult to show all possibilities with this method as for example the `inbook` field needs `author` *or* `editor`. In these few cases, one of the obligatory fields is marked with a red label. In table 2.2 the obligatory fields are explained in more details.

The optional cases are marked with blue labels. Additionally, fields with black labels may be used, but are ignored by BibTex. Nevertheless they can be very useful as the `Keywords` field. It is not used by BibTex, but I strictly recommend to add keywords for every publication added to the database. This strategy helps finding citations afterwards!

The `doctype` field is entered using a drop-down list in the `Form View` window. By that way only valid entries are possible.

2.3.2   BibTexKey

This field is necessary for BibTex. The `BibTexKey` field has to be unique and is used for the citation in a LaTeX document:

```
\cite{BibTexKey}
```

The fields: `document type` and `BibTexKey` are used in BibTex database file by:

```
@document_type{BibTexKey,
fieldname1    =  {....},
fieldname2    =  {....},
fieldname3    =  {....},
...
...
fieldnamen    =  {....}
}
```

Following this definitions, it is clear, that these two fields **must** be entered if the citation has to be used for BibTex.

2.3.3   Title

Title of the publication.

2.3.4   Author

Name of the author or names of the authors separated with `and`. The entry of the name can be executed in different styles :

>   Donald E. Knuth and Albert Einstein

or

>   Knuth, Donald E. and Einstein, Albert

Names in { } will be processed as one word, e.g.:

>   Sammy {Davis jr.}

or

>   {Davis jr.}, Sammy

Names with a "von" can be written like:

>   First von Last and von Last, First and von Last, Jr, First

2.3.5   Journal

Name of the journal, e.g. "Science", "Nature", … In the `Form View` window this field can be edited like the other text fields or a value can be selected from a template list. It is a good idea to add the names of the frequently read journals to this template list. This list can be changed by selecting : `Options|Edit Templates ...`.

2.3.6   Volume

Volume of the journal (a number).

2.3.7   Number

Number of a journal or a technical report. Journals are often labeled with a volume *and* a number.

2.3.8   Pages

Page or pages of the article in a journal or a book or proceedings, … (e.g. 45–67 *or* 45 *or* 112+). Don't forget to make two dashes:"–" for typographic reasons!

2.3.9   Year

Year of publication. If the paper is unpublished, enter the year of origin.

2.3.10   Month

Month of publication (see section 2.3.9). Use the abbreviations: jan, feb, mar, apr, may, jun, jul, aug, sep, okt, nov, dec.

2.3.11 Booktitle

Title of the book, that contains the paper. If the citation *is* a book use the field `title` (see 2.3.3) instead.

2.3.12 Chapter

Number of the chapter or section, or similar.

2.3.13 Edition

Edition of a book. Enter: First, Second, . . . Start with a capital letter.

2.3.14 Series

Name of the series of a set of books. Use `title` for the title of the book and `series` for the name of the series.

2.3.15 Editor

Name of editor, or names of editors separated with `and`, see also 2.3.4

2.3.16 Publisher

Name of the publisher: e.g. "Springer", "Elsevier", . . . It is possible to define templates for the publisher field (see also 2.3.5) too. The difference to the `journal templates` is that an address for the publisher can also be defined. The correct syntax for the template list is (with examples):

```
Publisher@Location

Chapman and Hall@London, Weinheim, New York, Tokyo
Elsevier@Brussels
Gustav Fischer@Jena
John Wiley and Sons@NewYork, Chichester, Brisbane, Toronto
```

2.3.17 Institution

Name of the institution, that financed a technical report.

2.3.18 Address

Address of the publisher or of any other institution. In case of a "big" publisher the statement of the city is sufficient. This field is filled out automatically if publisher templates are used.

2.3.19   Howpublished

Enter the kind of publishing, if no other field fits.

2.3.20   Organisation

Name of the organisation that financed a conference or a manual.

2.3.21   School

Name of the university where the mastersthesis or PhD thesis was written at.

2.3.22   Annote

A BibTex-comment field. Not used by standard BibTex stylesheets, but used by some packets like `annote`.

2.3.23   Note

Additional BibTex-comment, that could be helpful for the reader.

2.3.24   Key

Alternative key to be sorted for. Only used, if no entry in the `author` or `editor` field is available.

2.3.25   Type

Type of the technical report. It will be used instead of the standard "technical report".

2.4   Non-BibTex Database Fields

2.4.1   Subject

The subject field is designed to categorize publications. It is a key-field and is obligatory. Use for example: *Philosophy*, *Analytical Chemistry*, *Neurobiology*, . . . Also for this field a template list can be used (see also 2.3.5).

2.4.2   Archive

Use the archive field to enter archive numbers, tags of folders, where the publication is stored or any other identification mark.

2.4.3 Owner

The owner field is also a key field. It is very useful if databases should be joined with datasets entered by more than one person: Hence double datasets are possible, and it can be interesting who entered a dataset. Enter a short abbreviation (max five chars) as user code. If you enter your user code in the `Options | Preferences...Owner` field, every time a new dataset is created, this abbreviation is added automatically to the `owner` field.

Tip: One example for the use of this field: Consider scientist *A*, who is looking for a certain paper and finds it in a joined database. Now it is interesting *who* has archived this paper and in which folder: Taking a look to the `Owner` and `Archiv` field can solve this problem.

Tip: So the first thing you should do starting SCATMAN 1.0 the first time, is to enter this user code!

2.4.4 BorrowedTo

Use this field to enter the name of a person to whom you have borrowed a book or a paper.

2.4.5 Keywords

Enter a set of *significant* keywords (max length 255 chars). In my opinion it is **highly recommended** to use this field, as it can help a lot at finding publications to a certain topic.

Tip: In case of books, keywords can be extracted out of the contents.

2.4.6 Abstract/Comment

This field is a memo-type. That means that texts of arbitrary length can be entered here. It is first of designed all for abstracts of publications and for general comments – as this field is not used by BibTex. To enter an abstract, the paste from clipboard function can be used by clicking with the right mouse button inside the field in the `Form View` window.

2.4.7 Attachment

This field shows the unique name of the attachment index file. It is not possible to manipulate this field manually. To change attachments use the `Attachment` button on top of the `Form View` window, to remove an `Attachment` press the button right beside this field. The attached files will **not** be deleted, only the index file and the database entry are removed.

2.4.8 Tag

This field has a special function. It offers the possibility to mark certain datasets arbitrarily. The use of this field can be best described by an example:

Consider you want to select citations for a new paper you are writing. For that purpose different searches and browsing in multiple subjects are performed. All relevant citations are marked with, say "xg1".

Finally all selected citations can be filtered by `quick filter` selecting `Tag` with the value `xg1`.

To do this more comfortable, additional tag controls can be displayed in the `Table View` window (see 3.1.3).

2.5 LaTeX commands and special german characters

Entering LaTeX commands into database fields like

`\bf`

is no problem and will be exported and imported without changes to and from BibTex format. But certain characters are treated in a special way:

All german umlauts (ü Ü ö Ö ä Ä and ß) entered in SCATMAN 1.0 are converted automatically when exported to BibTex to

`{\"u} {\"U} {\"o} {\"O} {\"a} {\"A} and {\ss}`

If you use the " symbol in SCATMAN 1.0, export is a problem, because " has a special meaning in BibTex, and would cause errors when exporting as is. So " is converted to

`{\texttt{\symbol{34}}}`

BibTex Import recognizes the german umlauts and the \dq too and converts it back to (üÜ ö Ö ä Ä ß) and ".

Other "german" symbols can be entered directly like:

Start	End	meaning
\glqq	\grqq	„Test"
\glq	\grq	‚Test'
\flqq	\frqq	«Test»
\flq	\frq	‹Test›

Tip: The feature to convert the \dq when importing a BibTex file is enabled by default. If this is not desired, take a look to section 7.7.2 on page"nobreakspace –˝40 to get information how to disable it.

Warning: The special characters mentioned above are only processed properly by LaTeX if the `babel` package is included. So if you want to write a german document for example add the line `\usepackage[german]babel` to your document header. For more information take a look into your LaTeX reference.

3 Views

3.1 Table View

3.1.1 Introduction

The Table View form is designed for giving an overview over the database. The main elements of this window are marked in figure 3.1. I assume you are comfortable with the standard windows user interface, if you should have problems with using a windows application please read the windows help-files, or take a look at the Windows 95 or Windows NT manuals.

All features can be applied using the `menus`. Frequently used commands are additionally offered in the `Button Bar`. The functions of the buttons will not be explained here in detail, because they offer the same functionality as the referring menus. A short pop-up help to each button is offered when the cursor rests over a button for about one second.

Furthermore for all essential functions shortkeys are defined. The functions for navigation in the table grid are listed in Table 3.1, all other hotkeys are listed beside the functions in the menu.

Right beside the buttons, the number of currently shown datasets is plotted.

The selected dataset is marked with a little triangle on the left side of the table grid. To edit data, change to the `Form View` by selecting the menu `View | Form`, by pressing the corresponding Button or by double clicking into one field of the dataset you want to edit. The `Table View` and the `Form View` window are synchronized. Using the database navigation in any of the two views, will update the other view automatically.

In the following sections the main functions of controlling the `Table View` will be ex-

Key	function
Cursor in table grid	cursor in table
PgUp, PgDown	move cursor one page up or down in table
Pos 1, End	Jump to first, last row
Ctrl + (Pos 1, End)	Jump to first, last dataset
Tab	Change between grid and quick filter
Alt + underlined Char	Open the menu

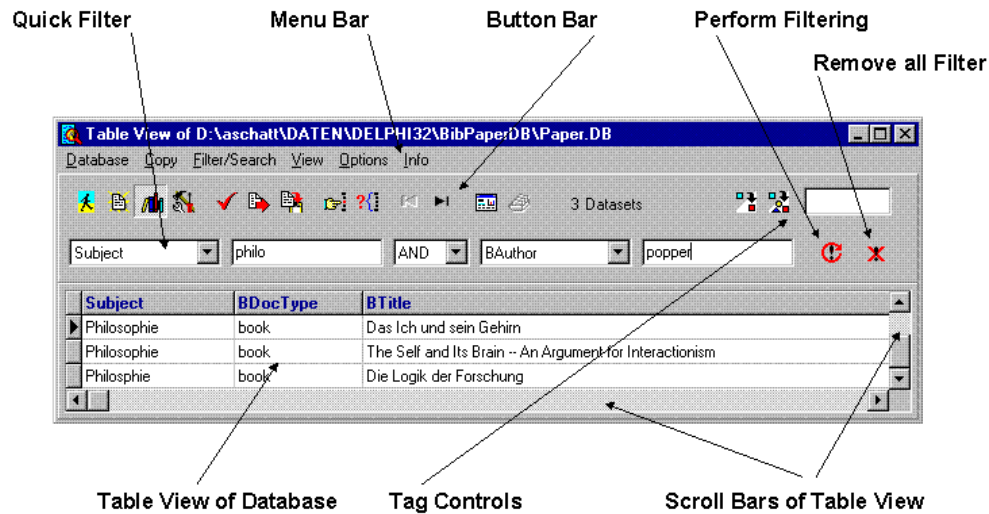Table 3.1: Shortkeys to navigate in the table grid.

Figure 3.1: Screen Shot of Database Table View

plained.

3.1.2 Define Fields to Sort by

Use the menu `View` to define the field(s) to sort for. Default selection is `Subject`. As selecting `Subject` activates the main key of the database, the fields will be sorted by: `Subject`, `BDocType`, `BTitle`, `BAuthor`, `Owner`.

3.1.3 Show Tag Controls

Selecting the menu `View|Show Tag Controls` item will show two additional buttons and one edit-field on the `Table View` window. If these additional elements are enabled, this menu item is checked. To disable these elements select the menu item again.

This addition to the user interface can be helpful in organizing citations as described in section 2.4.8 on page"nobreakspace –"14. First of all enter the `Tag` text into the edit field. If you want to mark the selected dataset press the left button (labeled with "Mark currently selected dataset"). To mark *all* visible datasets press the right button (labeled with "Mark all visible datasets"). This can be especially usefull when multiple queries are performed and the complete result should be marked.

This is an *additional* way to enter Tags. Naturally you can use the `Form View` window and enter the tag text in the specific `Tag` field for the same purpose.

3.1.4 Show Database Quick Access List

The use of SCATMAN 1.0 shows, that usually only a few databases are used regularly. It is annoying to switch between these often used files by using the `Database|Select...` dialog (or the equivalent button). To give fast access to often used databases this function is designed for:

Selecting the menu item `View|Show DB Quick Access List...` or clicking the button with this function, will open a scalable non-modal dialog window with a list box and three icons. Pressing the left button ("Add link with filemanager...") will open a `File Open` dialog. Select the database to enter to the list there.

Tip: Alternatively, you can *drag* the file from the explorer and *drop* it into the preference-list grid.

Pressing the middle button ("Add current database") adds the currently open database to the list. The right button ("Remove selected link") will remove the selected link from the list. The referring database will **not** be deleted!

To select a database double click one link in the list. (This window may be left open while working with databases.) Close this window by selecting `View|Show DB Preferences...` again.

3.2 Form View

3.2.1 Introduction

Select the menu item `View|Form` to open the `Form View` window with the currently selected dataset. This window is designed to read details of a single dataset and to enter data in a comfortable way. As the database contains 33 fields, it is not even possible using a high resolution monitor to show all fields on one screen. So the most important fields are arranged on the upper half of the form. You can resize the window to the maximim size (height) visible on your system. Size and position of the window will be stored after terminating SCATMAN 1.0. To navigate in the form use the scroll bar on the right side or move from field to field by using the `tabulator` key. Inside the edit field the common windows navigation key commands are possible. For more information please take a look to your windows documentation or help-file.

This windows offers also the functionality to work with `Attachments`. For more details about the philosophy of the attachments and how to use them please take a look to the Chapter 8 on page"nobreakspace –˝44.

3.2.2 Insert, Edit a Dataset

To insert a dataset press the `Add Dataset` button described in the next section. Then enter the data.
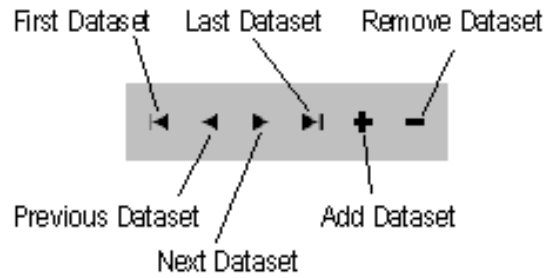
Figure 3.2: Database Navigation Buttons

Editing data is only possible if the property `Read Only` in the preferences is *disabled*! If a change in one of the database fields occurs, the navigation buttons disappear and two now buttons appear: `Accept Changes` and `Discard Changes`. The `Table View` window is disabled. Only the `Field Help` button is yet active.
This is to ensure, that no changes are made by accident. After accepting or discarding the changes, all buttons are appearing, and the `Table View` is enabled again.

3.2.3 Database Navigation

To navigate in the database and to add/edit/remove data you need to understand the functionality of the database navigation buttons (see fig. 3.2):

First Dataset Clicking this button one jumps to the *first* dataset in the database. The order (what is first ...) is defined by the settings in the `View|Sort by ...` settings. (If the currently selected dataset is the first, this button is disabled)

Last Dataset Jumps to the *last* dataset in the database. (if the currently selected dataset is the last, this button is disabled)

Previous Dataset Moves to the previous dataset (if the currently selected dataset is the first, this button is disabled)

Next Dataset Moves to the next dataset (if the currently selected dataset is the last, this button is disabled)

Add Dataset Adds a new dataset: All entries are empty and one can enter new data. If the database is set to `Read Only` in the `Options|Preferences...` menu, this is not possible. To enter data disable this setting!

Remove Dataset Removes the currently selected dataset. A warning window will ask if you are sure. Be careful! There is no possibility to undo this function!

3.2.4 Field Help

As it is essential to fill out the database fields in a correct way to ensure consistency between different users and to guarantee the correct work of BibTex pressing the button `Open field - help` extends the size of the toolbar-panel and shows two additional fields:

Field Description This field gives a general information about what kind of data should be entered in the currently active field. If the `Subject` field is active, this field shows: "Enter a general topic here for categorization"

Comment/Example In this field additional comments about *how* to enter the data and examples are listed. Examples are written in quotation marks. E.g.: "Biology" means you can enter *Biology*, but you must not enter the quotation marks too, because they are only used to separate different examples of one field.

These two fields are updated every time you move to a new field with the mouse-cursor or the tabulator key. As the size of the fields are limited, only short information is provided by this way, but it should be sufficient for orientation. If you are new to this database and/or to BibTex please take a look at section 2.3 on page"nobreakspace –˝9. There you can find a more detailed description of the available database fields.

3.2.5 Create LaTeX Citation

The `Create LaTeX cite in clipboard` button creates the command:

`\cite{BibTexKey}`

where the BibTexKey is the current value standing in the `BBibTexKey` field.

Tip: Be careful changing the entry of the BibTexKey, as used citations in LaTeX documents can become invalid!

3.2.6 Attachments

Press the `Attachments` button to show or add attached files. For more details take a look at Chapter 8 on page"nobreakspace –˝44.

4 Database Functions

4.1 Select Database

Use the `Database|Select...` menu item to launch a file-open dialog for selecting the literature database you want to work with. The literature database is stored in Paradox format (for more details to the database structure see chapter 2 on page"nobreakspace –˝7). The last used database will be stored on closing SCATMAN 1.0 and reopened the next time SCATMAN 1.0 is started. **Do not open other Paradox databases except those created with this application. Loss of data may be the consequence!**

Tip: Alternatively, you can *drag* the file from the explorer and *drop* it into the database grid.

As often only a small number of databases is used, one can add a link to the often used databases to the `Quick Access Database` list window (see section 3.1.4 on page"nobreakspace –˝18).

4.2 Create New Literature Database

Select `Database|Create New...` to create a new literature database. Enter the path and the filename in the file-save dialog. An empty database with this name will be created.

4.3 Extract Datasets

4.3.1 Extract Current Selection

Select `Database|Extract Current Selection...` to copy only the datasets that are shown by the current filter criterions. If, for example, the complete database contains 436 datasets and the filter property is field: `BAuthor` with the value: "popper", say 15 datasets out of 436 are viewed (because they satisfy the criterion). In this case *only these 15* datasets are extracted.

In the opened dialog window select the target database (this is the database the selected records will be copied to). The target database **must** be different from the source database!

4.3.2 Extract Only Datasets Used in a Paper

In some cases the following problem may occur: By backup or for other reasons only the datasets used in one paper written in LaTeX have to be extracted from the complete database. For this purpose create a new (empty) database with the `Database|Create New...` command. Then select `Database|Extract only used Records`. In the following dialog box enter the LaTeX auxiliary file(s) with the extension `.aux`[1].

4.4 Delete Current Selection

Use this function to delete all records currently selected with the `QuickFilter` or `SQL` query. **Be careful:** There **is no possibility of undoing** this function:
If for example all datasets of the database are visible (no filters defined) the **complete database will be deleted**!

Tip: Make a backup copy of the database before using this function (see section 2.2 on page"nobreakspace –˝7).

4.5 Check BibTex Key

As the BibTexKey should be unique, a function is offered to test whether some BibTex keys are identical. Select `Database|Check BibTex Key` to start the validation.
If one or more keys are used in more than one record, a window opens and shows the BibTex keys which are double (or triple, . . .) in use. Double click to one of these keys to select only the datasets with this key. Then correct the key field(s).

4.6 BibTex Export/Import

4.6.1 BibTex Export

To create a BibTex file select `Database|BibTex Export...`. Then the export dialog box is opened (see fig. 4.1). Define the options:

Export Select `Complete Database` if *all* records should be exported (even if a filter is active), select `Current SQL Selection` if only the currently filtered records have to be exported.

---

[1]The auxiliary files contain the information which citations are used in the referring document. As BibTex writes the information to the auxiliary files, this method works only in a correct way, if LaTeX translated the document and BibTex was applied to the document. For further information take a look into one of the LaTeX books cited in the list of References.
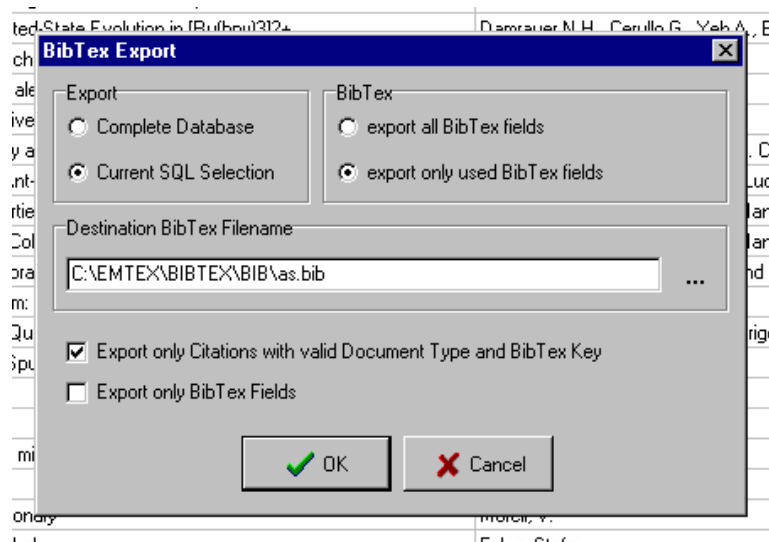
Figure 4.1: Screen Shot of BibTex Export Dialog Box

Fields Select `Export All Fields` if *all* fields should be exported, even if they are empty, selecting `Export Only Used Fields` on the other hand will ignore empty fields.

Destination BibTex Filename Select the name of the target BibTexFile (a default filename can be entered at the preferences, see section 7.1 on page"nobreakspace –˝37.

Export only Citations with ... Records with invalid document type and/or BibTex key are ignored (to avoid BibTex errors).

Export only BibTex Fields Restricts export to BibTex fields. If the function is disabled *all* fields of the database are exported. This is no problem for BibTex but makes large files under certain conditions. Nevertheless this function can be very important to export the *whole database* to other applications.

Append to existing BibTex file If checked, the currently data will be exported to bibtex format, but *appended* to the selected bibtex file. If option is unchecked and a bibtex file with the defined name is existing, this file will be deleted before export procedure.

Add Brackets... Some bibtex styles change the case of the chars in the `BTitle` field for style conformance. The consequence can be, that e.g. "Introduction To 3D NMR Methods" becomes "introduction to 3d nmr methods" instead of "Introduction to 3D NMR methods.". This can be achieved by writing "Introduction to {3D} {NMR} Methods". Exactly this will be performed by SCATMAN 1.0 when this option is enabled.

Then press OK to start export process. If the BibTex database exists a warning statement appears with the quertion whether to overwrite the old file or to abort it.
The export filter creates BibTex files with the following style:

```
@article{as_NicolisClimAttr,
Title            =   "Is There A Climatic Attractor",
Author           =   "Nicolis, C. and Nicolis, G.",
Journal          =   "Nature",
Month            =   "oct",
Pages            =   "529--532",
Volume           =   "311",
Year             =   "1984",
}
```

Tip: For use with BibTex, the best parameter setting for export is usually checking: `export only used fields`, `Export only valid Citations...` and `Export only BibTex Fields`. This ensures small files and optimal behaviour with BibTex.

Warning: Enabling the "Export only BibTex fields" ignores all non-BibTex fields! An import of the created BibTex file will hence **not** restore the complete database!

4.6.2   BibTex Import

Select `Database|BibTex Import...` to import BibTex databases into the currently open database. The BibTex datasets will be *added* to the open database. (If a database containing only the BibTex datasets is desired, create a new database first of all, see section 4.2 on page"nobreakspace –"21)
As the database uses indices, the fields `BSubject`, `BAuthor`, `BTitle` and `BOwner` have to be together unique. So there may be two datasets with "Einstein, Albert" in the `BAuthor` field, but no two that are identical in all four fields.
If two or more datasets are identical in the meaning as described above, a *key violation* error occurs. If this happens while importing a BibTex database:

- Select `Abort` to stop importing procedure.

- Select `Ignore` to ignore this dataset (which is the one that makes problems) and proceed with the next one.

- Select `All` to ignore this dataset and ignore all further datasets that will produce key violations in the database.

Tip: It is recommended to take a look into the `biberror.log` file to examine if all datasets were imported correctly or which datasets made problems for the import parser or database.
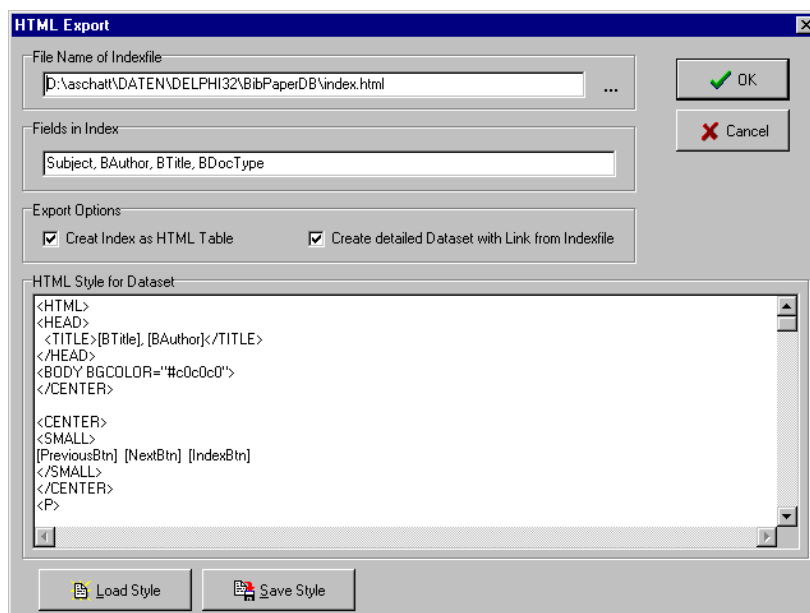
Figure 4.2: HTML Export Dialog window.

Tip: If the BibTex database was generated with SCATMAN 1.0 with the option `Export all Fields` then the complete literature database is reconstructed. Nevertheless it is not recommended to keep the data only in BibTex format, as opening the Paradox database is much easier and faster.

4.7   HTML Export

SCATMAN 1.0 offers the functionality to export your scientific literature database for use in the World Wide Web and creates a **Java-Applet** for online browsing in the exported data. It is necessary to understand at least the basic principles of HTML to use this function.
Select `Database|HTML Export`. This will open the dialog box shown in fig.4.2.
This function will generate an index file and (if desired) detail files for each dataset. If the function `Create detail File...` is enabled, SCATMAN 1.0 also creates the Java Applet for online browsing. Enter all fields, that should be in the index-file to the `Fields in Index` field, separated with a comma.
For example:

```
Subject, BAuthor, BTitle
```

will create an index file containing these three fields one row, each row containing one dataset. So use only a few fields for this index files, and put the details into the detailed sheets:

The database fields, that should appear and the format/layout of these detailed files is arbitrary and can be defined in the Style text-box. Enter regular HTML syntax here, or load stylesheets by pressing the **Load** button.
To enter a database field use the format:

```
[fieldname]
```

for example:

```
The subject is [Subject], and the title is "[BTitle]"
```

This will produce output like:

```
The subject is Chaos, and the title
is "Is there a climatic attractor?"
```

Check the `Create Index as HTML Table` check box to format the index file as HTML table. This has the advantage, that the index looks better and is easier to survey. Otherwise a "simple" list is created. This list on the other side has the advantage, that it will be loaded faster with the browser and may be more useful if you like to process the index file afterwards for some other purpose.
The use of the Java-Applet is simple, as the quick search function is similar to SCATMAN 1.0. Browsing the online data becomes much easier using the applet functionality, which is working both on Intra- and Internet! Unfortunately there are a few things to take into consideration for correct work of Java Applets:

- The Webbrowser has to be able to show Java Applets programmed with **JDK Version 1.1**! Netscape Navigator works fine when using the last version. If you should have problems using Navigator, please visit the Netscape homepage `http://www.netscape.com` and download the Java-Update Patch.

- Webbrowsers offer options for security purpose. So it is possible to deactivate Java. Logically you have to enable the Java support of your browser to be able to use the Java Applet.

- **You may use this applet for Intra- or Internet browsing purpose, but do not forget, that the applet is no Freeware. So providing this applet in any other way than via Inter- or Intranet is not allowed (e.g. using it as CD-Rom frontend.) If you need the applet for some other purpose, please contact me.**

Tip: The easiest way to explore this function is to try it. Use the default stylesheet first of all. Then start Netscape Navigator and open the index file. Finally you can modify this or create your own.

Tip: If you are not experienced in writing HTML, you can use an arbitrary HTML editor like AOLPress or Netscape Editor to create this stylefile. Just add the `[Fieldname]` tags at the position the data of the fields should be located, save the file with the editor and load it from this dialog window by pressing the `Load` Button.

Tip: If the index file becomes rather big (maybe larger the 500 entries) it can be better unselecting the table mode for index creation as download speed will be enhanced (especially when the data is provided on the internet, not on an intranet).

Tip: Use the created HTML index page as a basis for further manipulation. You will have to change the title, add some comment for introduction or the like. Eventually you may want to remove the Java Applet (remove the `applet` Tag) or separate the HTML index and the Java Applet to two different pages. However, remember that the detail files-index link shows to the created HTML index file. So it is a good idea to leave the HTML index unnamed, but eventually put the JAVA Applet to another page.

Hint: Please accept that the Java Applet provided with this version of SCATMAN 1.0 is not the final version. To be honest, it is more an experimental version. The problem is, that nearly no currently available browser understands Java 1.2 (Swing). The final applet will use certain features of JDK 1.2. Until Netscape provides the next generation browser, this applet uses Borland libraries working with JDK 1.1.
If you are interested in a more functional ScatMan Java frontend, send comments and suggestions for further development.

4.8 Pack Database

When working for a longer period of time with certain databases (especially on deleting datasets), the size of the database seems to be too big. This is a result of dynamic database management of the Borland Database Engine. This free space is used again, when entering new datasets.
Nevertheless, you can free this space "manually" by using the `Database|Pack Table` function from time to time. This will reduce the size of the database and speed up the access to datasets.

5 Copy

5.1 Copy for BibTex Citation

Select Copy|Create cite for LaTeX to copy the LaTeX citation command with the BibTexKey of the selected dataset to the clipboard. If the value of the BibTexKey would be for example "as_KuhnStructSciRev" then the text in the clipboard will be:

```
\cite{as_KuhnStructSciRev}
```

Paste this citation to your LaTeX document. To generate the citation with LaTeX and BibTex the database must be exported to BibTex format (see section 4.6.1 on page "nobreakspace –˝22). The LaTeX document should look like:

```
...
...
\begin{document}
...
...
%***** Bibliography  *****
\bibliography{name}
% --- Style of Bibliography
\bibliographystyle{plain}
\end{document}
```

where the name has to be the filename of the BibTex file (without extension). The BibTex file is usually located in the ../emtex/bibtex/bib path.

Tip: If the document is written in german, add the packet

```
\usepackage{bibgerm,cite}
```
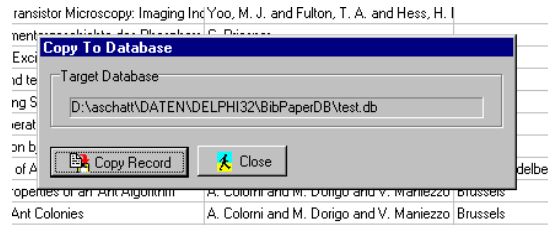
to the document header.

Figure 5.1: Copy selected dataset to Other Table

5.2   Copy Dataset for Word Processor

Select `Copy|Citation as Text...` to copy a citation as text to the clipboard. The difference to the function described in the section above is, that the clipboard does not contain a `cite` command but for example:

Kuhn, Thomas: The Structure of Scientific Revolutions. University of Chicago, 1970

The style of the citation can be defined for every document type with the style editor in the `Options` menu. Even different stylesheets for different purposes can be created.

5.3   Copy Text-Citation to file

This function (`Copy|Citation as Text to File...`) has the same functionality as the function described in the previous section. The only difference is, that not just a single citation is copied to the clipboard, but all visible datasets as citations to a textfile.

Tip: This function can be "abused" to write an individual ASCII Export filter. For this purpose define a stylesheet and use this function when all datasets you want to export are visible.

Tip: The `Tag` field and the `Tag Controls` can be used to mark all desired datasets. For details see section 3.1.3 on page"nobreakspace –˝17.

5.4   Copy Dataset to Other Table

Select `Copy|Copy Record to other Table...` to copy datasets to another database. After selecting the filename of the target table, the copy dialog boy (see fig. 5.1) is opened.

To copy a record, select the record in the `Table View` or in the `Form View` window, then press the `Copy` button. Proceed with as many datasets as necessary. Finally close the Copy window by pressing the `OK` button.

5.5 **Duplicate Record**

Select `Copy|Duplicate Record` to duplicate the selected dataset in the database.
This can be very useful for example if more than one paper out of a proceedings book should
be entered. In this case: enter *one* paper, duplicate it and make only the necessary changes.

6 Filter, Search and SQL Functions

6.1 Quick Filter

Use the `Quick Filter` controls (see fig. 6.1) to make an *on-click* query from the database. By default, after each keystroke, the new filter is applied to the data. If this is not useful (because the computer is not fast enough, or the database is too big) disable the `Perform filtering with every keystroke` in the `Preferences`.
To perform a quick filtering, do the following steps:

1. Select the `fieldname` for the first value you search for in the `Fieldname 1` control.

2. Enter the value to filter in the `Filter Value 1` field.

3. If a second filter citerion is necessary, select an operator in the `operator` control. Selecting the `AND` operator means that filter criterion 1 **and** filter criterion 2 must be fulfilled. If the `OR` operator is selected, filter criterion 1 **or** filter criterion 2 must be fulfilled.

4. If two filter criterions are wished, and the operator is selected, select the second field to search in with the `Fieldname 2` control and enter the second search value in the `Filter Value 2` field.

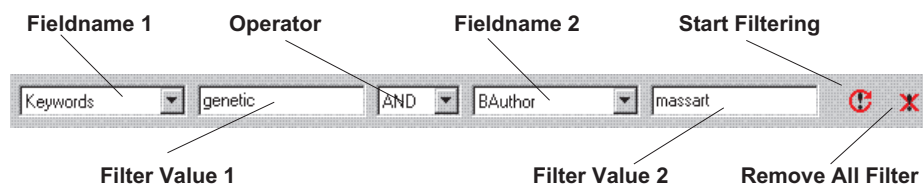5. If `Filter with every keystroke` is disabled, press the `Start filtering` button.

Figure 6.1: Quick Filter Controls

To **disable all filters**, that means to return to the full view of the database, simply press the `Remove All Filter` button.

Tip: If the `Remove All Filter` button is enabled, some filter or `SQL query` is active and not the whole database is viewed!

6.2   Quick Filtering more than one database simultanously

Sometimes it is useful to query not only the currently active database, but more than one. E.g. if you organize your citations in more than one database, or if you have databases with citations collected by colleagues.

Enter the search topics as described in the previous section 6.1. Then press the `Query ALL databases` in `Quick Access List`. The defined search topics will be searched in all databases defined in the quick access list.

For more informations how to work with this `quick access list`, take a look at section 3.1.4 on page"nobreakspace –"18.

Warning: This function is only available in the registered Version of SCATMAN 1.0.

6.3   Search in "All" Fields

Under some circumstances it may be necessary to search in "all" fields for a value. To perform this operation, select `Filter/Search|Search in ''All'' Fields...` or press the refering button. In the dialog window enter the text to search for. In this window a list of all fields that are used for the search is shown.

Warning: In the Memo fields the search is case sensitive. To get information, which fields are memo-fields, see table 2.1.

6.4   Full-Text Search in Attachments

As far as the attachments are textfiles (e.g. plaintext, html, latex,...) selecting `Filter/Search|Full Text Search in Attachments...` performs a full-text search[1] .

After selecting this menu topic, SCATMAN 1.0 extracts the filenames of all attachments. Be aware, that the entry in `Main Directory of Attachments` in the preferences have to be set correctly. If removable media as zip-disks or CD-Roms are used to store attachments, the correct media has to be inserted.

---

[1]Though this function can be very powerful, it is recommended to enter keywords for every entry as filtering is much easier and results are more vivid.
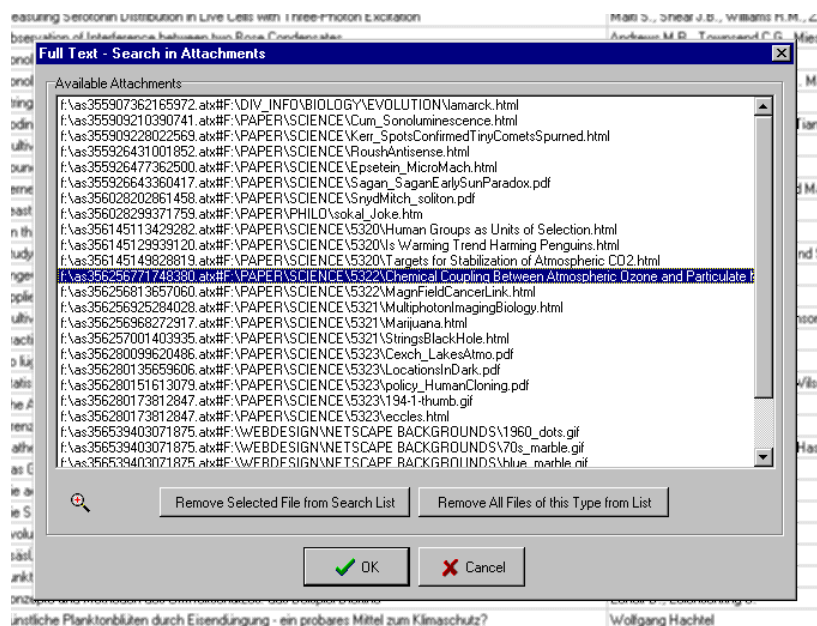
Figure 6.2: Extracted Attachment Filenames in the form: `index-file.atx#attachmentfile.extension`
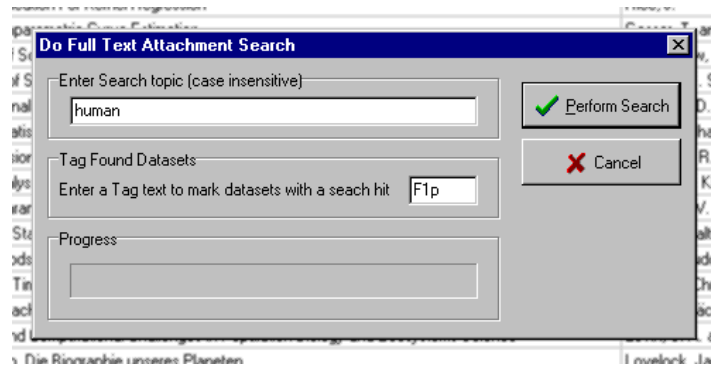
Figure 6.3: Full text search window

This extracting procedure can take a few minutes if many attachments are available or if the media is rather slow (as CD-Roms).

After this procedure is finished, SCATMAN 1.0 shows the filenames of the found attachments (see fig. 6.2). If you feel it is not necessary to search in certain attached files, press the `Remove selected...` button to remove the selected file from the search list, press the `Remove All Files...` button to remove all files of the selected *type*. This can be useful if one wants to remove, say all gif files from the search list. In that case: Select *one* `gif` file and press the right button. Then all gif files will be removed from the list.

Remark: These commands have no effect on the attachment (the attachment will not be deleted, or anything like this), but SCATMAN 1.0 *will perform the full-text search only with the files in this list.*

Press the `OK` button and enter the search topic in the next window (see fig.6.3). SCATMAN 1.0 will *tag* all records, the search topic is found in the attachment. So use the default tag, or enter any other value in the tag-field. Press the `Perform Search` button to start the search.

If SCATMAN 1.0 detects, that the selected tag is already in use, it asks whether to remove all tags from the datasets. This is recommended as otherwise the search result could be wrong.

Warning: This function uses the `Tag` field to mark the found records. If tags are used otherwise, the values are probably overwritten!

6.5   Remove All Filters

Select `Filter/Search|Remove All Filters` to reset the SQL statement and show all datasets. All filter-criteria will be removed. Optionally you can use the button in the button-bar.

6.6   Perform SQL Queries

6.6.1   Introduction

This option is designed for more complex queries. The concept of SCATMAN 1.0 is, that all filtering features described above create SQL statements. These created statements can be viewed and edited by selecting `Filter/Search|SQL...` or the referring button.

6.6.2   SQL

It is not possible to give a detailed description of SQL here, only the most important commands are explained:
A query should consist of:

```
SELECT *
```

that selects all columns

```
FROM "c:\databases\paper.db"
```

to define database to query

```
WHERE column
```

to define column to search in. The column name are identical to the description of the columns in the `Table View` window. Use "BAuthor" for the `BAuthor` field.

```
LIKE "value"
```

to define value to search for or

```
= "value"
```

where LIKE search for similar values and "=" for exact match. To build a criterion, where the value is *not* existing write:

```
<> "value"
```

Use `%` for wildcard, like the asterix in DOS. These queries are case sensitive. To search case insensitive, use

```
WHERE UPPER(fieldname) LIKE "value"
```

to combine more than one serach criterions use `AND` or `OR`:

```
AND fieldname IS "value"
```

To change the sort order add

```
ORDER BY fieldname
```

Tip: To get examples for queries, make a quick filtering using the quick filters as described in section 6.1 on page"nobreakspace –˝31 and select `Filter/Search|SQL....`

6.7 Search and Replace

Select `Filter/Search|Search and Replace...` to replace text in all visible datasets in one of the fields.

1. Select with the `Search in` list-box the Field to *search and replace* in.

2. Enter in the `Search For` field the text you want to *replace*

3. Enter in the `Replace with` field, the text, that replaces the found text.

Warning: There is no secure way to undo this procedure, to be on the safe side, make a backup of the database before replacing values (see section 2.2 on page"nobreakspace –˝7).

7 Preferences

7.1 General Preferences

Database: Read Only If this option is enabled, no editing of the database is possible. This can be useful to ensure that no changes are made by accident.

Expert Mode After installation the expert mode is deactivated as beginners can be confused by too much and complex functions. If you are already a versed in using SCATMAN 1.0 enable the expert mode for full functionality.

SQL filtering: Perform filtering with ... If this option is enabled, the quick-filter function starts the selection every time, the entry in one of the value fields is changed. If this option is disabled, the filtering must be executed on pressing the `Perform Filter` button.

Owner Enter a short (5 chars) user identification code. This is very useful to keep databases consistent, more than one person is working with, or if different databases are joined. This user code will be added automatically into the `Owner` field, when adding new datasets.

Main Directory of Attachment Select the root drive and path of the attachment locations. All attachments must be below this directory.

Default BibTex File Often only one BibTex file is used. For convenience this filename can be entered as default.

Copy Citation as Text: Stylesheet Filename Enter the name of the stylefile to be used for the `Copy Citation as Text` function (see section 5.2). After installation a default stylesheet is available. To create new stylesheets, press the + button. To toggle between different stylesheets press the **...** button. After creating a new stylefile, you can edit it with the stylesheet editor by selecting `Options`│`Edit Text Citation Style...`

Copy Button Function As three different types of copying citaions are available (for LaTeX, as Text, as Text to File) the function of the button can be defined here.

7.2   Visible Columns in Table View

Selecting this menu item, a list of all available columns (database fields) is shown. If it is not necessary for you to see all available fields in the `Table View` window, disable the columns you do not need. This has no consequence to the data stored in these fields!

7.3   Edit Templates

Use this feature to define template lists for a more convenient data editing in the form view. Enter the often used Journal names, publisher names with address (Publisher@Address), Subject items and names of People publications or books are often borrowed to.

Simply add one item after the other, one item per line. The data of these templates are stored in the files with the extension `.tpl`. These files can be edited with any text-editor.

7.4   Edit Text Citation Style

It is possible to enter a citation style for each document type: So first of all, select In the `Document Type` field to edit. Then enter the style template in the `Citation Style` field.

Syntax:

[Fieldname] Fieldnames written in [ ] brackets will be replaced by the value of the field `Fieldname`

{ } Write separators between fields between { and } brackets. This is not absolutely necessary but useful: If a field is empty, SCATMAN 1.0 detects that two separators are colliding and ignores the second one.

All other chars All other chars are taken as they are.

Examples:
Syntax of the style is:

`[BAuthor]{, }[BTitle]{, }[BJournal]`

Values of fields are: `BAuthor` is *Karl Popper*, `BTitle` is *Die Logik der Forschung* and `BJournal` is empty. Then the result will be:

`Karl Popper, Die Logik der Forschung`

If the field-values are: `BAuthor` is *Grassberger, P. and Procaccia, I.*, `BTitle` is *Characterization Of Strange Attractors* and `BJournal` is *Physica D* the result will be:

```
Grassberger, P. and Procaccia, I., Characterization Of
Strange Attractors, Physica D
```

If, for example the `BTitle` field in the upper example would be empty, SCATMAN 1.0 detects that two separators (,) collide and ignores the second one. So the result is **not**

```
Grassberger, P. and Procaccia, I.,, Physica D
```

but

```
Grassberger, P. and Procaccia, I., Physica D
```

and so on. . .

7.5   Clear All Tags

Use this functions to remove all tags of the currently filtered records.

Warning: There is no undo function!

7.6   Backup Function

As it is struggeling to forget to backup no database file or configuration file, an automatical backup function is added. The following files are backuped (if desired):

- Configuration (Preferences) file
- Configuration (Size of Windows) file
- The `Quick Access Databases` list.
- All template files (Subject, Journal, Publisher, Borrowed To)
- All Text Copy Stylesheets located in the application path
- All stored SQL queries with extension `*.sql`, located in the application path
- All databases declared in the `Quick Access Databases` list

After selecting the `Options|Backup` function, select whether to backup only the configuration files, only the databases or both. Then enter a filename for the archive file in the next dialog box. Finally all files to be backuped are shown.

The backup procedure uses a freeware `zip` program and creates a zip-file. This zip file can be unpacked for example with pkunzip or with WinZip.

Tip: If you make a backup, **do not store the zip file on the same harddisk as the original data**, as a virus or a hardware defect can destroy *both* the original data *and* the backup file. At best, copy the backup file to a floppy disk, streamer tape or any other removable medium!

7.7   Configuration Files

7.7.1   Introduction

SCATMAN 1.0 needs (at least) three configuration files and five files containing multiple templates. In case of problems configuration files can be deleted. SCATMAN 1.0 tries to read the configuration files on startup, if some files are missing, new ones with default settings are created.

`boptions.cfg` Contains general options. File is of ASCII type. description see section 7.7.2

`winsize.cfg` Contains window-sizes and position. File is of Binary type.

`pref_db.txt` List of often used databases with path and name. ASCII Format.

`copy.sty` defines the default (text) copy style. Can be changed by `Options | Edit Text Citation Style...`

`borrow.tpl` Template for `BorrowedTo` field.

`journal.tpl` Template for `BJournal` field.

`publish.tpl` Template for `BPublisher` and `Adress` field.

`subject.tpl` Template for `Subject` field.

`copy.sty` Default Stylesheet for Text-Citation.

Tip: It is recommended to backup the configuration files, especially the files containing the templates. This is possible manually or by using the `Options | Backup` function.

7.7.2   General Options File

Format of `boptions.cfg` file:

```
****
Configuration File for Bib-Tex Literature Database Version V0.80b
Copyright (1997) Alexander Schatten
email: AlexanderSchatten@gmx.net
****
\LASTDB
D:\aschatt\DATEN\DELPHI32\BibPaperDB\Paper.DB
\SHOWTAGCONTROL
FALSE
\ATTACHPATH
f:\
\COPYSTYLE
```

```
D:\aschatt\DATEN\DELPHI32\BibPaperDB\copy.sty
\COPYBUTTON
latex
\DEFBIBTEX
E:\texmf\bibtex\bib\base\as.bib
\DBORDERBY
Subject
\DBREADONLY
FALSE
\LIVESQL
TRUE
\HITWAIT
600
\OWNER
as
\BIBDQ
TRUE
\VISIBLEROWS
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
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TRUE
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TRUE
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TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
TRUE
```

Usually it is not necessary to edit the configuration file manually. Only two parameters must be "tuned" manually using an arbitrary text editor:

- The `HITWAIT` value defines the time between the last keystroke and the execution of the SQL-filtering. The default value is 600, meaning 600ms. This seems to be a good

value for most purposes. If, by some reason, this time seems to be too long or too short, change the value with a text-editor.

- The `BIBDQ` parameter defines whether to convert \dq commands to the " symbol or not. By default this feature is enabled. To disable it, set the parameter to `FALSE`.

7.7.3 Database Preferences

Format of `pref_db.txt` file:

```
D:\DATEN\DELPHI32\BibPaperDB\Paper.DB
D:\Optimierung-Buch\GA\Literatur\ga.db
D:\Test\test.db
```

This ASCII file contains a list of often used Literature Databases.

7.7.4 Copy Citation as Text - Stylesheet

The format of the stylesheet is:

```
\article
[BAuthor]<, >[BTitle]<, >[BJournal]<, >[BVolume]<:>[BPages]<, >[BYear]
\book
[BAuthor]<: >[BTitle]<. >[BPublisher]<, >[BAddress]<. >[BEdition]< Edition, >[BYear]
\booklet
[BAuthor]<: >[BTitle]<. >[BAddress]<. >[BYear]
\inbook
[BAuthor][BEditor]<, >[BTitle]<, >[BJournal]<, >[BVolume]<:>[BPages]<, >[BPublisher]<, >[BYear]
\incollection
[BAuthor]<, >[BTitle]<. >[BBooktitle]<. >[BPublisher]<, >[BYear]
\inproceedings
[BAuthor]<, >[BTitle]<. >[BBooktitle]<. >[BOrganisation]<. >[BPublisher]<, >[BYear]
\manual
[BAuthor]<, >[BTitle]<. >[BOrganisation]<, >[BYear]
\mastersthesis
[BAuthor]<, >[BTitle]<. >[BSchool]<, >[BAddress]<, >[BYear]
\misc
[BAuthor]<, >[BTitle]<. >[Bhowpublished]<. >[BYear]<, >[BNote]
\phdthesis
[BAuthor]<, >[BTitle]<. >[BSchool]<, >[BAddress]<, >[BYear]
\proceedings
[BEditor]<: >[BTitle]<. >[BOrganisation]<, >[BPublisher]<, >[BAddress]<, >[BYear].
\techreport
[BAuthor]<, >[BTitle]<: >[BNumber]<. >[BInstitution]<, >[BAddress]<, >[BYear]
\unpublished
[BAuthor]<, >[BTitle]<. >[BNote]<. >[BYear]
```

The first line of each definitions contains the name of the document type proceeded by a backslash. The next line contains the definition of the style. The definition must stand in one line, no carriage return is allowed.
The stylefiles should have the extension `.sty` and should be located in the application path. Only in this case the backup function works properly for this file type.

7.7.5 Template Files

The template files: `borrow.tpl`, `journal.tpl`, `journal.tpl`, `publish.tpl`, `subject.tpl` contains a list of template entries of the referring database fields. All files except `publish.tpl` are a simple list of entries, `publish.tpl` has the format `Publisher@Adress`.

8 Attachments

8.1 Introduction

While programming the `Attachment` function in SCATMAN 1.0, the following problems were considered:

- It is very useful to organize scanned publications (in some cases with OCR-text) with SCATMAN 1.0. This would provide not only the BibTex functionality, but also some archiv functions for publications.

- Store Hypertext documents downloaded from Internet.

- Archive downloaded publications from publishers like *Science* (e.g. in Adobe PDF format)

- In a more general approach it should be possible to attach arbitrary file formats.

- Keep these files in the original format for allowing access not only with this application.

- Reorganisation of the file structure of the stored documents must be possible without problems.

- Attached documents must be accessible from *any* drive type (harddisc, CD-rom, floppy disc, Zip-drive, . . .).

- Often not *all* attached files will be stored on only one medium, maybe a part of the publications will be on CD-Rom, others on ZIP disc.

All these objectives are solved with the attachment function of SCATMAN 1.0 with only little restrictions:

- Attaching one or more file(s) to a dataset means **no** *physical* copying of the files, but making a link in an index file.

- All files attached to one certain record have to be located in **one** folder. (For sure, for different datasets, different folders may be used!)
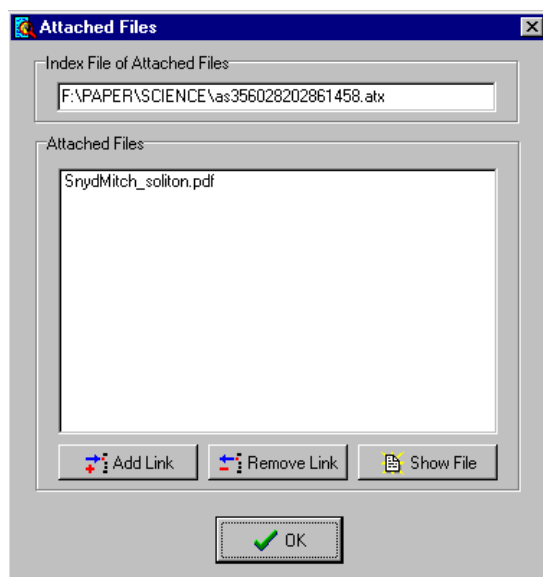
Figure 8.1: Work with Attachments

- An index file with the name: `usercodeXXXXXXXXXXXXXX.idx` where `usercode` is defined in the `Preferences`, `XXXX` stands for an automatically generated number (referring to date and time) with the result, that each index file has a unique filename.

- This index file is located in the folder, where the attached files stand, and contains the names of the attached files *without* file-path!

- To access attachments, the drive or directory containing the attachment files must be entered in the `Preferences`.

- SCATMAN 1.0 stores only the name of the index file – to access the attached files, SCATMAN 1.0 searches the drive(path) and the subfolder of the unique-named index files. For that reason, one can reorganize the hierarchy of the attachments in an arbitrary way with one restriction: **The index file and the referred attachment files must stay in one folder, and may not be separated!**

- It is recommended to store the attachment files "as is", not in compressed form (e.g. as zip-file), because full text search is only possible if the documents are not compressed.

8.2   Add Attachment to Record

Press the `Attachment` button. If no attachment is yet available for this file (no index file name is existing in the `Attachment` database field), you'll receive a file open dialog to select the files to attach to the record. Remember that all files have to be in one folder. Then the index file is created, and the name is added to the dataset.

8.3   Access Attachments

If an attachment is already available for the dataset, pressing the `Attachment` button will open search the index-file and open the `Attached Files` dialog (see fig. 8.1). To show an attachment (open it with assiciated application) double click on the name or select the name and press the `Show File` button.

To remove an attachment select it and press the `Remove Link` button. The attachment file **will no be deleted**, only the link to the file will be removed.

Pressing the `Add Link` button is opening a dialog window for adding further documents as attachment (evidently only files from the same folder as the other attached files may be selected).

8.4   Remove All Attachments

To remove not only single attached files, but all attachments and the index file, go to the `Form View` window and press the button right beside the `Attachment` database field.

This operation will remove the database entry of the *index file name* and will remove the index file from the medium (if possible). Also this procedure **will not delete the attachment files!**

9 How To ...

9.1 ...Create a New Literature Database

To create a new (empty) Literature Database perform the following steps:

1. Select `Database|Create New...`

2. Select the folder to store the new Literature database in

3. Enter the filename of the new database

4. Press `Save` Button or hit the `Enter` key

Additionally you can add the new created database to the `Quick Access Database` list by

1. If the menu `View|Show DB Quick Access List...` is not checked, select it to activate the DB Prefereces window

2. Press the `Add current database` button in the `Quick Access` window

9.2 ...Open a Database

To open (select) an existing database simply:

1. Select `Database|Select...`

2. Select the folder

3. Double click on the filename or select file name and press the `Open` button

If the database is already in the `DB Quick Access` list open the `DB Quick Acces` window as described above and double click on the name of the database to select it.

9.3 . . . Add Data

To add new datasets:

1. Make sure, that the `Read Only` property in the `Options│Preferences` is disabled!

2. Change to the `Form View` window

3. Press the `Add Record` button (see fig. 3.2 on page"nobreakspace –˝19)

4. Enter the data in the form. Move from field to field by using the tabulator key or the mouse. If templates for the `Subject`, `DocType`, `Journal`, `BorrowedTo` or `Publisher` field are defined, a selection out of the template list with the mouse can be done.

5. To get help about the meaning of the database fields open the `Field Help` by pressing the referring button or take a close look to chapter 2 on page"nobreakspace –˝7, and especially to sections 2.3 on page"nobreakspace –˝9 and 2.4 on page"nobreakspace –˝13.

9.4 . . . Use Filters

Example 1: You want to select publications where the name of one author is "Grassbergen" and the word "chaos" should be a keyword. The result should be sorted by title. Perform the following steps (see also fig. 6.1 on page"nobreakspace –˝31):

1. Select "BAuthor" from the `Fieldname 1` drop down list.

2. Enter "grassberger" in the `Filter Value 1` field.

3. Select "AND" from the `Operator` drop down list.

4. Select "Keywords" from the `Fieldname 2` drop down list.

5. Enter "chaos" in the `Filter Value 2` field.

6. If the `Perform filtering with every keystroke` property is disabled in the `Options│Preferences` menu, press the Start Filtering Button.

Example 2: You search for books written by "Popper":

1. Select "BAuthor" from the `Fieldname 1` drop down list.

2. Enter "popper" in the `Filter Value 1` field.

3. Select "AND" from the `Operator` drop down list.

4. Select "BDocType" from the `Fieldname 2` drop down list.

5. Enter "book" in the `Filter Value 2` field.

6. If the `Perform filtering with every keystroke` property is disabled in the `Options | Preferences` menu, press the Start Filtering Button.

Example 3: You want to see all publications with the word "cell" or the word "neuronal" in the title:

1. Select "BTitle" from the `Fieldname 1` drop down list.

2. Enter "cell" in the `Filter Value 1` field.

3. Select "OR" from the `Operator` drop down list.

4. Select "BTitle" from the `Fieldname 2` drop down list.

5. Enter "neuronal" in the `Filter Value 2` field.

6. If the `Perform filtering with every keystroke` property is disabled in the `Options | Preferences` menu, press the Start Filtering Button.

Example 4: You want to search not only in one database, but in all available databases:

1. Check if all databases are listed in the `Quick Access List`. If not perform the following steps:

   a) Open the `Quick Access List` Window by selecting `View | Show DB Quick Access List` or by pressing F11

   b) Press the left button in the `Quick Access List` window (Add Link with File-manager)

   c) Select the database to add.

   d) Goto 1 until all databases are added to this list.

   e) This list will be stored after quitting application, so you need to do this procedure only once.

2. Enter the search topics as described in the examples above.

3. Press the `Query ALL databases in quick access list` button right beside the quick filter controls.

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4. Search procedure will be performed. Be aware, that all functions that would change or edit datasets are disabled as long as this filtering mode is active. To disable this filter press the `Remove all filters` button or `Ctrl R`, or select any database.

Tip: More complex queries can be performed by entering SQL commands. For more details, take a look to the section 6.6 on page"nobreakspace –"35.

9.5   . . . Add Attachments

Consider you want to add this list of files as attachment to the currently selected record:

```
1192-1-thumb.gif
1211-1-thumb.gif
Cum_Sonoluminescence.html
```

These files are located in the directory:

```
f:\paper\science
```

To attach these files perform the following steps (under the condition, that no attachment is defined for this record yet - to determine this, take a look at the `Attachment` field. If there is no entry, this condition is fulfilled):

1. Press the `Attachment` button

2. Select the path mentioned above

3. Select the three files: "1192-1-thumb.gif", "1211-1-thumb.gif", "Cum_Sonoluminescence.html" by marking the first file, then selecting the other two files while pressing the `Strg/Ctrl` key.

4. Press the `Open` button

Now the index file in the directory

```
f:\paper\science
```

will be generated, and the filename of this index file is entered to the dataset (`Attachment` field) automatically.

9.6   . . . Work with Attachments

To show the attached files is subject to the condition that the attachment path entered in the
`Options|Preferences|Main Directory of Attachments` is correct.
(E.g. You store all your attachments on the harddisc in directories below "d:\science\paper\",
enter this path to the `Main Directory of Attachments` field.   It does not
matter in which directory the attachments stand, as long as the directory starts with
"d:\science\paper\".)
To work with attachments press the `Attachment` button. The index file will be searched and
the attachment files are listed in the listbox (see fig. 8.1 on page"nobreakspace –˝45). If you
want to display the "Cum_Sonoluminescence.html" from the example above, simply double-
click the filename. If a browser is installed on your system, this browser will be launched and
the hypertext document will be displayed.

9.7   . . . Import a BibTex File

If you are working with BibTex yet, or receive BibTex databases, you may desire to import
these files to SCATMAN 1.0. Example: You receive a database: "biochem.bib". This file
should be converted to use it with SCATMAN 1.0:

1. Select `Database|Create New...`

2. Select the folder to store the database in

3. Enter "biochem" as name of the new database

4. Press `Save` Button or hit the `Enter` key

5. Select `Database|BibTexImport`

6. Change to the folder "biochem.bib" is located

7. Select "biochem.bib" by double clicking on the filename

8. Enter an arbitrary value for the Subject field. This is necessary, as the Subject field is no
   standard BibTex field, but used as Database Key. By the way, this can be very useful, to
   mark the datasets imported to an existing database.

The BibTex database will be imported to the new created database "biochem.db". All fields
not available in BibTex will be left empty. If an error occurs while reading a BibTex file, the
dataset is marked with the error statement in the subject field.

9.8   . . . Make a Citation in a LaTeX Document

Example: You have a LaTeX publication and you want to add a citation from SCATMAN 1.0: First of all export the database containing the publication(s) as BibTexFile to the BibTex – Bib folder. This is only necessary if the BibTex file is not yet existing or different from the database. So this step is usually **not** necessary each time you insert a citation.

1. Select `Database|Export BibTex`

2. Select `Complete Database`, if all datasets and `Current SQL Selection`, if only the currently filtered records should be exported, but ensure, that the publications to be cited are among these selected records

3. Select `Export only used fields`

4. Select the filename of the BibTex database

5. Check `Export only Citations with ...`

6. Check `Export only BibTex fields`

7. Press `OK`

These settings do not export the complete data contained in the database, but all data necessary for BibTex.

1. Select the dataset to be cited.

2. Select `Copy|Create cite for LaTeX`, or press the copy button

3. Change to the Editor you use to edit the LaTeX source code. Go to the position, where the citation should be inserted and select `Edit|Paste` or press `Strg/Ctrl v`

4. Run LaTeX compiler

5. Run BibTex

6. Run LaTeX compiler two times

For more details to LaTeX or BibTex read section 5.1 on page"nobreakspace –"28 or [2].

9.9   . . . Make a citation in Winword

There are two possibilities to do this job: The first way is to copy *one* selected record as citation to clipboard, then change to the Word-Processor (say Winword) and Paste it at the position you need it. The second way is (if a lot of citations are to be inserted) to create a filter statement that shows all records that should be cited (probably by using the `Tag` field see also section 3.1.3 on page"nobreakspace –˝17), export it to a text file, and insert this text file into the document.

Using the Clipboard

1. Start the Winword and SCATMAN 1.0

2. Change to SCATMAN 1.0

3. Select the record to cite

4. Select `Copy`|`Citation as Text` or press `F4`

5. Change to Winword

6. Move cursor to the position the citation should be located

7. Select `Edit`|`Paste` or press `Strg+v`

Using a Textfile

1. Start the Winword and SCATMAN 1.0

2. Change to SCATMAN 1.0

3. Enter the same value to all `Tag` fields of the records to be cited (e.g. *ct1*).

4. Select `Tag` in the Quick-Filter dropdown list

5. Enter *ct1* in the value field

6. Select `Copy`|`Citation as Text to File...`

7. Enter a filename

8. Change to Winword

9. Move cursor to the position the citation should be located

10. Select `Insert`|`File...`

11. Select `text (*.txt)` as `Filetype`

12. Select the file you have created with SCATMAN 1.0

13. Press `OK`

Tip: You can use the quick button in the same way as the menu described above, but select the correct function of the button in the `Options|Preferences` dialog.

9.10   . . . Replace text in a certain field type

It is possible to replace a text-string in all fields of a certain field type. For example: You want to change the name of the Journal: *Anal.Chem.* to *Analytical Chemistry* in all `BJournal` fields:

1. Select `Filter/Search|Search and Replace...`

2. Select *BJournal* in the `Search in` drop down box

3. Enter *Anal.Chem.* in the `Search for` field

4. Enter *Analytical Chemistry* in the `Replace with` field

5. Press the `OK` button

Warning: There is no undo function. Use this function with care!

9.11   . . . Make a Full-Text Search in the Attached Files

In some cases (if all other search strategies fail) it can be useful to search for a keyword in all attached files. This is only useful, if the attached files are text-type (HTML, plain text, LaTeX, . . .).

Example: You want to search the topic *human* case-insensitive in all attachments:

1. If the attachments are not stored on the local harddisk or on a mounted network drive, enter the media the attachments are located at (CD-Rom, Zip-disk,. . .).

2. Check if the `Main Directory of Attachments` value in the `Options|Preferences` is set correctly. E.g. the attachments are stored on a CD-Rom in folders "below" `g:\ScientificLiterature` enter this path.

3. Select `Filter/Search|Full Text Search in Attachments...`

4. Wait until the filenames of the attachments are extracted

5. If you want to exclude certain files or certain file-types from the search remove them from the list. E.g. you want to exclude all `gif` files: Select *one arbitrary* gif file and press the right button: `Remove All Files of this Type from List`

6. Press the `OK` button

7. Enter *human* in the `Enter Search Topic` field

8. Enter an arbitrary value in the `Tag Found Dataset` field or leave the default value: SCATMAN 1.0 will enter this value in the `Tag` field of all records, containing the search value in the attachment

9. Press the `Perform Search` button

10. SCATMAN 1.0 creates a filter that shows you all found datasets

11. To return to the full view of the database press the `Remove all Filters` button

9.12   . . . Transfer some Records to Another Database

Consider you want to copy some datasets from database "biochem.db" to "neurochem.db". Perform the following steps:

1. Select `Database|Select...`

2. Select the *source* database, in our example: "biochem.db"

3. Select `Copy|Copy Record to other Table...`

4. Select the *destination* database, in this example: "neurochem.db"

5. Select the dataset to copy

6. Press the `Copy Record` button in the `Copy to Database` window

7. Goto Step 5 until all datasets are copied

8. Press the `Close` button in the `Copy to Database` window

9.13 . . . Create web-site out of database.

Consider you have a homepage on a unix webserver: "public_html/welcome.html". You want to export a part of your citation database to offer the information in the intranet or as recommendation for your students. The HTML files should be located at "public_html/literature/"[1].

1. Create a query that shows the records you want to export. (for more information to this topic see 9.4 or look at chapter 6.1 on page"nobreakspace –˜31).

2. Select `Database|HTML Export`

3. Double Click into the `File Name of Indexfile` field.

4. Select the network drive of the server and the path "public_html/literature/". Enter the name of the index file, say "LitIndex.html".

5. You want the fields `Subject, BAuthor, BTitle, BDocType` to appear in the table of the index file. So enter these fieldnames separated with a comma into the `Fields in Index` field.

6. Ensure, that the `Create detailed...` check box is checked.

7. Load or enter your HTML style-file in the memo field, or load one of the default styles by pressing the `Load` button.

8. Press the `OK` button. The export procedure starts.

9. Open your homepage file "public_html/welcome.html" with a HTML editor like AOLPress or Netscape editor or with some texteditor and add a link to the indexfile of the literature list. If you write the HTML "by hand" enter the text: `<A HREF="literature/LitIndex.html">List of recommended Scientific Literature</A>`

For future update of existing HTML sites, simply repeat the steps 1–8.

Tip: A Java Applet is added to the index webpage for better navigation in the database. For more information see section 4.7.

Tip: If you want to remove the Java Applet from the index page, open the index file in an arbitrary text editor and remove the line containing the `<APPLET ...   </APPLET>` tag.

---

[1]I consider you have access to the Unix server via some network file system. Otherwise the data must be transmitted using some ftp program.

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Bibliography

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