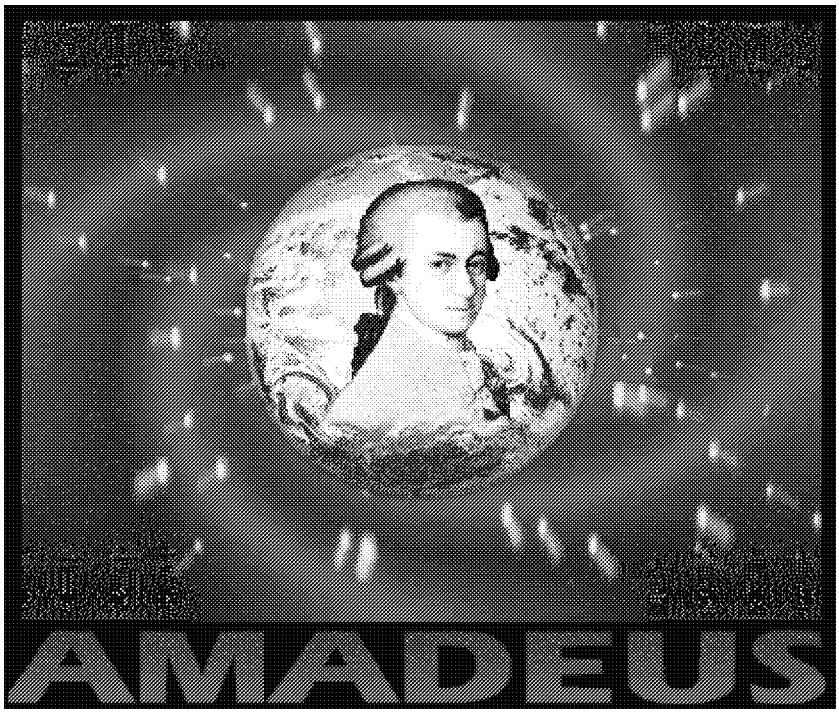
# Amadeus

## A PC-Client for Hyper-G

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## 1. HOW TO GET AND INSTALL AMADEUS 5

**1.1 Required Hardware** 5

**1.2 Required Networking Environment** 5

**1.3 Microsoft's Win32s software** 5

**1.4 Installing AMADEUS** 6
1.4.1 Local installation 6
1.4.2 Fileserver installation 6

**1.5 Hyper-G** 7

**1.6 Bugs** 7

## 2. HYPER-G - A VERY SHORT INTRODUCTION 7

**2.1 What is Hyper-G ?** 7

**2.2 Hyper-G is an open system** 7

**2.3 Hyper-G can be used at various levels of anonymity** 8

**2.4 Hyper-G uses the annotation facility in an "orthogonal" fashion** 9

**2.5 Structure of the data stored in a Hyper-G database** 9

**2.6 Navigating in Hyper-G** 9

## 3. WORKING WITH HYPER-G USING AMADEUS 9

**3.1 Preface** 9

**3.2 A short tutorial through the system** 9
3.2.1 First steps 9
3.2.2 Three possibilities to navigate: Browsing, Searching and Links 9
3.2.3 How to insert documents into the database 9

## 4. DETAILED DESCRIPTION OF AMADEUS COMMANDS 9

**4.1 The collection browser** 9
4.1.1 Types of Objects 10
4.1.2 Choose an Object 11

**4.2 The text viewer** 11
4.2.1 Key Bindings 12
4.2.2 Mouse Navigation 12

**4.3 The image viewer** 12

**4.4 The PostScript viewer** 13

**4.5 The movie viewer** 13

**4.6 The sound player** **13**

**4.7 The „File“ menu** **13**
4.7.1 Overview 13
4.7.2 The „New documents“ commands 14
4.7.2.1 Access Rights: 15
4.7.2.2 Inserting an Image, a Movie, a Sound, a Scene, a Postscript or a Generic document: 15
4.7.2.3 Inserting a Text document: 17
4.7.2.4 Inserting a new collection or a new cluster: 17
4.7.3 The „New Remote“ command 18
4.7.4 The „New Annotation“ command 18
4.7.5 The „Save“ command 19
4.7.6 The “Save Anchors” command 19
4.7.7 The „Modify“ command 19
4.7.8 The „Copy“ command 19
4.7.9 The „Move“ command 20
4.7.10 The „Unlink“ command 20
4.7.11 The „Delete“ command 20
4.7.12 The „Play“ command 21
4.7.13 The „Stop“ command 21
4.7.14 The „Print“ command 21
4.7.14.1 Shortcuts 21
4.7.15 The „Page Setup“ command 21
4.7.16 The „Print Preview“ command 21
4.7.17 The „Print Setup“ command 21
4.7.18 The „Exit“ command 21

**4.8 The „Edit“ menu** **22**
4.8.1 Overview 22
4.8.2 The „Cut“ command 22
4.8.2.1 Shortcuts 22
4.8.3 The „Copy“ command 22
4.8.3.1 Shortcuts 22
4.8.4 The „Paste“ command 22
4.8.4.1 Shortcuts 22
4.8.5 The „Make Link“ Command 23
4.8.6 The „Delete Link“ Command 23
4.8.7 The “Link Properties” Command 23
4.8.8 The „Attributes“ Command 23
4.8.8.1 Adding/Modifying attributes 24
4.8.8.2 Deleting of attributes 24

**4.9 The „Navigation“ menu** **24**
4.9.1 Overview 24
4.9.2 The „History“ command 25
4.9.3 The „Forward“ and „Back“ commands 25
4.9.4 The „Home“ command 26
4.9.5 The „Hyperroot command 26
4.9.6 The „Goto“ command 26
4.9.6.1 Collection name: 26
4.9.6.2 Remote connection: 26
4.9.7 The „Children“ and „Parents“ commands 26
4.9.8 The „Links“, „References“ and ‘Annotations’ commands 26
4.9.9 The „Break“ command 27

**4.10 The „Search“ menu** **27**
4.10.1 Overview 27
4.10.2 The „Find“ command 27

4.10.2.1 The search region 27
4.10.2.2 Search type Titles 27
4.10.2.2.1 Ordinary Search 28
4.10.2.2.2 Prefix Search 28
4.10.2.3 Search type Attributes 28
4.10.2.4 Search type Fulltext 28
4.10.2.4.1 Examples: 28
4.10.2.4.2 Note 29
4.10.2.4.3 Query Syntax 29
4.10.3 The „Find in text“ command 30
4.10.4 The „Activate“ and „Deactivate“ command 30
4.10.5 The „Show list“ command 30
4.10.6 The „Sort Order“ command 30
4.10.7 The „Full Text Option“ command 31

**4.11 The „Administration“ menu 31**
4.11.1 Overview 31
4.11.2 The „Identify“ command 31
4.11.3 The „Change password“ command 31
4.11.4 The „Status“ command 32
4.11.5 The „Send Message“ command 32

**4.12 The „Options“ menu 32**
4.12.1 Overview 32
4.12.2 The „Language“ commands 33
4.12.3 The „Fonts“ commands 33
4.12.4 The „Colors“ commands 33
4.12.5 The „Viewer Options“ commands 33
4.12.5.1 Initial Window State 33
4.12.5.2 Image Viewer 33
4.12.5.3 Text Viewer 34
4.12.6 The „Toolbar“ and „Statusbar“ commands 34
4.12.7 The „Save Settings on Exit“ and „Save settings now“ commands 34

**4.13 The „Window“ menu 34**
4.13.1 Overview 34
4.13.2 The „Cascade“ command 34
4.13.3 The „Tile Horizontal“ and „Tile Vertical“ commands 34
4.13.4 The „Tile Always Horizontal“ and „Tile Always Vertical“ commands 34
4.13.5 The „Arrange Icons“ command 35

**4.14 The „Help“ menu 35**
4.14.1 Overview 35
4.14.2 The „Index“ command 35
4.14.3 The „Using help“ command 35
4.14.4 The „About“ command 35

**4.15 The „Amadeus.Ini“ file and command line options 35**
4.15.1 Command line options 36

**5. INDEX 37**

# 1. How to Get and Install Amadeus

AMADEUS runs on IBM compatible PCs running Windows 3.1, Windows for Workgroups, Windows NT or Windows 95. (We are working on a special Windows version, that also runs under OS/2 Warp.) What you have downloaded is still a pre-release version, and we are interested in bug reports (see at end).

## *1.1 Required Hardware*

Amadeus requires an absolute minimum of an 80386-based machine with 4 MB RAM. Our recommended configuration is a 33-MHz, or faster, 80486 with at least 8 MB of RAM. (>=256 color display is also recommended.) The Amadeus binaries require min. 2 MB / max. 7 MB (depending on the configuration, + 2 MB for Win32s) of disk space, and you should have about 10 MB free in your TEMP directory when running Amadeus.

## *1.2 Required Networking Environment*

In order to use AMADEUS you must have direct access to the network, i.e. your machine has a network card and is connected to the network or you use your modem to call a terminal server that allows SLIP or PPP connections. This direct access must support the WinSock networking specification. To run Amadeus, you will need a system running Microsoft Windows 3.1 in enhanced mode, a 1.1 compliant winsock.dll and Microsoft's win32s software. Windows NT and Windows 95 users have these DLLs built in.

The winsock.dll provides the TCP/IP networking under Windows. Amadeus is a winsock1.1 compliant program. If you are using a commercial TCP/IP stack such as PC-TCP , PC-NFS or running a local area network such as Novell in addition to TCP/IP, you need to contact your network vendor directly about obtaining the Winsock DLL.

If you are accessing the Internet with a stand-alone PC running Windows, you may use a shareware winsock called the "Trumpet Software International Winsock". A copy of the Trumpet software can be found at ftp.utas.edu.au in the pc/trumpet/winsock directory.

Note 1: Our PC/TCP 2.20 does not work with multimedia documents, but version 2.30 works perfectly

Note 2: The hostname of your PC must be listed in the TCP/IP host file

## *1.3 Microsoft's Win32s software*

AMADEUS is a 32-bit application and therefore requires the win32s software when run under Windows 3.1 or Windows for Workgroups. Win32s allows you to run 32-bit Windows applications which do not use Windows "NT-specific features" under Windows 3.1 and Windows for Workgroups.

Win32s was developed by Microsoft and it is freely distributed to licensed users of Windows 3.1 or Windows for Workgroups. If you already use other 32-bit Windows applications then you should already have this software installed in your /windows/system/win32s directory. If AMADEUS is your first 32-bit application then the setup program of Amadeus will install win32s before installing AMADEUS.

You will find this software where you found this file (in *'/pub/Hyper-G/Amadeus'* on ftp server '*iicm.tu-graz.ac.at*').

## 1.4 Installing AMADEUS

Note: If you haven't got Amadeus on floppy disks, but have downloaded the zip-files you first have to unzip amadeus?.zip (? stands for 1,2, ..) in a temporary directory or on a floppy disk set (each zip on one floppy).

There are two setup programs: 'setup.exe' on disk #1 which allows you to choose full control over all setup features and 'setup2.exe' on disk #2 which only works for local installation on Windows NT, Windows 95, and on Windows 3.xx systems that already have installed Win32s (but do not require disk #1 at all, so you don't need to download it !). Disk #4 and Disk #5 are only required if you want to install the PostScript viewer.

Suppose you started 'setup.exe' from disk #1 (which works for all plattforms), then you will get the following dialog box:

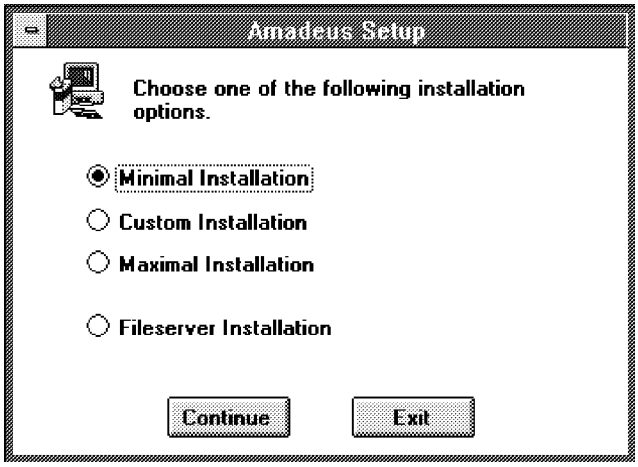


*Figure 1*

### 1.4.1 Local installation

All Amadeus binaries will be installed locally (directly on your PC), if you choose one of the first three options. For testing purpose, or if you don't have too much space left on the harddisk of your PC, you can click on 'Minimal Installation', this one requires about 2 MB (+ 2 MB, if you need Win32s and don't have installed it in your system yet). 'Custom installation' will be the best choice if you don't know what's going to be installed and want to look at the possibilites you have first. 'Maximum installation' will make a 'full-blown' Amadeus system, but be carefull, some things might only work on Windows 95 and/or Windows NT 3.5 (e.g. the upcoming 3D-scene viewer), so better take custom installation, if you only have Windows 3.xx !

Note (only for Windows 3.xx users): After you have finished your installation, Windows 3.xx will restart if the setup-program installed Win32s or WinG (a high speed graphics library). If you start Amadeus for the very first time, a graphic speed test will be made (test pattern), to check what the best display methods for your video driver will be. If you have difficulties during this step, please read the file 'amadeus.faq', which should come with the Amadeus files. (There are some known problems with an older S3-SVGA driver !)

### 1.4.2 Fileserver installation

This kind of installation is a very good choice if you are going to install Amadeus on a number of PCs and have a fileserver which is accessible by the PCs. Here all Amadeus binaries (except Win32s and WinG for Windows 3.xx systems) reside on the fileserver, only the Amadeus configuration file ('amadeus.ini') which stores your personal settings, will be copied to the local PC. The great advantage of this is not only that you need very little harddisk space on the local PC, but it is also very easy to update to a new Amadeus version by simply installing a new version on the file server. Then all Amadeus clients will run the new version without any change on these PCs !

After you have copied the Amadeus installation files to your file server (with the fileserver option), you need to install Amadeus on the local PCs, using the Amadeus setup program **on the fileserver** ! The install program will copy Win32s, WinG (if necessary), amadeus.ini to the local disk and generate an icon to access Amadeus. (Note: You have to do this only once, and not after every upgrade of the Amadeus fileserver files !)

## 1.5 Hyper-G

For more information about Hyper-G, we recommend you take a look at the '*/pub/Hyper-G/doc*' directory on our ftp server, or look at the online documentation on our Hyper-G server ('*info.tu-graz.ac.at*').

## 1.6 Bugs

This is a pre-release software, that means there will be bugs. We are very interested in bug reports. Please send electronic mail to '***amadeus@iicm.tu-graz.ac.at***' with a concise description of the error, INCLUDING what you did to generate it. Please try to re-produce the error.

Note: Be sure to read 'reame.1st' and 'amadeus.faq', before sending us the report, this might help you solving your problem or prevent sending us reports about known bugs.

# 2. Hyper-G - a Very Short Introduction

## 2.1 What is Hyper-G ?

*Hyper-G* is a large-scale, distributed, hypermedia information system. That means all kinds of documents (e.g. texts, graphics, raster images, animation, sound, ...) are stored on several servers spread all over the world.

If users have access to *Internet* (more than 20 million users world-wide!), the transport medium of Hyper-G, and also own a corresponding *Client*, then they may retrieve the complete information stored in the whole system.

Because the client runs on the user's computer, the program can take full advantage of the local PC (e.g. Windows, mouse, soundcard, ...) and there is no need for the user to learn a new operating system (versus logging on to a workstation where the database runs). Furthermore, communication (over the network) between client and server exists only when the former requests data from the latter because user interaction is completely handled by the client. That is very important for decreasing network load (especially over a long distance and a huge amount of users in the network). This kind of separation between an external database and a local query program is called *Client-Server-Concept*.

## 2.2 Hyper-G is an open system

It is clear that even in the very largest systems not all information can be stored locally, let alone kept up to date. Hence it is essential that Hyper-G allows access to other existing services, such as Dialog, BIX, CompuServe, Videotex (the German-speaking BTX variant containing much useful information), just to name a few. Such services are often not free of charge, they have different user interfaces and there are few (if any) cross-references between them.

However, there are at least three projects in addition to Hyper-G that have the potential to reduce this kind of limitation considerably.

✸ The Wide-Area Information Server (*WAIS*) Project was initially sponsored by Thinking Machines, Apple Computer and Dow Jones News/Retrieval; it is now being operated by the Clearinghouse for

Networked Information Discovery and Retrieval. It is based on a standardised protocol for full-text search. At this point in time some 300 servers are available world-wide, and clients have been implemented for almost all platforms. The WAIS source code is available free of charge; it can be downloaded via anonymous ftp from think.com in directory /wais.

✸ The *Gopher* Project developed at the University of Minnesota makes it possible to connect Campus Wide Information Systems with each other. The systems are menu-based and (unfortunately) do not support hypertext features. The protocol being used permits access to various types of documents and the search for keywords. Gopher source is available free of charge; it can be downloaded via anonymous ftp from boombox.micro.umn.edu in directory /pub/gopher. A demo-session can be initiated with telnet to host consultant.micro.umn.edu.

✸ The *WorldWideWeb* (*WWW*), developed at CERN in Switzerland is a distributed hypermedia system. Documents can be distributed all over the world and connected by links much as envisaged by hypertext pioneer Ted Nelson in his proposed Xanadu system. WWW is in the public domain; it can be downloaded by anonymous ftp from info.cern.ch in directory /pub. A demo-session can be started with telnet to host info.cern.ch.

All of the above systems are based, exactly like Hyper-G, on the client-server model. Hyper-G permits access to all information stored in any of the above three systems and - this is crucial - without change of user-interface. Conversely, the clients for Gopher and WorldWideWeb (that are available for PC, Mac, NeXT, UNIX and VMS) can also be used for Hyper-G.

The big difference between those systems and Hyper-G is Hyper-G's distributed link server This server keeps track of all the relations (e.g. links) between Hyper-G objects, allowing for automatic maintenance of the information network. For example, when an object gets deleted, the link server will be able to find and delete all links pointing to the object. In contrast, in Gopher and WWW there is no easy way to find out what other documents are pointing to a given document.

Also, having all relations for a given object at hand in the link server allows a display of graphical representation of the 'surroundings' of the current object (e.g., a fisheye view). In addition, the link server allows a search for objects in specific parts of the database ("give me all objects under this collection with keyword 'foo' that were created by user 'bar' in the last week), maintains user accounts, user groups, access rights and accounting information.

## 2.3 Hyper-G can be used at various levels of anonymity

To avoid the "Big-Brother-Syndrome" Hyper-G can be used both anonymously or identified. Of course anonymous users are not allowed to modify the database while identified users may have this option, e.g. for leaving annotations (notes) for themselves or a wider public for later perusal.

It is worth noting that between anonymous use and identified use there are many levels of "partial" identification that can be very useful. We mention just two in passing, supported by Hyper-G:

✸ In the semi-identified mode the real identity of the user is known to the system, but to nobody else. This assures that users are prevented from making slanderous comments, contributions violating some pornography law, etc. (since they can be identified by the law, if necessary) yet their real identity is shielded from other users: they can choose an arbitrary pen-name. This mode has proven to be particularly valuable for discussions in groups to assure that the usual barriers of job-hierarchy are broken down, and a discussion in a "space free of power and fear" (to quote the title of a book by the Austrian author Visotschnigg: "Verstaendigung im machtfreien Raum") can be conducted. Semi-identified users are allowed to create both private and publicly accessible documents.

✸ The anonymously-identified mode is similar to the semi-identified one except that the real identity of the user is not known even to the system. Users can select any still available pen-name and password, and this combination can be used whenever accessing the system. The advantage of this mode, when contrasted with the fully anonymous mode is that user preferences, bookmarks etc. can be stored across session boundaries. In this mode only documents for private use can be entered into the system.

## 2.4 Hyper-G uses the annotation facility in an "orthogonal" fashion

Information in Hyper-G can be annotated by users with both textual and graphical comments ("annotations") : such annotations may be accessible only by the person who created them ("private annotations"), by a designated group ("group annotations": e.g. a professor for the students in a particular class ) or by all users ("public annotations" ). By allowing to annotate annotations and to associate a type with each annotation (such as "counter argument", "generalisation", "supporting example" etc.) and by using links pointing to other documents, all of this supported by various other tools, Hyper-G provides a good basis for a structured discussion and for computer supported co-operative work. This feature has been used at the Graz University of Technology successfully to support a number of classes in which large structured group discussions seemed to be essential. (E.g. in courses on "Impact of information technology on society").

It was A. van Wijngaarden who introduced the notion of "orthogonality" into programming language design: a feature available in one context should be available in all analogous contexts. We have attempted to design Hyper-G along these lines, exemplified by the above discussion of the use of annotation and levels of anonymity.

## 2.5 Structure of the data stored in a Hyper-G database

There are three ways to access the information stored in the database: Hierarchical use of the collection browser (similar to the file-manager in windows, Gopher also uses this approach), following links with the text browser (similar to the Windows-help, compare with WWW) and using the mighty search & find possibilities built in Hyper-G.

## 2.6 Navigating in Hyper-G

# 3. Working with Hyper-G using Amadeus

## 3.1 Preface

## 3.2 A short tutorial through the system

### 3.2.1 First steps

### 3.2.2 Three possibilities to navigate: Browsing, Searching and Links

### 3.2.3 How to insert documents into the database

# 4. Detailed description of Amadeus commands

## 4.1 The collection browser

The collection browser displays the Hyper-G database using its hierarchical structure. Thus it displays the content of a collection in form of a list showing some short information about its objects.

In general, the lines look like this:

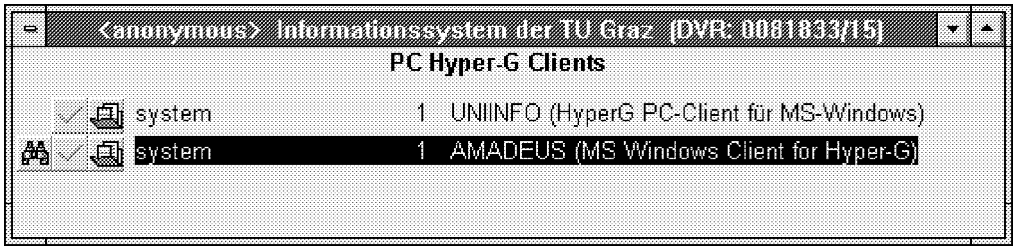


*Figure 2*

The first icon ( ) tells you that this cluster is included in the search list (see The „Activate“ and „Deactivate“ command, page 30), the next one ( ) tells you that you have already seen this cluster. Then the type of the object is displayed (explanation: see below). After that the author, the number of objects in the collection/cluster or the creation date (if it’s an ordinary document) and at last the title is listed.

### 4.1.1 Types of Objects

| Icon | Object Type |
|---|---|
| | Collection (similar to a directory) |
| | Cluster (special collection, where the system selects members for display) |
| | Text Document |
| | Image Document |
| | Sound Document |
| | Movie Document |
| | 3D - Scene |
| | Generic Document |
| | Unknown Document |
| | Destination anchor |
| | Remote File (anonymous FTP) |
| | Telnet Session (online connection to interactive service on remote host) |
| | Unknown Remote Connection |
| | Gopher Collection (like collection, but from remote gopher server) |
| | Gopher Text (like text, but retrieved from remote gopher server; no links) |
| | Gopher Image |

Gopher Index (searchable gopher collection)

Gopher Sound

WorldWideWeb Document (hypertext from remote server, sometimes searchable)

WAIS Source ("Wide Area Information Server"; remote full text database)

WAIS Text (text received from WAIS server, otherwise like Gopher Text)

WAIS Image (image from WAIS server)

Note: After a search command, a short name associated with the parent collection of the object is displayed instead of author and creation date. Should the object belong to more than one collection, one of it is displayed followed by a '+'. After a full text search, a score value is also displayed.

The list is sorted according to the currently set sort option, except for search results which are always sorted by score and parent collection, and some collections where the information provider wants to maintain a certain order of objects.

### 4.1.2 Choose an Object

To choose from the list you can either double click on the line (use the scroll bar to browse through the list) or use one of the following keys:

| | |
|---|---|
| „down arrow“: | Moves cursor one line down. When the end of the page is reached, the list will scroll up. When used on the last line, the cursor jumps to line one. |
| „up arrow“: | Moves cursor up a line (if possible). From line one you jump to the last line. |
| „page down“: | Scrolls lines one page down (if possible). |
| „page up“: | Scrolls lines one page up (if possible). |
| „Home“: | Jumps to line one. |
| „End“: | Jumps to the last line |
| RETURN, „right arrow“: | Selects the item under the cursor and issues a command that depends on the type of object under the cursor. In case of collections the members of the collection are shown (the list is updated), whereas when using documents the documents are shown. |
| BACKSPACE, „left arrow“: | Equivalent to entering the back command). |

Note: In addition to that you can get a 'context sensitive popup menu' when you click the right mouse button on an object. Context sensitive means that you get only those options that are valid for the current object, e.g. you get only a 'children' menuline, if you point to a collection or a cluster.

*IMPORTANT*: The command input always refers to the object under the cursor (and not to the list as a whole!).

## *4.2 The text viewer*

The text browser shows text coded in HTF (Hyper-G Text Format), an SGML-compliant format that allows formatting of the text at run-time. This enables you to change the window size in text mode resulting in immediate reformatting of the text.

The text may contain so-called links to other documents that are usually displayed with a 3D-effect border, making the link look like a button. If the link is surrounded by a different color then this means that the target document the link points to has already been visited during the current session.

Note: In older versions of this viewer an asterisk (*) immediately after the link indicates this state.

If you double click on a link which has been marked in this way, the text browser will follow up this link and therefore display a new document or a new collection list in the collection browser.

### 4.2.1 Key Bindings

To read the text, the following keys may be useful:

| | |
|---|---|
| „down arrow“: | Scrolls text one line down (if possible). |
| „up arrow“: | Scrolls text one line up (if possible). |
| „page down“: | Scrolls text one page down. |
| „page up“: | Scrolls text one page up. |
| „TAB“: | select next link (for following it up or deleting it), if any |
| „Shift TAB“: | select previous link (for following it up or deleting it), if any |
| „ENTER“: | follow up selected link |
| BACKSPACE, „left arrow“: | Returns to the previous state (equivalent to entering the back command). |

Note: In future versions of Amadeus there will also be a cursor with which you can mark parts of the text (for cut and paste, selecting areas to print/save, for link creation and inserting inline images)

### 4.2.2 Mouse Navigation

Apart from the usual mouse controls (like adjusting the scroll bar, sizing and positioning the window etc.), there are two additional very important functions:

- *Marking* parts of a text for link creation: you can mark a single word by double-clicking on it or you may *drag* (moving the mouse with left mouse button pressed) over the text that you want to select. Afterwards it will be displayed inverted and you can create a link with the selected text as the source anchor using ‘Edit/Make Link’ (see The „Make Link“ Command, page 23) or a context sensitive popup menu (see below).
- Inline Images: can be created by positioning the *caret* (blinking vertical bar) on the place where you want the image to be displayed. Then call ‘Edit/Make Link’ to specify the target image. (Note 1: Thus the image has to be inserted in the database **before** you create the inline link !) Note 2: No piece of text must be selected (indicated by the invertion) during this operation because then Amadeus would think that you want to create a real link but not an inline (image) link ! (automatic link type detection)
- Opening a *context sensitive popup menu* when clicking on the right mouse button: this will be a very usefull shortcut to important functions of the text viewer and includes things like: makeing/deleting of links, changing the font you clicked on, viewing document properties etc.

## *4.3 The image viewer*

- is used to display various image formats and associated links (if any). New links are displayed with a dotted rectangle/circle/ellipse, ‘seen’ links (means the target document the link points to has already been visited during the current session) are visualized with a solid border. (Note: this may change in future versions of Amadeus !). Links can be followed up by double clicking inside the marked area.

## 4.4 The PostScript viewer

- is used to display PostScript documents and works only if you installed it during setup using the 'custom' or 'maximum' option (see Installing AMADEUS, page 6)!

You may navigate through a postscript document of several pages either by entering the desired page number in the toolbar, going forward/backward, to the beginning/end using the toolbar buttons or by follwing up links (areas marked by a colored rectangle) by double clicking on them.

Additionally you may alter the zooming factor by pressing (zoom in) or (zoom out).

If you press the right mouse button you will get a magnifying glass to temporarily enlarge interesting areas. (This behavious may sligthly change in future version of Amadeus because this functionality conflicts with the use of the right mouse button for context senstive menus !)

Note: You may also print out the postscript document even if you don't have a PostScript printer !

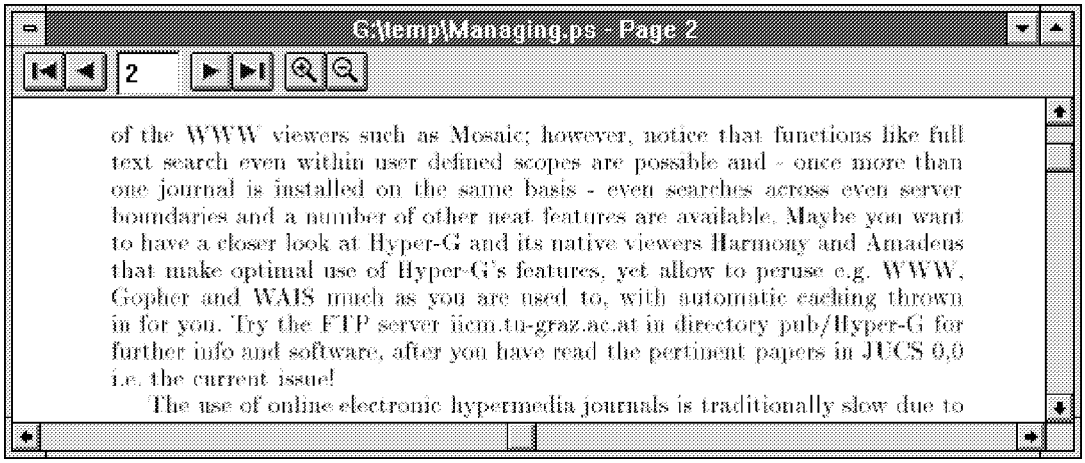


*Figure 3*

## 4.5 The movie viewer

- is used to display animations (technically 'MPEG movies') and is currently under construction.

You can start playing a movie with the 'File/Play' command (see The „Play" command, page 21) and stop it with the 'File/Stop' command (see The „Stop" command page 21).

## 4.6 The sound player

- is used to play sounds. There is currently no special viewer directly build in Amadeus, instead you can configure an external viewer (see The „Amadeus.Ini" file and command line options, page 35 on how to do this) or take the default 'soundrec.exe' which comes with every Windows system (Note: On Windows NT systems, it's called differently (sndrec32.exe), so you have to copy this file to 'soundrec.exe' (located in the system32 directory) to make it work with Amadeus !)

## 4.7 The „File" menu

### 4.7.1 Overview

These are the commands that are available in the File menu:

| Commands | Shortcut Key | Purpose |
|---|---|---|
| New | Ctrl+N | creates Hyper-G documents (such as collections, clusters, |

| | | |
|---|---|---|
| | | texts, images, movies, ...) |
| Save | Ctrl+S | saves the active document (actually only working with text, image, postscript documents and the collection browser) |
| Save Anchors | | saves source and destination anchors of active document (dumps out link attribute information) |
| Modify | | modies the active document (currently only working for text documents !) |
| Copy | | copys the active document to a different collection |
| Move | | moves the active document to a different collection |
| Unlink from collection | | unlinks the active document from its collection |
| Delete | | deletes the active document from the Hyper-G database. |
| Play | | plays a multimedia document (if it is playable, e.g. a movie) |
| Stop | | stops a multimedia document from playing |
| Print | Ctrl+P | prints active document |
| Page Setup | | changes page layout settings |
| Print Preview | | makes a print preview of the active document |
| Print Setup | | calls the print setup dialog box |
| Exit | Alt+F4 | closes Amadeus |

### 4.7.2 The „New documents“ commands

The New command in the File menu allows you to insert different documents into the Hyper-G database. Before you choose this command you have to select where (in which cluster or collection) you want to insert the new document (using the collection browser). Then you may click on ‘New’ and a pull down menu will open, where you can decide which kind of document you want to insert. You can select between inserting:

- a text document,
- an image document
- a movie document
- a sound document
- a 3D-scene document
- a Postscript document
- a generic document
- a remote connection
- a new collection
- a new cluster
- an annotation

After that one of four dialogue boxes will appear. (The commands ***Image***, ***Movie***, ***Sound***, ***Scene***, ***Postscript*** and ***Generic*** will always call the same dialog box, see Figure 4, just the dialog box title changes.)

What they have all in common is that you have to specify a title and you may apply access rights to the document.

### *4.7.2.1 Access Rights:*

Currently there exits ‘read access rights’, ‘write access rights’ and ‘unlink access rights’.

The syntax is:

*< read access rights >[;< write access rights >][;< unlink access rights >]*

whereas

*< read access rights >:* **R:<*spec*>{,<*spec*>}**

*< write access rights >:* **W:<*spec*>{,<*spec*>}**

*< unlink access rights >:* **U:<*spec*>{,<*spec*>}**

*<spec>:*

| | |
|---|---|
| a | ... only the Author |
| u user{ user2} | ... one or more users |
| g group{ group} | ... one or more usergroups |

By default everybody may read your document, write access is limited to the owner of the document and to system administrators.

Unlink access right: If you add this access right only **the specified user(s)** may delete a document (users with the write access right may only add new, but not delete other documents which they do not own !)

Examples:

‘R: g iicm; W: u tdieting; U: a’

Means: The author, the user ‘tdieting’ and all members of the ‘iicm’ group may read the document, the author and the user tdieting may modify it, but only the author may delete it.

‘R: a’

Here, only the author (and the system administrators) may access this document.

### *4.7.2.2 Inserting an Image, a Movie, a Sound, a Scene, a Postscript or a Generic document:*

In the right part of this dialog box you will find a small file chooser. Use it to select the document you want to insert into the database. On the left side you have to enter some information about the document. Author, creation time and language will be taken from the present settings but can also be changed. In the first input line you have to insert the title of the document and in the input line called ‘Rights’ you can specify the access rights (see ‘Access Rights:’).

If you select ‘*Generic*’ in the ‘New’ menu, then two additional fields will be enabled: „***subtyp*“‘ and „***arguments***“.

At ‘subtype’ you write the generic user type, e.g. ‘excel’ if you want to insert an Excel-spreadsheet document into the database. At ‘Arguments' you type now the true file-name of your Excel file (e.g., 'budget94.xls' , you can use the file chooser on the right to select the file and then copy and paste the file name to this field), without a path in this field. (Note: You may also specify a different filename in the argument-entry, but that's the name your document gets, when it is downloaded)

In this example we don't need any further arguments, thus we click on 'Ok' and the document will be uploaded to the database (I suppose that you have also filled out correctly the rest of the entries!)

Ok, now we go to the 'Amadeus.ini' file and look what we have to do there (this has to be done only once for every new generic document type):

Use your preferred editor to open amadeus.ini and scroll down to the [Generic] section. Then make a new line beginning with the text you specified in the 'Subtype' entry before, in our case 'excel' (Note: It MUST NOT be different in any way, otherwise it will not work) and place a '=' afterwards. Then you write the complete path of your Excel-version on your PC followed by '$arg0'.

Now it should read like this: (for example)

[Generic]

excel=c:\excel\excel.exe $arg0

Note: There is also a short description of the syntax in the ini-file.

Ok, you've got it - that's all !

If you want to upload additional Excel files to the database be sure to specify always 'excel' in the 'Subtype'-field !

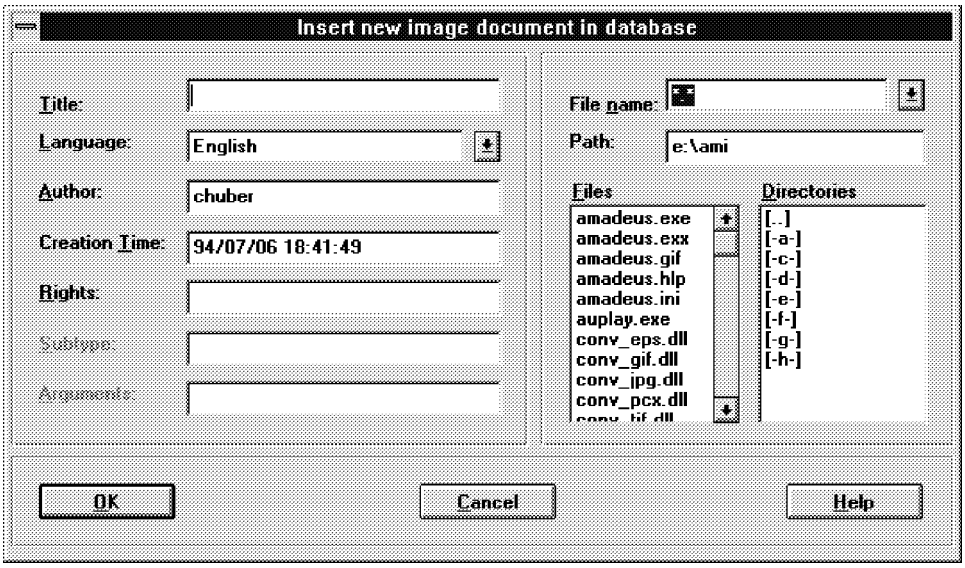


*Figure 4*

### *4.7.2.3 Inserting a Text document:*

If you select the ***Text*** command a dialog box will open where you have to enter the collection name, the title of the document, choose the document in the file chooser and set the correct language and the correct type of object (RTF, HTF or TXT). You may also apply an expiration date, that specifies when a document is no longer visible in the database.

Hint: Having a collection or cluster selected as current object (e.g. by positioning the cursor on the parent collection in list mode) the name of this collection is taken as default. Otherwise, you would have to find the name or the ObjectID of the parent collection with the info command.

Note: Specifying the correct language is important for the display of the title and for searching!

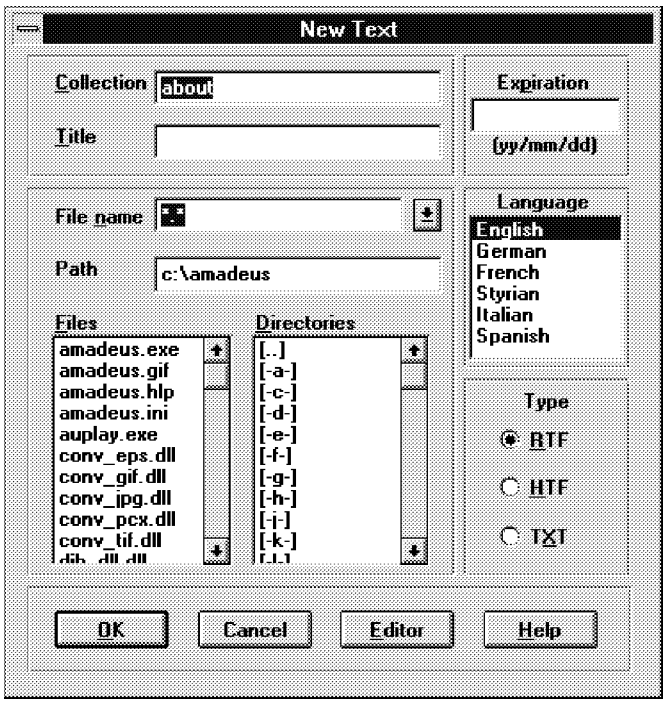


*Figure 5*

### *4.7.2.4 Inserting a new collection or a new cluster:*

When you insert a new ***collection*** or a new ***cluster*** you get nearly the same dialog box. Title, language, author, creation time and access rights have to be filled out by the Amadeus user and appear in both dialog boxes. Description and unique name are two more input lines which appear when you select the 'new collection' command.

*Figure 6*

### 4.7.3 The „New Remote“ command

With this command you can insert a special document which provides links to other remote databases (host field).

Valid types are (currently): Telnet, Gopher, http (WWW), FTP and WAIS. Additionally you can also specify a port number and a startup directory (gopher, http), a path (ftp), a user (telnet) or the database name (WAIS).

Of course you also have the possibility to specify the usual Hyper-G document attributes like title (should always be added), title language, author, creation time (set to server time, if left empty) and access rights (see Access Rights: page 15)

Note: additional attributes (e.g a second title) can easily be added using ‘Edit/Attributes’ (see The „Delete Link“ Command

With this command you can physically delete the selected link.

The “Link Properties” Command

See 4.8.8 (The „Attributes“ Command) for a detailed description of properties (attributes).

The „Attributes“ Command, page 23)

### 4.7.4 The „New Annotation“ command

This command allows to interactively enter a (possibly public) annotation to a certain document. You need to have selected the document to be annotated as current document (e.g. by reading it in or having positioned the cursor on it in the collection browser).

After entering the command, a dialog box similar to the ‘new text’ command (see Figure 5, page 17) will come up that asks you about the name of the parent collection of the new text (defaults to the parents collection of the document to be annotated, if only one) and the title of the annotation. Then you have to enter the language of your comment, defaulting to the language of the document to be annotated.

Note: Specifying the correct language is important for the display of the title and for searching!

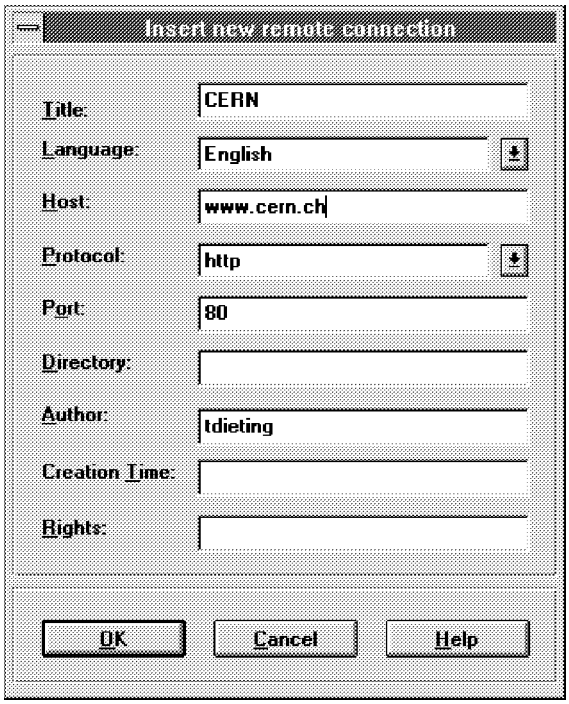


*Figure 7*

Then you may click on the ‘Edit’ button to enter a few lines with the simple built-in editor or select a prepared file with the file chooser.

Note: Be sure to specify the correct text format: E.g. ‘Rtf’, if you want to insert an rtf-document, ‘Txt’ if you want to insert plain ISO-text (e.g. from EMail, or if you use the built-in editor because you don’t know anything about the Htf-Format !).

If you open the text-editor it will contain a few lines that were generated automatically, including a link specification pointing to the document to be annotated. Do not edit these lines!

It is possible to insert arbitrary links into the text. The description of the make link command tells you how.

### 4.7.5 The „Save“ command

With this command you can save the selected document to disk. Currently only texts, images and postscript documents are supported. (See Figure 8 as a sample dialog for saving a text document)

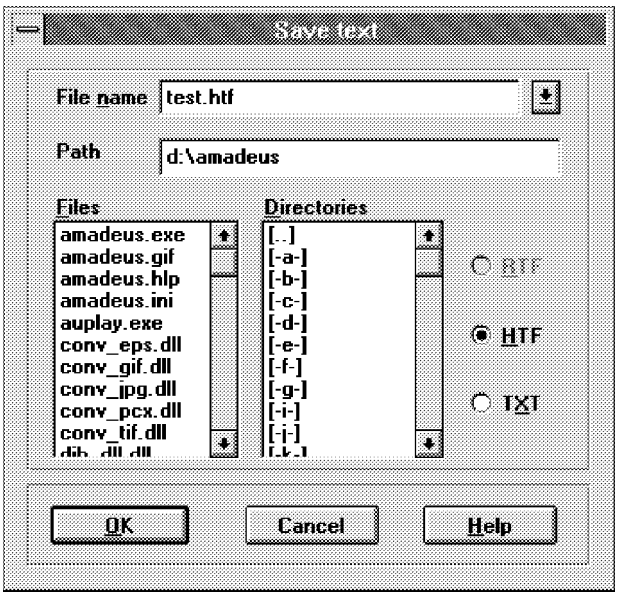


*Figure 8*

### 4.7.6 The “Save Anchors” command

This command is only for internal purpose. E.g.: In addition to a document you may save all attached anchors. If you have a stand-alone Hyper-G viewer, you may also follow internal links.using this viewers. An example is the stand alone PostScript viewer, released very soon.

### 4.7.7 The „Modify“ command

Currently, only modifying of text document (in the original HTF-style) is available. There is a very simple text editor built in that allows you to change the content of the document.

Note: You have to be identified and have write access rights to modify the document !

### 4.7.8 The „Copy“ command

This allows to copy the current object (document or collection) to another collection/cluster (a Hyper-G object may be member of a number of collections). You will get a dialog box which asks you for the source object (initially the currently active object) and the destination collection. Use the collection browser to move to the desired object and then click the ‘source’/’destination’ button to fix your selection (see Figure 9).

The only restriction is that no circles in the collection hierarchy can be made (e.g. collection A being a member of B being a member of A).

Note: The object is not physically copied (thus resulting in requiring additional space in the document server), instead only a new link from the specified collection/cluster to the object is generated.

You can use this function to generate ‘bookmarks’ in your home collection.

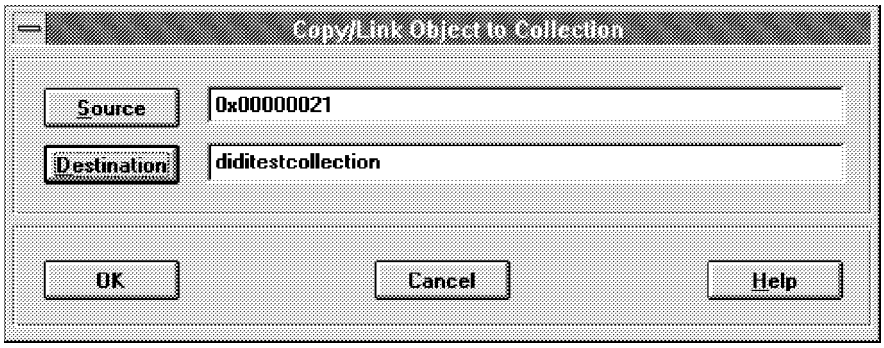


*Figure 9*

### 4.7.9 The „Move“ command

This command moves the selected object to a different collection. After the command has been entered the viewer prompts you with a dialog box for the target collection (similar the ‘copy object’ command, see Figure 9). This can be specified by either directly entering the collection name or the collections ObjectID (which can be found with the ‘Edit/Attributes’ command), or by selecting the target collection with the collection browser.

You must have write permissions for both the target collection and the collection which contains the object you are moving. Otherwise the message *** Error: Access denied *** will appear.

The message Database modified is displayed if the command completed successfully. The message *** found nothing *** indicates that the target collection was incorrectly specified.

### 4.7.10 The „Unlink“ command

With this command you can unlink a selected object from a collection. In this case it is **not** physically deleted if there is more than one parent referring to it, only the link between the parent collection and the object is removed. (Thus you may still find the object using search, or following a link to this object from a different collection)

If there are more than one parent collections, you will get a dialog box (see Figure 10) which asks you to select a particular collection to unlink from.

Note: If the object is going to be physically deleted, you will get a warning informing you about this operation !

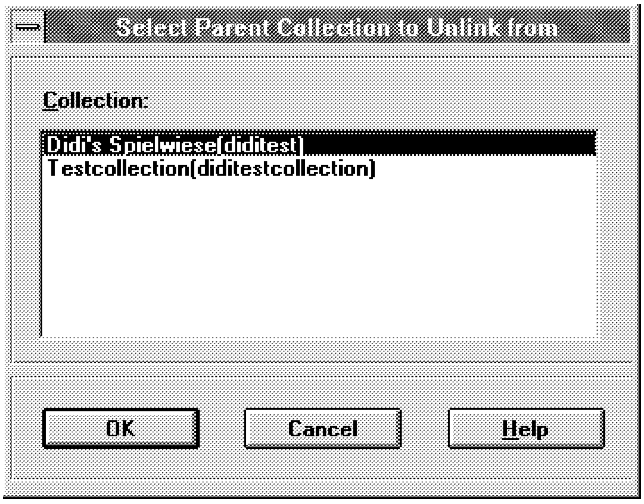


*Figure 10*

### 4.7.11 The „Delete“ command

This command can be used to physically delete the selected object (the active text document or the highlighted object in the collection browser, if this one is active) from the Hyper-G database. You can only delete objects if you have write permission on the object. Naturally, you will have to identify yourself before you issue this command.

Note: this command erases the current object from all of its father collections. In order to remove it only from specific father collections use the 'unlink from coll.'-command (this is much safer !)

### 4.7.12 The „Play“ command

This command plays a multimedia document that is handled by an internal viewer. (If it's playable, such as movie.) Currently only MPEG movies are supported by this command.

### 4.7.13 The „Stop“ command

This command stops a multimedia document (that is handled by an internal viewer) from playing. (If it's playable, such as movie.) Currently only MPEG movies are supported by this command.

### 4.7.14 The „Print“ command

Use this command to print a document. This command presents a Print dialog box, where you may specify the range of pages to be printed, the number of copies, the destination printer, and other printer setup options.

#### *4.7.14.1 Shortcuts*

Toolbar:

Keys: CTRL+P

### 4.7.15 The „Page Setup“ command

Use this command to change the page layout settings.

### 4.7.16 The „Print Preview“ command

Use this command to display the active document as it would appear when printed. When you choose this command, the main window will be replaced with a print preview window in which one or two pages will be displayed in their printed format. The print preview toolbar offers you options to view either one or two pages at a time; move back and forth through the document; zoom in and out of pages; and initiate a print job.

### 4.7.17 The „Print Setup“ command

Use this command to select a printer and a printer connection. This command presents a Print Setup dialog box, where you specify the printer and its connection.

### 4.7.18 The „Exit“ command

With this command you can quit 'Amadeus'

## 4.8 The „Edit“ menu

### 4.8.1 Overview

These commands are available in the Edit menu:

| Commands | Shortcut Key | Purpose |
|---|---|---|
| Cut | Ctrl+X | cuts parts of a document into the clipboard. (not yet implemented !) |
| Copy | Ctrl+C | copies parts of a document into the clipboard. |
| Paste | Ctrl+V | inserts clipboard content into the document. (not yet implemented !) |
| Make Link | Ctrl+L | inserts a link into the selected document (currently only working for text documents) |
| Edit Link | | edits several attributes of the link (not yet implemented !) |
| Delete Link | | delete the currently selected link |
| Link Properties | | gets/edits properties of selected anchor |
| Attributes | | gets/edits properties of selected document |

### 4.8.2 The „Cut“ command

Use this command to remove the currently selected data from the document and put it on the clipboard. This command is not available if there is no currently selected data.

Cutting data to the clipboard replaces the contents previously stored there.

#### *4.8.2.1 Shortcuts*

Toolbar:

Keys: CTRL+X

### 4.8.3 The „Copy“ command

Use this command to copy selected data onto the clipboard. This command is not available if there is no currently selected data.

Copying data to the clipboard replaces the contents previously stored there.

#### *4.8.3.1 Shortcuts*

Toolbar:

Keys: CTRL+C

### 4.8.4 The „Paste“ command

Use this command to insert a copy of the clipboard contents at the insertion point. This command is unavailable if the clipboard is empty.

#### *4.8.4.1 Shortcuts*

Toolbar:

Keys: CTRL+V

### 4.8.5 The „Make Link“ Command

If you have write permission to a textdocument you will be able to insert click-able links into it. After you called this command a dialog-box will appear (see Figure 11). Then you may select the word (in the text document) you want to make a link to by double-clicking on it. The word will get marked. Now click on the „Source“-button in the dialog box to fix the „*source-anchor*“. Next to that you have to specify what will happen when the user clicks on this link. Thus you have to specify the „*destination anchor*“ by selecting the object (e.g. in the collection browser) and then clicking on the „Destination“-button.

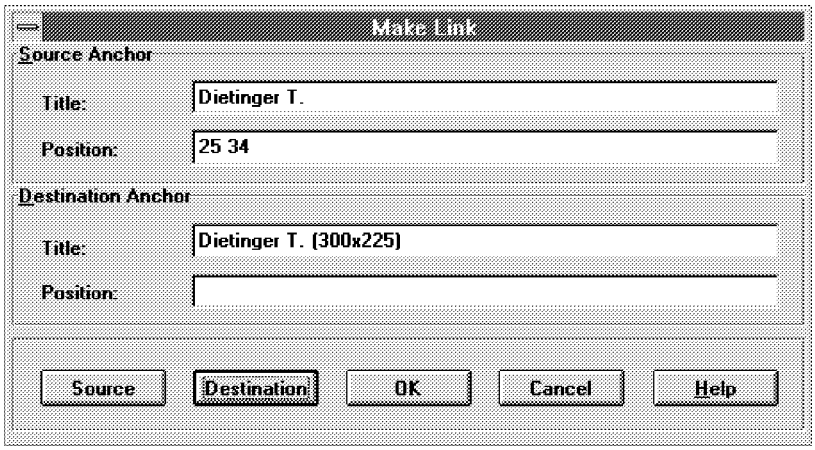


*Figure 11*

Finally you press the „Ok“-button to confirm your link creation or the „Cancel“-button to abort the operation.

Note: If you don’t select a word, the current cursor position will be used to insert an inline image (you specify with destination) there !

### 4.8.6 The „Delete Link“ Command

With this command you can physically delete the selected link.

### 4.8.7 The “Link Properties” Command

See 4.8.8 (The „Attributes“ Command) for a detailed description of properties (attributes).

### 4.8.8 The „Attributes“ Command

This command provides detailed information about the currently selected object (more than fits into the title line) For the "ordinary" user this information is not of extreme importance, however. The number and kind of attribute names and values depends on the type of the object.

Some of the attribute fields displayed by the info command may be changed using this command, provided that you have write permission for the current object. It is rather obvious that this command should be used with care.

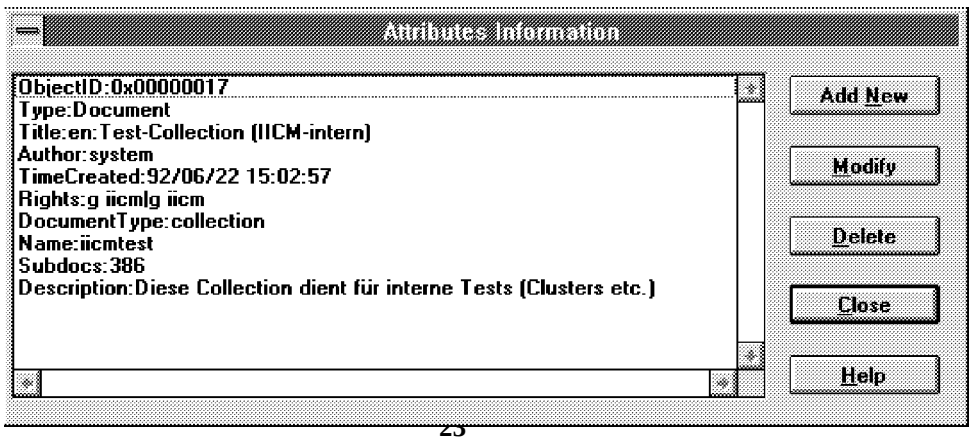




*Figure 12*

#### *4.8.8.1 Adding/Modifying attributes*

If you click on the „Add New“-button you will get a new dialog box (see Figure 13) that allows you to add a new attribute type (out of the list in the type-field) to the current document.

The same dialog box will also appear if you click the „Modify“-button or double-click on one attribute in the information dialog box and enables you to modify the value of an attribute.

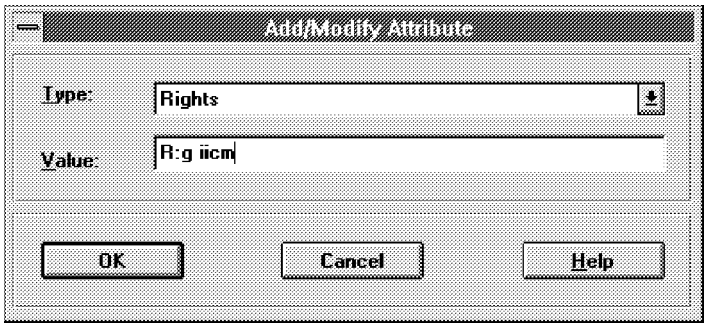


*Figure 13*

Note: Usually you use this command to add/modify access rights or titles/descriptions.

E.g. By adding a second title to a multimedia document, you can make it „*language independent*“.

Explanation of „language independent/dependent“: Suppose you want to make a cluster with two sound documents with the same contents but in two different languages (e.g. a spoken explanation). All you have to do is to specify the titles of the sound documents in the respective language.

The algorithm to ensure correct viewing of these documents works like this: If a cluster contains more than one documents of a certain type (e.g.: sound) with only ONE title only the document that matches the desired language best will be displayed. Documents that have more than one title (= language independent) will be displayed in any case (and in addition to the language dependent documents). If you want to show several language dependent documents (of the same type) in a cluster, you have to make „*sub-clusters*“. (E.g.: If you want support two languages you will create a cluster that contains two text documents in different languages and two sub-clusters, each containing two language dependent images. The viewing-result will be a text and two images in the correct language.)

#### *4.8.8.2 Deleting of attributes*

If you have write access for this document you may also delete certain attributes (where it makes sense, e.g. you may not delete the documenttype) by clicking on the „Delete“-button in the Attributes Information dialog box (see Figure 12).

A description of the meaning of attributes of Hyper-G objects can be found in the documentation on the Hyper-G Data Model. In particular, it contains a description on how to specify access rights.

## *4.9 The „Navigation“ menu*

### 4.9.1 Overview

These are the commands that are available in the Navigation menu:

| **Commands** | **Shortcut Key** | **Purpose** |
|---|---|---|
| History | | shows a list of previously executed commands |
| Forward | | navigates forward in the history list |
| Back | Ctrl+Z | navigates back in the history list |
| Home | | jumps to home page |
| Hyperroot | | shows all Hyper-G servers all over the world |

| | | |
|---|---|---|
| Goto | | goes to a specified collection or stored bookmark |
| Set Bookmark | | stores active collection in bookmark list |
| Children | F12 | shows children of current document |
| Parents | F11 | shows parents of current document |
| Links | | shows links of current document |
| References | | shows references of current document |
| Annotations | | shows annotations of current document |
| Break | | stops each action |

### 4.9.2 The „History“ command

This command displays a list of recently issued commands. You may select any command from this list and re-execute it.

Technical description of commands "history", "back" and "forward"

Whenever a viewer command is executed, it is appended to the history list, which is organised as a stack.

✸ The Command "back" (or simply BACKSPACE) removes the top element from the stack (but remembers it in a second one) and re-executes the new top-level command of the stack.

✸ In contrast, the "forward" command removes the top-level command from the second stack, puts it on the history stack again, and re-executes it.

✸ Execution of an ordinary command clears the second stack and puts the command on top of the history stack. Commands which cannot be undone are not stored on the stack.

✸ The "history" command displays both stacks (with elements from the second stack marked with ’*’).

In most cases, repeating an old command works faster the second time because of caching in the client.

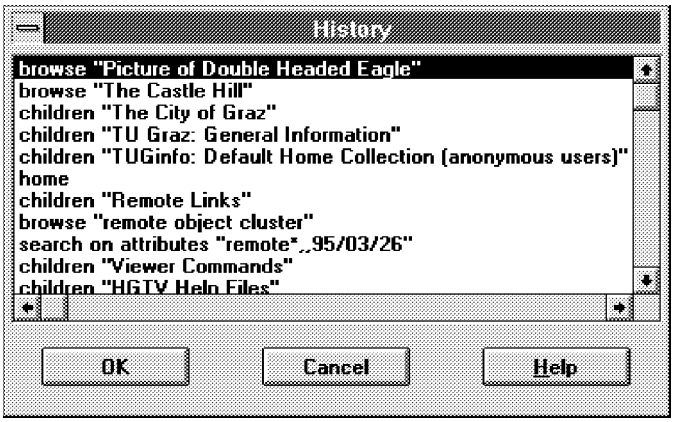


*Figure 14*

### 4.9.3 The „Forward“ and „Back“ commands

With these two commands you can move forwards and backwards in the history list (thus executing a previous command).

### 4.9.4 The „Home“ command

This command puts you to your home collection. If you are an anonymous user, or if your system administrator has not created a personal home collection for you, you will see the "anonymous root collection" (a collection that is named either ~anonymous or rootcollection).

The home command is automatically executed when the terminal viewer is started.

You may use the parents command to go "up" from this point, especially if you want to insert a new document into the home (root) collection.

As a Hyper-G system administrator, you may use the hgadmin (currently only on UNIX-platforms supported) command to supply users with a personal home collection.

### 4.9.5 The „Hyperroot command

This command lists you all Hyper-G Servers all over the world in the collection browser. You can connect to one of the servers by selecting its menu line in the browser.

### 4.9.6 The „Goto“ command

Currently this command allows you only to jump directly to a collection by specifying the unique collection name (not the title) and a remote connection by specifying the path.

#### *4.9.6.1 Collection name:*

The command will prompt you for the name of the collection. The name may be abbreviated (if the prefix is unique) with an asterisk. You will then see the children of this collection, or an error message if it is empty.

Note: The (unique) name of a collection can be found by applying the info command to it.

#### *4.9.6.2 Remote connection:*

The format is: <protocol>://<host>{:port}/path

where <protocol> is one of the following:

’hyperg:’, ’gopher:’, ’http:’, ’wais:’, ’telnet:’, ’ftp:’

E.g.: http://www.tu-graz.ac.at/

gopher://gopher.tu-graz.ac.at/1~anonymous

gopher://gopher.bmwf.gv.at

For ’hyperg’:hyperg://<host>{:port{:<binary>{:<distributed>}}}/path

E.g.: hyperg://hyperg.tu-graz.ac.at:418;0;1/~anonymous

### 4.9.7 The „Children“ and „Parents“ commands

With ‘parents’ you get the previous object (according to the hierarchical structure of Hyper-G), with ‘children’ all objects contained in the selected collection/cluster.

Note: The ‘Parents’ command is the only way of getting to the very top of the document hierarchy to add items into the root collection.

### 4.9.8 The „Links“, „References“ and ‘Annotations’ commands

‘Links’ displays a list of all links emanating from the current object (more precisely, the destination documents of the links), sorted according to the current sort options.

The call also works on WorldWideWeb documents, however, only the URL (Universal Resource Locator) and not the title of the target document can be shown.

'References' is the opposite of the links command, so to say. It answers the question: "What other documents reference to the current document"?

The result of this command is a list of all documents that have a link pointing to the current document.

'Annotations' shows a list of annotations referring to the selected document.

### 4.9.9 The „Break" command

This command allows to interrupt some lengthy operations like file loading etc...

## *4.10 The „Search" menu*

### 4.10.1 Overview

These are the commands that are available in the Search menu:

| Commands | Shortcut Key | Purpose |
|---|---|---|
| Find | Alt+F3 | searches for documents in the database |
| Find in text | | searches for strings in the active text document |
| Activate | | includes this collection in the search list |
| Deactivate | | deletes this collection from the search list |
| Show list | | shows current search list |
| Sort order | | changes sort order of search result list |
| Full text option | | changes some fulltext query options |

### 4.10.2 The „Find" command

One of the most important functions in Hyper-G. Currently you have three different possibilities **how** (search type) to search and two **where** to search in the database.

#### *4.10.2.1 The search region*

You may search in the 'Whole Database' or restrict the search to 'Activated Collections' (see *The „Activate"* and „Deactivate" command, page 30)

#### *4.10.2.2 Search type Titles*

With this search type you may perform Boolean searches in the Hyper-G information network.

Note 1: This is not a full text search. Rather, an object is found when the keywords entered appear in the title of the object or have been attached to it as additional keywords. When used on a WAIS source or Gopher

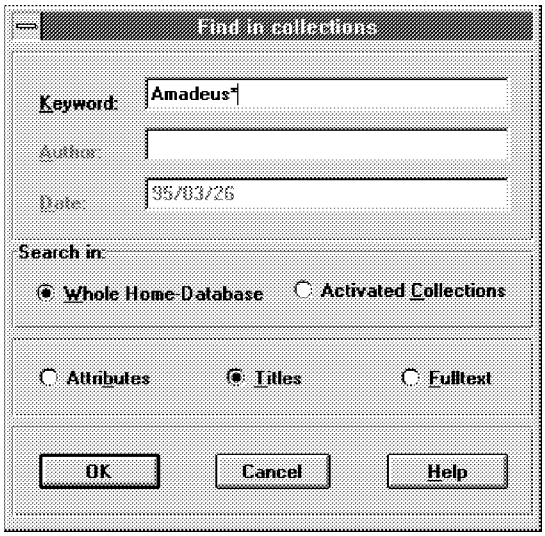


*Figure 15*

index, the exact effect is determined by the remote database implementation (but in most cases it will default to a full text query).

#### 4.10.2.2.1 Ordinary Search

For example, entering ’foo’ as a keyword will find all objects (documents, collections, destination anchors) with the word ’foo’ in the title or as a keyword. Upper- and lowercase are ignored. National character sets can be entered as 8-bit codes (ISO Latin 1) or in SGML notation.

The output will be a list of matching objects, sorted by score (for WAIS databases, first parent collection, and title in reverse order. The name of the first parent collection is displayed instead of date and author in list mode.

When entering more than one word, they are ANDed (in other words, a blank is the AND operator). E.g., ’foo bar’ will match only objects that contain both ’foo’ and ’bar’. The OR operator is ’|’. E.g. ’foo|bar’ will match all objects that have either ’foo’ or ’bar’. The operators can be combined, but without brackets. There is no NOT operator.

#### 4.10.2.2.2 Prefix Search

E.g. ’foo*’ would match everything that contains a word that starts with ’foo’ (like foobar). You may use AND and OR operators like above (like in ’uni* california).

Due to a (deliberate) limitation in the server, you cannot use ’*’ to match all objects.

### *4.10.2.3 Search type Attributes*

This search type offers the full functionality of the search type ‘Titles’. In addition, you may restrict the search to certain authors and objects inserted into the database after a certain date.

Note: Unlike the search titles command this command cannot be used to search through remote databases (WAISes and Gopher Indices).

An Example: To find all document of author "foo" in the set of active collections that have been created after April 1, 1993, you would enter:

Keyword: (empty)

Author: foo

Date: 93/04/01

At most 2 out of the 3 fields can be left empty. As a special case, if the first two fields are left blank, the system will offer the current date as a default. This is a convenient way to search for the objects that have been created today.

### *4.10.2.4 Search type Fulltext*

This search type allows you to perform searches on the contents of text documents stored in the Hyper-G server. All text documents inserted into the server are automatically indexed for full text search.

Technically speaking, the Hyper-G full text engine is able to perform a combination of ranked, Boolean, weighted, fuzzy, and nearest-neighbour searches on the documents (see the formal syntax description at the end of this text). The following examples explain the meaning of these termsin a more intuitive fashion.

#### 4.10.2.4.1 Examples:

##### *4.10.2.4.1.1 „computer“ (primitive search)*

When you enter only one word, you will receive a ranked list of the documents in the set of active collections that contain this word. The list will be truncated after 40 matches (this number can be

changed with the Full Text Option command), and normalised such that the top-ranking document gets a Score value of 100%. The ranking is computed based on the number of times the word appears in the document, where it appears (title, headings, and subheadings count more), and the size of the document.

As the Hyper-G full text engine employs a so-called stemmer, the above example would also match documents containing "computers", "computing", "compute", and the like.

There are certain words (so-called stopwords) that usually appear very often (e.g., "is", "was") that you cannot search for, as they are not indexed. Whether you use uppercase or lowercase characters is irrelevant.

#### *4.10.2.4.1.2 „tell me about computer conferences“ (nearest neighbour)*

You may also enter a search string like this example. The first 3 words are stopwords and ignored. The system will search for documents that contain most of the other (2) words, but usually will also deliver those that contain a high frequency of one of the words only.

#### *4.10.2.4.1.3 „computer & conference“ (Boolean search)*

Sometimes you want to specify that the documents really contain all the search terms, like the example above. The & operator means "AND" (you may also use &&), while | means "OR" (you may also use ||). There is no "NOT" operator, but we plan to implement a "AND NOT" operator in the future. You may of course combine these operators to more complex constructs, like e.g. "(personal & computer) | (ibm & pc) | macintosh | amiga" to match a variety of personal computers. In this example, the brackets are not really necessary as the AND operator has precedence over OR.

#### *4.10.2.4.1.4 „computer &[f] conferencing“ (fuzzy Boolean search)*

The ’f’ makes the AND operator a fuzzy AND, i.e. it will also match documents that contain only one of "computer" and "conferencing", but with lower ranking.

#### *4.10.2.4.1.5 „computer &[f] conferencing{3.5}“ (weighted Boolean search)*

Similar to the example above, but allows you to make "conferencing" 3.5 times as important as "computer" in the ranking.

### 4.10.2.4.2 Note

Your may combine above examples to arbitrary complex queries. Most of them are not particularly useful, however.

Some of the features (e.g. stemming and stoplists) are of course language dependent. While ,in principle, the Hyper-G indexer allows to index words in any language that is based on the ISO Latin-1 alphabet, stoplist and stemmer are currently available for English only.

### 4.10.2.4.3 Query Syntax

This is a more formal description of the syntax of full text queries, where expressions in ’[]’ are optional, ’{}’ means 0 or more occurrences, and ’|’ means "or":

```
expr       ::= term { orop term }
term       ::= factor { andop factor }
factor     ::= node [’{’float’}’]
node       ::= word { word } |  ’(’expr’)’

orop       ::= ’||’ | ’|’
andop      ::= ’&&’ [ optionlist ]  |  ’&’ [ optionlist ]

optionlist ::= ’[’ option { ’,’ option } ’]’
option     ::= ’F’ | ’f’
```

The optionlist is extensible, to foresee proximity searches in the future.

### 4.10.3 The „Find in text“ command

With this command you may find a string in the active text browser. Currently only exact matches are found.

### 4.10.4 The „Activate“ and „Deactivate“ command

Use this commands to include/activate or exclude/deactivate a collection from the search list. It only works with ordinary Hyper-G collections ( ), WAIS sources ( ) and gopher indices ( ). Activated collections are visualised with a ' ' int front of in the collection browser.

If you want to restrict the search scope with ‘search in Activated collection’(see Figure 16) using the ‘Search’ command, you need to activate at least one collection first. However, there is a little shortcut: When using the above command on a collection, WAIS server or gopher index (e.g. when the cursor points to it in list mode), the corresponding collection is temporarily activated, the search is performed, and it is deactivated afterwards.

Important: Searches are performed on all subtrees of the activated collection(s), recursively (except for remote collections and remote databases; they have to be activated "by hand"). In order to activate the root collection (i.e. the whole Hyper-G database), you may perform

the ‘Home’ command,

the ‘Parents’ command and

the ‘Activate’ command

Note: You may also use the toolbar buttons to activate, and to deactivate a collection from the search list.

### 4.10.5 The „Show list“ command

Displays a list of all activated collections (including remote WAISes and Gopher indices). Useful to deactivate some of them.

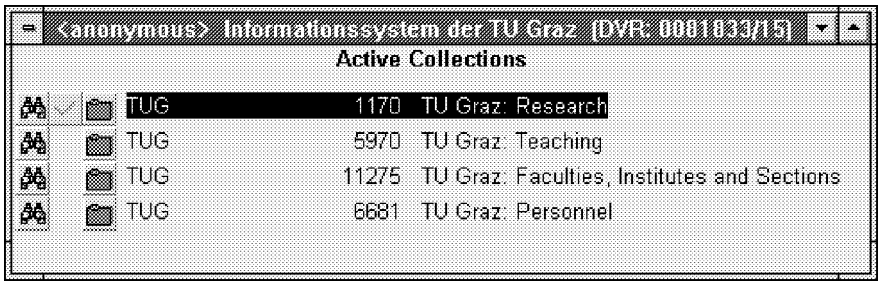


*Figure 16*

### 4.10.6 The „Sort Order“ command

Use this command to change the sort order of collections browser items (e.g. the search result list after a search).

The sort order is defined by sorting on the object’s attributes. You will be prompted to enter a string composed of the following characters:

-: on 1st position: sort descending (default ascending)

**#**: Sequence Number

**A**: Author

**C**: Creation time

- **E**: Expiration time
- **O**: Opening time
- **P**: Parent (after search only)
- **S**: Score (after full text search only)
- **T**: Title
- **t**: Type

For example, „**AT**“ means sort by author first, and then (if authors are equal) by title.

The default sort order is "#T", which means look at a sequence number first (the Sequence attribute, if specified), and then by title.

After a search, however, the default sort order is "-SPT", which means sort by descending score value (after fulltext search or WAIS search), then by parent collection, then by title.

Bugs: The "descending" flag works for all sort attributes. It is not possible to specify it for individual attributes.

### 4.10.7 The „Full Text Option“ command

This command lets you set the maximum number of items that is returned by the search full text command, and by using the search titles command on WAIS sources. The default value is 40, which means that only the 40 "best-matching" items are displayed.

## *4.11 The „Administration“ menu*

### 4.11.1 Overview

These are the commands that are available in the Administration menu:

| **Commands** | **Shortcut Key** | **Purpose** |
|---|---|---|
| Identify | | identifies the user using a password |
| Change password | | change current password |
| Status | | shows current system status |
| Send Message | | sends a message to one or all active users |

### 4.11.2 The „Identify“ command

Use this command to identify yourself to the Hyper-G server. After successful identification(the user name is displayed in the title bar of the collection browser) you may modify part of the information network, add documents, etc., depending on your access rights.

The identification is done by entering your user name plus a password. In order to receive a Hyper-G account, you have to contact the Hyper-G operator(s) of your organisation.

### 4.11.3 The „Change password“ command

This command allows you to change the password associated with your Hyper-G user record. You will have to enter the old password, and the new one (twice). Of course, you have to be identified to use this command.

### 4.11.4 The „Status“ command

This command allows you to retrieve information about the Hyper-G server you are connected to, including performance statistics and the user currently connected to it.

The command displays the protocol version of the client (Px) as well as the connection (Cx), and a copyright message in the top right corner of the screen. Following are the identification of the server, the local server time, the time it was started and the time that has elapsed since then. The next line contains a performance (or load) measure, i.e. the number of objects per second that have been retrieved from the low-level database. An average value is given for the last minute, the last 15 minutes, the last hour, and since the server was started. What follows is a list of users that are currently connected to this server, with yourself marked by an asterisk in the first column. The list contains the user number, the user's name, the host of the client, when the session was started, and the user's idle time (i.e. the time that has elapsed since the last transaction with this server).

Note that some Hyper-G servers will close the connection after a certain period of inactivity (usually 12 hours, but could be significantly less).

### 4.11.5 The „Send Message“ command

The command allows you to send a message to all or to a special user (specified by his user number). Use the 'status command' in order to find the user number which belongs to the user.

After the message has been received the other user can reply to your message easily.

Note: If you are a system administrator you may also specify „ALL“ instead of a user number, so that all users that are currently logged in the system will receive your message !

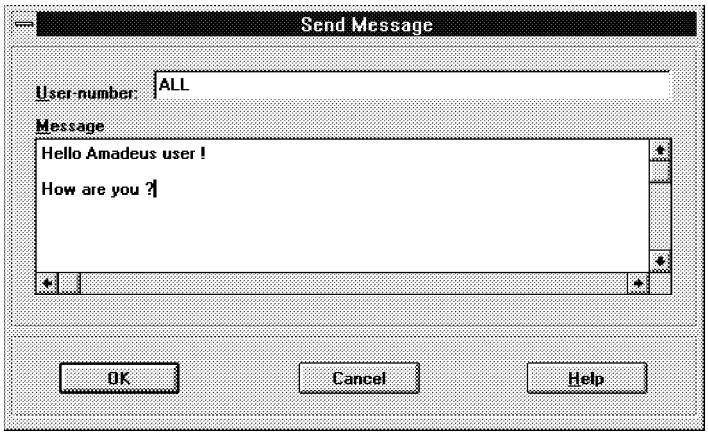


*Figure 17*

## *4.12 The „Options“ menu*

### 4.12.1 Overview

These are the commands that are available in the Options menu:

| **Commands** | **Shortcut Key** | **Purpose** |
|---|---|---|
| Language | | changes preferred language |
| Fonts | | changes various fonts (e.g. textbrowser) |
| Colors | | changes various colors (e.g. background) |
| Viewer Options | | configures some viewer specific options |
| Toolbar | | enables or disables toolbar |
| Statusbar | | enables or disables statusbar |
| Save Settings on Exit | | enables or disables saving of changed configuration settings |

| | | |
|---|---|---|
| Save Settings Now | | saves changed configuration settings now |

### 4.12.2 The „Language“ commands

With this command you can set your preferred language. Then the user interface texts, the titles of documents as well as the documents themselves are displayed in your selected language, if available.

### 4.12.3 The „Fonts“ commands

With this command you can change the fonts (and their attributes) of the fonts used in the collection browser (currently only one) and the text browser.

### 4.12.4 The „Colors“ commands

Here you can change the background colors of the Amadeus desktop, of the collections browser and of the text viewer.

Note: The text background in the collection and text browser must be a solid color. If you select a dithered color, Amadeus will automatically select the nearest solid color, thus preventing unreadable text.

### 4.12.5 The „Viewer Options“ commands

With this command you can change various settings that affect the appearance and behaviour of the viewers directly implemented in Amadeus.

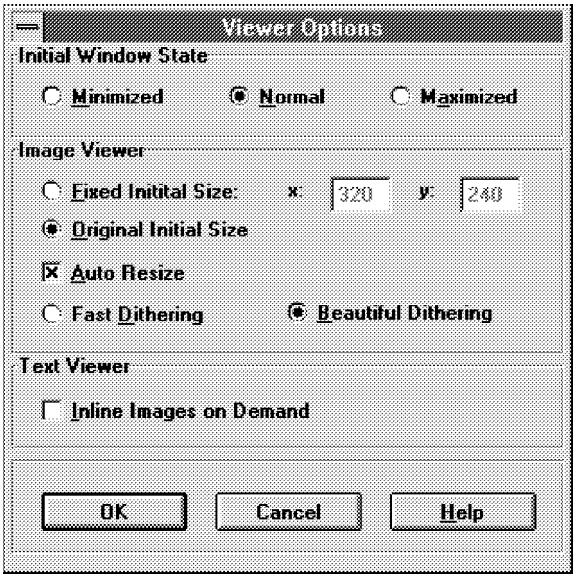


*Figure 18*

#### *4.12.5.1 Initial Window State*

This influences how a multimedia document (image, movie, sound, postscript, ..) will be opened after download. Possible options are:

- Minimized: The document will be shown as an icon
- Normal: The document will be immediately opened after download
- Maximized: The document will be immediately opened with a maximized window after download

#### *4.12.5.2 Image Viewer*

- Fixed Initial Size: The image viewer will display images with a fixed size no matter what the real size of the image might be. This should prevent displaying very huge images with their full size. You may also specify the fixed size in the two edit boxes for x (width) and y (height).
- Original Initial Size: If you check this radio button, the image will be shown in its original size when you open the window.
- Auto Resize: If this option is checked, images will be automatically resized if you change the size of the window.
- Fast Dithering: On 16 or 256 color displays images must be ‘dithererd’(technique to mix colors) to show all colors. If this option is enabled the calculation will be quite fast but the quality will not be very high.

- Beautiful Dithering: Dithering will be slower but with a better quality.

#### *4.12.5.3 Text Viewer*

- Inline Images on Demand: If you enable this option, inline images will not be fetched (and thus shown) automatically. Instead you will see an Amadeus-head-icon indicating the inline image. You may fetch the inline image by double-clicking on this icon. This feature is mainly used when you have a very slow connection to your database server and you want to look at the text first and decide afterwards whether it is interesting for you.

### 4.12.6 The „Toolbar“ and „Statusbar“ commands

With these commands you can toggle the appearance of the toolbar and the statusbar.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. Similarly, this area shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you do not wish to execute the command, then release the mouse button while the pointer is off the toolbar button.

### 4.12.7 The „Save Settings on Exit“ and „Save settings now“ commands

Here you can specify when Amadeus should store its user configuration settings (link fonts, colors, search type, windows size, ...). Either when exiting Amadeus, or on demand (save now) or never (none of these two options selected or checked).

## *4.13 The „Window“ menu*

### 4.13.1 Overview

These are the commands that are available in the Window menu:

| Commands | Shortcut Key | Purpose |
|---|---|---|
| Cascade | | cascades displayed windows on the desktop |
| Tile Horizontal | | tiles displayed windows horizontally on the desktop |
| Tile Vertical | | tiles displayed windows verticalyl on the desktop |
| Arrange Icons | | arranges icons on the desktop |
| Tile Always Horizontal | | tiles displayed windows horizontal on the desktop automatically whenever the program window is resized |
| Tile Always Vertical | | tiles displayed windows vertical on the desktop automatically whenever the program window is resized |

### 4.13.2 The „Cascade“ command

Arranges windows in an overlapped fashion.

### 4.13.3 The „Tile Horizontal“ and „Tile Vertical“ commands

Arranges windows in non-overlapping horizontal or vertical tiles.

### 4.13.4 The „Tile Always Horizontal“ and „Tile Always Vertical“ commands

Arranges windows in non-overlapping horizontal or vertical tiles every time the main windows is sized or a new viewer is created (= not the same as opening an existing window!)

### 4.13.5 The „Arrange Icons“ command

Use this command to arrange the icons for minimised windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

## *4.14 The „Help“ menu*

### 4.14.1 Overview

These are the commands that are available in the Help menu:

| Command | Shortcut Key | Purpose |
|---|---|---|
| Index | | displays the index of Amadeus Help topics |
| Using help | | displays instructions on how to use help |
| About | | displays Amadeus copyright and version information |

### 4.14.2 The „Index“ command

Use this command to display the opening screen of Help. From the opening screen, you can jump to step-by-step instructions on how to use Amadeus and various types of reference information.

Once you open Help, you can click the Contents button whenever you want to return to the opening screen.

### 4.14.3 The „Using help“ command

Use this command for instructions about using Help.

### 4.14.4 The „About“ command

Use this command to display the copyright notice and version number of your copy of Amadeus.

## *4.15 The „Amadeus.Ini“ file and command line options*

Most of the Amadeus.ini-file settings are made by Amadeus itself or through menu commands and options. However, there are some settings that might be interesting for the advanced user.

They are specified in the section „Amadeus“:

```
[Amadeus]

Port=418                          ; specifies default port number for
                                    communicating with the Hyper-G
                                    database (usually port 418)

Server=fiicmss02.tu-graz.ac.at ;  specifies the default Hyper-G
                                    database

ShowLogo=1                        ; specifies whether the welcome logo
                                    is shown or not

CollectionHead=1                  ; specifies whether the opening text
                                    pages are shown automatically
```

Hint: Look in the „Amadeus.ini“-file, there are some comments on additional entries.

### 4.15.1 Command line options

These override default settings specified in the „Amadeus.ini“-file

| Switch | Default | Note |
|---|---|---|
| -r <hghost> | -r info.tu-graz.ac.at | specifies the Hyper-G database to which to connect.<br>E.g. hmu1.cs.aukuni.ac.nz (New Zealand), tracy.esrin.esa.it (Italy) email.tuwien.ac.at (Vienna, Austria), hyperg.edvz.uni-linz.ac.at (Linz, Austria) |
| -p <hgport> | -p 418 | specifies a different port number |
| -l <language> | -l english | specifies a different user language |
| -c <startcollection> | -c ~anonymous | jumps directly to a specified collection at startup |

Extented ‘-r’ command line option:

Amadeus can now be used to directly access a Gopher server by specifiying „-r gopher://<host>{:port}{/1path}“ in the commandline

E.g.: „-r gopher://gopher.tu-graz.ac.at/1“

Note: This should also work with the other protocols supported in the 'goto' command, but they are NOT tested so far !

Hint:It is a good idea to copy the Amadeus icon into the Program-manager several times, every time with different command line options (e.g. different Hyper-G server).

# 5. Index


***A***

Access Rights....15; 18
Activate....10; 27; 29
Administration menu....31
  Change password....31
  Identify....31
  Send Message....32
  Status....31
Amadeus
  Working with Hyper-G using Amadeus....9
Amadeus.Ini....13; 35
annotations....9
anonymously-identified....8

***B***

Bugs....7

***C***

*Client-Server-Concept*....7
collection browser....9

***D***

Deactivate....10; 27; 29
destination anchor....23

***E***

Edit menu....22
  Copy....22
  Cut....22
  Make Link....12; 18; 23
  Paste....22

***F***

File menu....13
  Copy....19
  Delete....20
  Exit....21
  Modify....19
  Move....20
  New Annotation....18
  New documents....14
  New Remote....18
  Page Setup....21
  Play....13; 21
  Print....21
  Print Setup....21
  Save....19
  Stop....13; 21
  Unlink....20
full text engine....28
Fulltext search
  Boolean search....29
  fuzzy Boolean search....29
  primitive search....28
  Query Syntax....29
  weighted Boolean search....29

***G***

*Generic document*....15
  arguments....15
  subtype....15
*Gopher*....8
group annotations....9

***H***

Help menu....34
  About....35
  Index....35
  Using help....35
hostname....5
Hyper-G....7
  Hyper-G - a Very Short Introduction....7
  Hyper-G can be used at various levels of anonymity....8
  Hyper-G is an open system....7
  Hyper-G uses the annotation facility in an "orthogonal" fashion....9
  Structure of the data stored in a Hyper-G database....9
  What is Hyper-G ?....7

***I***

identification....31
image viewer....12
Inserting a document....15
Inserting a new collection or a new cluster....17
Inserting a Text document....17
Installing AMADEUS....6
  Fileserver installation....6
  Local installation....6
*Internet*....7

***L***

language dependent....24
language independent....24
Link Properties....18; 23
link server....8

***M***

movie viewer....13

***N***

Navigation menu....24
  Annotations....26
  Back....25
  Break....27
  Children....26

Forward ..... 25
Goto ..... 26
History ..... 25
Home ..... 25
Hyperroot ..... 26
Links ..... 26
Parents ..... 26
References ..... 26

***O***

Options menu ..... 32
Colors ..... 32
Fonts ..... 32
Language ..... 32
Save settings now ..... 34
Save Settings on Exit ..... 34
Statusbar ..... 33
Toolbar ..... 33
Ordinary Search ..... 27

***P***

PC/TCP 2.20 ..... 5
PC-NFS ..... 5
PC-TCP ..... 5
performance statistics ..... 31
PostScript viewer ..... 13
Prefix Search ..... 28
private annotations ..... 9
protocol version ..... 31
public annotations ..... 9

***R***

Required Hardware ..... 5
Required Networking Environment ..... 5

***S***

Save Anchors ..... 19
Score value ..... 28
Search menu ..... 27
Activate ..... 10; 27; 29
Deactivate ..... 10; 27; 29
Find ..... 27
Find in text ..... 29
Show list ..... 30
Search type
Attributes ..... 28
Fulltext ..... 28
Titles ..... 27
semi-identified ..... 8
Show list ..... 30
sound player ..... 13
source-anchor ..... 23
sub-cluster ..... 24

***T***

TCP/IP ..... 5
text browser ..... 11
Text document ..... 17
Types of Objects ..... 10

***U***

user number ..... 31
usergroup ..... 15

***V***

Viewer Options ..... 33

***W***

*WAIS* ..... 7
Wide-Area Information Server ..... 7
Win32s ..... 5
Window menu ..... 34
Arrange Icons ..... 34
Cascade ..... 34
Tile Always Horizontal ..... 34
Tile Always Vertical ..... 34
Tile Horizontal ..... 34
Tile Vertical ..... 34
winsock.dll ..... 5
*WorldWideWeb* ..... 8
*WWW* ..... 8