

Tar for the Macintosh

by Craig Ruff

Introduction

This document describes the second version of tar for the Macintosh. This version includes support for different volumes, printing of archive contents, better screen output (for archive contents) and an improved directory selection dialog.

Description

This program reads and writes tar format archives. It has been tested against tar running on 4.3 BSD, System 5.2 and John Gilmore's public domain tar program, which is Unix standard (P1003 draft 6) compatible. The program is based on John Gilmore's public domain tar, and excerpts of that program make up the non-Macintosh portions. Tar is public domain. The source code is available in a separate StuffIt archive. The source code was compiled with the MPW 3.0 C compiler. The resources (tar.r) are in MPW rez format. It has been tested under system 6.0.2 on a Plus, system 6.0.3 on a IICx.

What tar will do

Tar will create, extract and list tar archives in the old format, BSD format and the new standard format. Tar will convert the Macintosh newline character '\r' to the Unix newline character '\n' if desired on archive creation, and back the other way on extraction. Tar archives whole directories only, but will extract whatever is put in the archive on another machine.

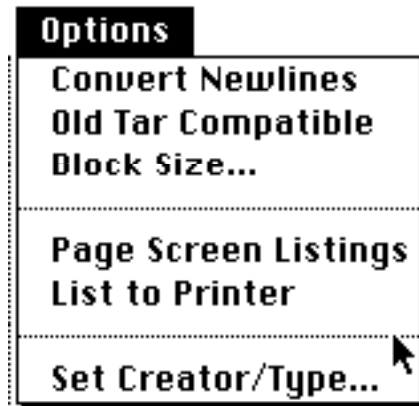
Using tar

When you start tar, you will see this menu bar:



You select options off the Options menu, and then select a choice off the file menu. The edit menu is for desk accessory support.

The Option Menu



Convert Newlines

When this option is checked, '\r' will be converted to '\n' during creation.

During extraction, '\n' will be converted to '\r'. Take note, this occurs in the body of **all** files, and is thus useful only for source or text transfers.

When this option is not checked, no conversion takes place. Note that the '\n' is 0x0A and '\r' is 0x0D.

Old Tar Compatible

When this option is checked, tar will create archives with the old format.

When this option is not checked, tar will create the new standard format archives. Note that tar will read any archive type, regardless of the state of this option.

Block Size

This option brings up a dialog box that allows you to select the blocking size. This is arbitrarily limited to between 1 and 128 512-byte blocks (inclusive). Note that this has little effect on creation or extraction except to make disk transfers more efficient. On extraction, you may see a block size alert if the archive and the default differ, though this shouldn't cause a problem.

Page Screen Listings

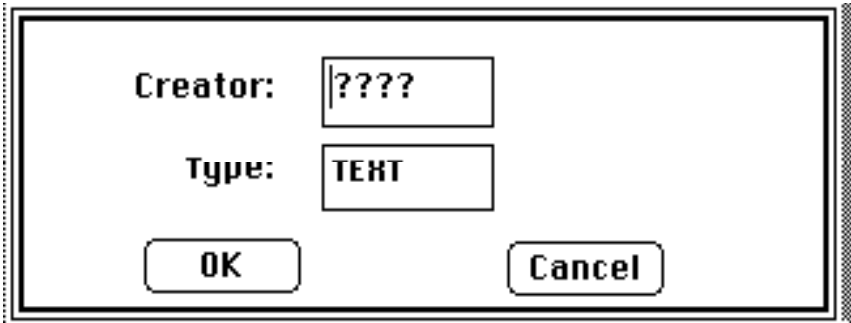
This option causes the listing (during creation, extraction or listing) of archive file contents to be listed by the screen full. When the message "Press any key to continue" is displayed at the bottom of the window, any key press will cause the listing to continue. The default mode for the list option will always page the listing to the screen in this manner.

List to Printer

This option causes the listing of archive file contents to be printed. A print job dialog will be shown after the archive file and target directory selection. Note that this will work for all three file options.

Set Creator/Type

This options allows you to specify the Finder Creator and Type for each file extracted from the archive. Note that this applies to every file extracted.



Note that the default creator and type can be changed by modifying the 'ftyp' ID 0 resource. The first four bytes are the creator characters, the second four bytes are the type characters.

The File Menu



Create

This selection brings up dialog boxes involved in the creation of a tar archive. The first box is a standard file dialog, in which you specify the name of the archive. Do not worry if the archive file is in a directory to be placed into the archive. Tar detects this and skips the archive file. The next dialog(s) select the (whole) directory to be placed in the archive. The dialog is a customized version of the Standard File dialog. The directory displayed at the top of the file list will be the directory placed into the archive if the '**Select**' button is pressed when no subdirectory in the file list is highlighted. Double clicking a subdirectory (or clicking and pressing the '**Select**' button) will make the selected subdirectory the current directory. The '**Drive**' button is used to select the next online HFS volume. The '**Eject**' button is used to eject volumes. The '**Cancel**' button halts the creation of the archive and closes it. After each directory is added to the archive, this dialog will appear again giving you a chance to add other directories. You may stop the creation of the archive by typing '**Command-.**'.

Extract

The extract option will present two dialog boxes. The first is the standard file dialog, in which you select the archive to extract. Note that all files are displayed, as your favorite downloading program may not be able to specify the file creator and type to give it. The next dialog box is the directory selection box (like in create). This dialog box works the same way as in create. The current directory (at the top of the file list) is where the files will be placed. You may stop the extraction by typing '**Command-.**'.

List

The list option displays the standard file dialog, in which you select the archive to list. You may stop the listing by typing '**Command-.**'.

File List Window

In each of the three cases (create, extract and list), if the "List to Printer" option is not selected, a file list window will pop up and display the files (in Unix pathname format) being inserted, extracted or listed. While the listing an archive, the archive is displayed by screenfulls (by default). You can also select this for creation and extraction, otherwise, if the page screen listing option is not checked, you can pause the display by typing Command-S. Command-Q will restart the display. The window looks like this:

T	Size	Date		Name
D		Apr 25 23:12 1987		tmp/
F	1013	Feb 8 12:14 1987		tmp/chkkey.c
F	432	Feb 8 12:14 1987		tmp/con.h
F	3120	Feb 8 12:14 1987		tmp/conopen.c
F	2469	Feb 8 12:14 1987		tmp/getkey.c
F	415	Mar 24 13:17 1987		tmp/p.lst
F	0	Apr 25 17:32 1987		tmp/q

Limitations

Tar works under HFS only. Tar does not understand the file types device, link, FIFO and contiguous defined in the tar header. Tar does not handle selective extractions. Tar will not allow single files to be placed in the archive. Tar does not support the archive file spanning multiple volumes. Tar does not include the resource fork of Macintosh files. The tar archive format does not allow names longer than 100 characters, thus long Macintosh pathnames may cause an error. Macintosh file related attributes except for modification date and (data fork) size are not kept.

I welcome your comments, suggestions and gripes about this program.
You can send e-mail to 'cruff@ncar.ucar.edu'.

Thanks to Sak Wathanasin for the improvement of the 'ftyp' resource to specify the default creator and type values and the simplified directory selection dialog. The new icons are courtesy a person in Finland, I'm sorry I've lost your name and e-mail address. Other bug fixes courtesy several others.