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TurboGopher – Internet-Gopher für den Macintosh.

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Net

Computer, die ans Internet angeschlossen und zusätzlich mit Gopher-Software ausgestattet sind, können inzwischen so ziemlich unkompliziert Informationen abfragen oder Dateien kopieren, die auf den Gopher-Servern weltweit gespeichert sind. Wie eine Taschenratte ist Gopher in der Lage, das Internet nach den gesuchten Informationen oder Dateien zu durchwühlen. Das ist ein sehr entscheidender Fortschritt.

Für die Macintosh-Welt wurde dafür seit 1991 von der University of Minnesota (USA) die Client-Software ***TurboGopher*** entwickelt, die kostenlos übers Internet bezogen werden kann.

Dokumentiert ist in diesem Merkblatt die Original-Beschreibung vom ***TurboGopher*** des Gopher-Teams vom 20. April 1993 sowie eine Übersicht der Hauptmenüs.

1. Definitions

Gopher n. 1. Any of various short tailed, burrowing mammals of the family Geomyidae, of North America. 2. (Amer. colloq.) Native or inhabitant of Minnesota: the Gopher State. 3. (Amer. colloq.) One who runs errands, does odd-jobs, fetches or delivers documents for office staff. 4. (Computer tech.) software following a simple protocol for burrowing through a TCP/IP [1] internet.

Gopher+ n. 1. Hardier strains of mammals of the family Geomyidae. 2. (Amer. colloq.) Native or inhabitant of Minnesota, the Gopher state, in full winter regalia (see PARKA). 3. (Amer. colloq.) Executive secretary. 4. (computer tech.) Software following a simple protocol for burrowing through a TCP/IP internet, made more powerful by simple enhancements (see CREEPING FEATURISM).

TurboGopher n. 1. A small rodent with a turbocharger strapped on its back to increase its speed and ferocity. 2. (Amer. colloq.) Native or inhabitant of Minnesota after consuming three double espressos. 3. (Amer. colloq.) An Olympic sprinter who runs errands, does odd-jobs, fetches or delivers documents for office staff. 4. (computer tech.) Speed-optimized Macintosh software following a simple protocol for burrowing through a TCP/IP internet; network speed is achieved by using turbocharged software; incoming bits spin the turbine that pumps out the outgoing bits.

2. Overview

TurboGopher is a Macintosh application that we believe is (still!) the fastest Macintosh Gopher client available. Beyond optimizing TurboGopher for raw speed while fetching documents and directories, we turbocharged the user interface by displaying information as soon as possible... you can read the first part of a document or directory while the rest is being fetched.

This version of TurboGopher also supports many of the Gopher+ extensions to the original Internet Gopher protocol. In spite of the design goal to run fast as possible, TurboGopher is a good Mac citizen: it shares time with other applications. You can put TurboGopher in the background to fetch lengthy items in the background while you work in another application in the foreground.

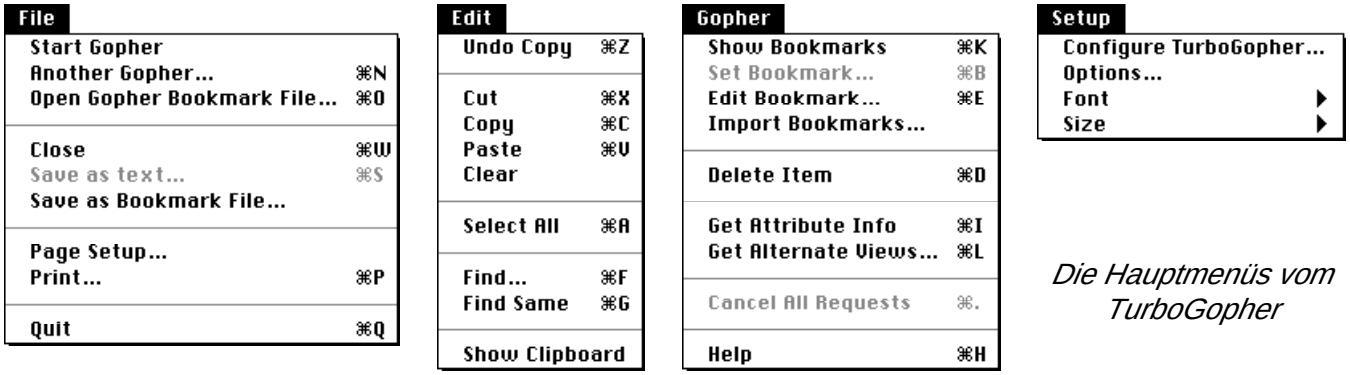
3. What is Gopher?

The Internet Gopher protocol and the first Gopher software was developed by the Gopher Team at the University of Minnesota. Gopher was originally created as a fast, simple, distributed, campus-wide information search and retrieval system. Ease of use and implementation has made Gopher increasingly popular on the Internet. Since its original release, many folks on the Internet have contributed to its growth, submitting patches, servers, clients, and linking their local servers into the worldwide network of Gopher servers. Now there are even gateways to seamlessly access a variety of non-Gopher services such as FTP, Archie, WAIS, USENET news, whois servers, etc. This network of Gopher servers is at your disposal from a Mac, PC, or workstation connected to the Internet. Incidentally, TurboGopher, the Internet Gopher protocol, and the Gopher+ extensions are copyright © 1991-1993 by the University of Minnesota.

The Gopher software may be retrieved from numerous Gopher or FTP archive sites, including the University of Minnesota Gopher server, the Info-Mac Archive Gopher server, and by anonymous FTP from boombox.micro.umn.edu and sumex-aim.stanford.edu. The most recent release of TurboGopher is always available from the University of Minnesota Gopher server (or by anonymous ftp from boombox.micro.umn.edu). If you discover a bug or just want to know if you have the newest version, read the file called 'ReadMe-Versions- Bugs'. The version number of your TurboGopher may be found by choosing 'About TurboGopher' from the Apple Menu or by clicking on the application's icon in Finder and choosing 'Get Info' from the Finder's File menu.

4. How does it work?

Information accessible via Gopher is stored on many computers all over the Internet. These computers are called Gopher servers. Information stored on many kinds of non-gopher servers is also available via special gopher servers that act as gateways (protocol translators). Virtually any popular computer (Mac, Unix box, PC, or larger computer) can be used as a server. Servers do not just contain files, directories and searchable databases; they can also contain references to other servers. To retrieve and search this information, you need to run a Gopher client application on your computer. TurboGopher is a Gopher client applica-



Die Hauptmenüs vom TurboGopher

tion. You can set it up to remember how to connect to one server; from here you can effortlessly traverse the web of all interlinked servers.

5. Getting Help with TurboGopher

In addition to this information you are reading right now, if you are using System 7 (and we strongly recommend that you do, as many TurboGopher features are only available under System 7), some Balloon Help is available in TurboGopher. See your Macintosh System 7 documentation for information on using Balloon Help.

6. Using TurboGopher

TurboGopher uses MacTCP to communicate with gopher servers on a network. Assuming your Mac has correctly configured MacTCP software installed in the System Folder, TurboGopher is all set to go.

7. Navigating Gopherspace

To navigate through gopherspace, double-click on any interesting items to open (fetch) them. If you double-click on a file, TurboGopher will fetch and display the file. Opening a folder will let you view its contents. Double-clicking on the question-mark (Search) icons will let you search a database. On most gopher servers these databases are full-text indexes of a collection of information. Full-text index means that every word in every document is considered a keyword. The best way to search a gopher full-text database is specify the words for which to search when TurboGopher presents you with a dialog box. The results of the search are returned as a list of documents containing those words. If you double-click on the phone-book icons you can search electronic phone books. Phone book databases are structured in the sense that they have fields (i.e. a name field, an address field, and a phone number field). The simple phone-book lookup dialog assumes that you want to search for someone by name. Click on the 'More Choices' button if you wish to specify exactly which fields to search in, when you formulate a query. The result of the query is displayed in a document.

Disk icons represent archived Mac software or documents that you can fetch; these items will be saved to your hard disk. Such items are often stored in compressed form to save space. You need to have certain Mac utilities to 'uncompress' such items. The most common such utilities are StuffIt and Compactor. Both may be obtained from the Info-Mac archives with gopher. If you are running System 7 and TurboGopher retrieves an item that needs to be 'unstuffed' or 'uncompacted', it will ask you if it should open them via Finder and the appropriate decompress utility. We recommend that you use CptExpand and SitExpand for your decompress needs; both of these are available with the TurboGopher software distribution as Helper Applications as well as from the Info-Mac archives.

Items that are specific to MS-DOS are seen as documents with a tiny 'PC' emblazoned on them; similarly items specific to UNIX show up as documents with a tiny 'UX' on them. You can retrieve either of these kinds of items if you like. TurboGopher will ask you if you wish to save them to your disk. You may not 'view' these items as text. In fact it will probably make very little sense to fetch such items unless you intend to further transfer them later from your Mac to another kind of computer, or if you have some special tools on your Mac that will allow you to use these kinds of items.

Items appearing as documents with a starburst on them are probably graphics or picture files (typically in GIF, JPEG, or PICT format). TurboGopher will transfer such files, save them on your disk, and optionally launch a picture-viewing helper application if you wish to view the picture.

8. Alternate Views

Gopher+ servers may store more than one representation of a document (an image, text, sound, video, etc.). If more than one view of a document is available, you can select between the views by choosing the 'Get Alternate Views' item from the Gopher menu. When alternate views are available, an alternate view window will be displayed with descriptions of the views.

For many alternate views of documents, TurboGopher will save a copy of the item to your Macintosh's disk, and then (under System 7) optionally ask the Finder to open the item with a helper application. You can configure which applications should be used as TurboGopher helpers; to do this see the section on configuration options.

9. Connecting to terminal-based services

Opening the 'terminal' icons will make TurboGopher launch NCSA Telnet (or TN3270 if appropriate) and start a terminal session to a terminal-based information system. Typically these are library catalogs or other such services. Note that for this to work, you need to have Telnet or TN3270 installed on your Macintosh. If you are still running System 6, TurboGopher will only save a Telnet session file rather than launch Telnet; this is another good reason to run System 7 on your Mac.

Following the Macintosh guidelines, TurboGopher starts out displaying text in the standard application font. The Font and Size menu items let you change font appearance for documents and lists. TurboGopher will attempt to display phonebook lookup results in a monospaced font (Monaco), effectively ignoring your font selection. It IS possible to change the font of a phonebook results lookup window after it has been opened; however things will not line up correctly and generally look icky.

10. Advanced Navigation Features & Shortcuts

If you double-click on a folder while holding down the Option key, TurboGopher will re-use the current window instead of using a new one to display the folder contents. Some folks like to do this to prevent screen clutter and keep from having too many open windows. You may use the up and down arrow keys on your keyboard to move up and down lists in windows. The Enter or Return key opens an item (and is equivalent to double-clicking on an item). Use of the arrow keys is not supported on the Mac Plus.... (sorry). You may also type the first letter (or first few letters) of an item name in a list and TurboGopher will highlight the first item it finds that matches (sort of like the Finder does in list views). The Find menu item is available to locate an item in a list: just type a string in the Find dialog. Find can also be used to search for text in open document windows, by the way. To delete any item in any list window, click once on the item to select it. Then choose 'Delete Item' from the Gopher menu. TurboGopher remembers the last full-text index search (item with question-mark icon) you used. If now you hold down the Option key and double-click on a word in a document window, TurboGopher will query that search service for all documents containing the word you selected. You must use a search service before this pseudo-hypertext capability is accessible (TurboGopher needs to know which search service to use in your hypertext query).

The Recent menu lets you go back to any directory window you have viewed during your Gopher session. The left and right arrow keys may be used to go to previous or next windows; they are equivalent to traversing the recent menu upwards or downwards. Note that the Recent menu only remembers directory windows you visit. Document or phone-book lookup windows are not listed.

If you hold down the Command Key while clicking on the title of a window, the path you took to get there is displayed (much like the Finder does for its windows). Further, Command-Up arrow lets you move back up to a directory's parent (enclosing) directory. If you close a window by clicking in its close box while

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holding down the Option key, then (like Finder) TurboGopher will close all open windows.

If you click in the close box while holding down the Shift key, then the window will be closed and if it is a list, it will also be forgotten. In other words, it will be removed from the Recent menu. Of course, if you hold down both Option and Shift keys then all windows are closed and forgotten. For the terminally curious, if you hold down the Shift key while single clicking on an item in a list, TurboGopher will display the item's Gopher selector string, host name, port number and Gopher+ baggage in the status pane. This is a quick peek. If you want to copy-paste this information, use the Get Attribute Info menu item found under the Gopher menu; the information you want is in the +INFO attribute (the first line).

If wish to fetch an item that is a Macintosh file (binhexed file, shows up with the icon of a disk), but don't want TurboGopher to automatically dehex it as it fetches, you may force TurboGopher to fetch the document as a raw, unprocessed file. To do this, hold down the Control key while you double-click on the item. For folks using DownLine or other applications for de-binhexing and de-archival, this is one way to do what you want.

11. Authenticated Servers

TurboGopher now supports AdmitOne Authentication for Gopher+ servers that restrict access to information on a per-user basis. When you attempt to open a directory that has such access restrictions, TurboGopher will prompt you for your username and password on the restricted-access server. TurboGopher and the server negotiate to establish a valid ticket, and subsequent requests to the server use a new ticket for each request. This means that your password is not sent over the network, and that you only have to enter your password to get the initial authorization.

12. Bookmarks and Bookmark Files

If you formulate a search or find a folder you would like to come back to quickly later, you can use the Set Bookmark menu item to save your place. Set Bookmark saves a reference to a folder, file, search, terminal session... in fact any Gopher item. If nothing is selected in the front list window, a bookmark is made for a folder representing the window. Try it, it's easier to do than to say. Bookmarks are placed in a special Bookmarks window. Use the Show Bookmarks menu item to open the Bookmarks window. Bookmarks are remembered even after you quit TurboGopher; contents of the Recent menu are however forgotten. It might be useful to consider the Bookmarks window to be a special kind of 'worksheet' or 'construction area' for you to build your own scratch-pad of useful gopher resources. You may edit the names or other parts of bookmarks using the Edit Bookmark… menu item. Unless you understand the Gopher protocol we don't recommend that you change anything except perhaps the title (name) of a Bookmark.

You can save your Bookmarks window or ANY list window or ANY selected item as a Bookmark file ('Save as Bookmark File…' menu item). Bookmark files are small and may be exchanged with other Gopher users if you wish. If you know what you are doing, Bookmark files may be edited with permissive text editors. The 'Import Bookmarks…' menu item lets you read a Bookmark file right into your Bookmarks window. The 'Open Gopher Bookmark File…' menu item on the other hand, places the contents of a bookmark file in a window of its own. The latter is equivalent to double-clicking on bookmark files from the Finder. If you launch TurboGopher by double-clicking on a bookmark file, it will not immediately connect to the Home Gopher server, but will open the Bookmark file instead. So you may use bookmark files as custom Home Gopher servers.

13. Item Attributes

More sophisticated Gopher servers (referred to as Gopher+ servers) can provide you with information about any selected item, much like the Finder's Get Info menu lets you get information about a Mac item. Use the 'Get Attribute Info' menu item of the Gopher menu for this.

14. Canceling Slow Network Operations

TurboGopher executes most requests in a few seconds. A document or directory is displayed as it is received. However, if a server is especially slow or busy or if you have started to fetch what appears to be a very long and uninteresting document or directory, you may cancel the fetching process by closing the document or directory window. Once you have closed the window, TurboGopher assumes that it does not need to fetch the remainder of the item. Note that when you fetch a file that is saved to your Mac disk, TurboGopher displays a window with the status of the transaction. Again, to cancel, you can simply close the window. A more extreme method for canceling a network operation is to choose the Cancel All Requests item from the Gopher menu (or by holding down the command key and typing a period). If you open a file or folder by double-clicking while holding down the Option key (to conserve screen space as described earlier), TurboGopher will also cancel the running network transaction if one is outstanding; and this is in fact exactly what you want over low speed connections such as SLIP. Both these features make TurboGopher seem faster and more responsive over SLIP links. TurboGopher runs happily in the background (if you wish to fetch something very large or from a very slow server). You may also fetch an item (file or directory) while another one is still being fetched, since TurboGopher supports multiple concurrent streams. Command-Period cancels all active streams.

15. Starting and Configuring TurboGopher

The 'Start Gopher' item under the File menu opens a window containing the initial directory fetched by connecting to your home Gopher server. TurboGopher is pre-configured to connect on startup to one of the University of Minnesota's Gopher servers. You may change your home Gopher server by using the 'Configure' item under the Setup menu. To do this you need the full Internet domain name and port of the desired primary server. You can configure TurboGopher to use one of two alternate primary servers. This distributes the load for a campus over two different (but equivalent) primary servers and it prevents a single point of failure. TurboGopher will randomly try one of the two and then try the other if the first is down. If you don't understand this, you don't have to bother with it or with the Another Gopher item under the File menu. TurboGopher attempts to speak Gopher+ to all Home Gopher servers, and then backs off if it sees that the server does not have Gopher+ style items. This is a bit presumptuous, and it confuses some servers. These servers should be revised in the future so they don't confuse so easily. If configured to connect to a Home Gopher server and nothing is displayed, you may want to try using the 'Another Gopher' item under the file menu and making sure that the Gopher+ check box is NOT checked.

16. TurboGopher Options

You can use the Options item under the Setup menu to customize some behaviors of TurboGopher. The Single Directory Window checkbox makes TurboGopher recycle its windows whenever you open a new directory (and not just when you hold down the Option key). Use the ISO Latin-1 checkbox if you need to use Latin/Romance language characters. Many sites in Europe have a need for this to display their national characters. If you visit European gopher servers and the accented characters don't display correctly, you may want to choose this option.

The Extended Directory listings checkbox is disabled; it's for a future feature. If you visit Gopher servers with Japanese or Chinese documents, and you use a Japanese or Chinese font while running System 7.1's WorldScript, Gopher will display Japanese SJIS (MS Kanji) or traditional Chinese characters (BIG-5).

When you save documents, TurboGopher normally saves them as MacWrite II TEXT documents (we like MacWrite II). If you'd rather save them as TEXT documents of your favorite word processor or editor, use the appropriate 'Set…' button in the Options dialog to select the word processor of your choice. With Gopher+ servers, items may be available in a number of alternate views. When fetched, these alternate views are typically saved as a file to be viewed by a Mac application.

If you are a network/macintosh cowboy, you can change the Mac application and Mac filetype associated with a Gopher+ alternate view.... this changes the helper application that TurboGopher asks the finder to launch to view the document. Double-click the view in the list and you will be presented with a dialog in which you can select the application to be used as a TurboGopher helper. By the way, you won't be able to do this if you're running System 6...

17. Miscellaneous

TurboGopher saves or caches the item lists for all visited directories (even when windows are closed). Since these lists don't ever have to be fetched from the server again, this dramatically increases speed when choosing any item from the Recent menu. If TurboGopher runs out of memory it will release the caches for closed windows. Closing unneeded windows will reduce TurboGopher's memory needs.

If you browse many large directories and documents, we recommend that you increase TurboGopher's memory allocation. Do this by clicking once on the TurboGopher icon in Finder and then doing a Get Info in Finder. Set the memory allocation up in the ensuing dialog box. TurboGopher stores what it needs in a file called TurboGopher Settings; this lives in the Preferences folder, which is found in your System Folder. If you drag this file out from the Preferences folder and place it in the same folder as TurboGopher, it will still be found and used.

18. For Experts

If you are a campus or department network administrator, and you would like information about pre-configuring internal defaults, read the short Inside TurboGopher document. This is available in the Gopher software distribution from the University of Minnesota's Gopher server, along with with the current version of TurboGopher itself.

You may send e-mail to the Gopher Team at: *gopher@boombox.micro.umn.edu.* Please write to the development team (at the above address) with bugs, suggestions, or (of course!) praise.

To be informed by e-mail of new developments in the Gopher world, or of new versions of Gopher software, you may subscribe to 'gopher-news'; Send your request to: *gopher-news-request@boombox.micro.umn.edu.* Have fun surfing the Internet... –

The internet Gopher Team at the University of Minnesota April 20, 1993.

19. and now, to keep the lawyers happy...

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20. Sonstige Hinweise

■ Derzeit keine. Doch: Hm, es könnte sein, daß das Nutzen von Browsern à la ***Mosaic***, der vom National Center for Supercomputing Applications (NCSA) in Champaign für das World-Wide-Web entwickelt wurde [2], dem Gopher den Rang abläuft.

21. Literatur

[1] Dittberner, K.-H.: TCP/IP – Der Standard für den Datenverkehr zwischen den Computerwelten. FU Berlin (IfP): wdv-notes Nr. 135, 1990-1993.

[2] Dittberner, K.-H.: Benutzung des Internets: MOSAIC. FU Berlin (IfP): wdv-notes Nr. 252, 1993.

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