DirSize 1.4

Steve Robb

	COLLABORATORS			
	TITLE : DirSize 1.4			
ACTION	*NAME*	*DATE*	*SIGNATURE*	
WRITTEN BY	Steve Robb	August 23, 2022		

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DirSize 1.4

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         Copyright notice
                    DirSize was written by
        Steve Robb
         in 1995-1996.
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1.2 Introduction

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Introduction to DirSize.

Here is another one of those tools Commodore missed (I would say  AT,  but
they  have yet to do anything with the OS). If you are the owner of a hard
drive, or similar storage devices, you may often wish to know the size  of
a,  or  several,  directories.  The trouble is, with the commands supplied
with the OS, you can't. TRUE, you  could  use  list  <dir>  all  but  this
returns the blocks used, which is not the best unit – most people are more
familiar with bytes, kilobytes, etc.

This is where a program like DirSize is useful. It quickly accumulates the
sizes of the files inside a directory and it's sub-directories.

There is a number of similar tools available on Aminet and  elsewhere,  so
why  make  another  one?  The reason is simple: I was bored! I couldn't be
bothered to download one of the already available tools, so I wrote  this.
I  have  been  using  it for nearly a year now, without any problems (even
with a relatively harmless mungwall hit which has now disappeared).
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1.3 Features

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Features of DirSize.
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* Select the unit of measurement (bytes, kilobytes, megabytes, gigabytes)
  or select automatically.

* Include only files matching a certain AmigaDOS pattern.

* Accumulate number of files and directories.

* Find size of multiple directories.

1.4 Requirements

```
Requirements for DirSize.

DirSize requires the following:

Workbench 2.04+
Shell/CLI experience (only a little!)

Commodore's/AT's  Installer  program  is  needed  for  installation  via
Installer script. (Funny that!)
```

1.5 Installation

Installation of DirSize.

The simplest method of installation is to use the provided Installer
script. Installer program is required for this to work.

To install by hand, just copy the executable (called DirSize) to your
desired location. You might want to copy the documentation elsewhere.

1.6 Usage

                    Usage of DirSize.

Currently, DirSize is a Shell/CLI only tool. It is my intention to give it
a user-interface (see
                future
).

The command line template of DirSize is as follows:

DIR/M,WILD/K,B=BYTES/S,KB=KILOBYTES/S,MB=MEGABYTES/S,GB=GIGABYTES/S,
AUTO/S

If you have any experience of AmigaDOS templates, most should be
self-explanatory.

 DIR/M: specify the directories you wish to count. If none are given, then
        the current directory is used.

WILD/K: include only files matching this pattern. This is a standard
        AmigaDOS pattern. The keyword WILD must be specified. Default: all
        files are included in the count.

B=BYTES/S,KB=KILOBYTES,MB=MEGABYTES,GB=GIGABYTES,AUTO/S:

These are all switches but only one should be used (the right most in the
template has priority over those on the left, if you do use more than
one). Specifying BYTES (or B) will cause DirSize to output sizes in bytes,
KB will output kilobytes, etc. AUTO will cause the program to select a
suitable size for each directory.

It is important to remember that you can only specify one unit for all
directories. If you request KILOBYTES, sizes of directories will be in
kilobytes. The only exception to this is AUTO.

Default: AUTO.

Once each directory has been scanned, the program will output the size of
the directory together with the number of files and sub-directories inside
it.

At the end of this, the total size, number of files and directories will
be displayed. This is, basically, the sum of the figures given for the

```
    individual directories.

    See also:
                    Examples
                    .
```

1.7 Example usage

```
    Example usage.

    DirSize

    will output the total size of the current directory, including  all  files
    and automatically selecting a suitable sizing unit.

    DirSize archives BYTES KB

    will size the directory archives using kilobytes  as  the  selected  unit.
    Note that BYTES was specified, byte KB has precedence over this.

    DirSize archives/ WILD=#?.lha

    will only count the files ending with .lha in the directory archives.

    As a final note, ensure there is enough stack space. 4096 bytes should  be
    enough for small to medium nested directories.
```

1.8 Limitations

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    Limitations of DirSize.

    A more precise notation for larger sized directories is needed. An example
    of  this  is  say  a  45000  Kb  directory.  In  megabytes,  this would be
    represented by 43Mb. A more precise value would be 43.94Mb. This I hope to
    achieve this by the next version.

    I  have not been able to try out DirSize on anything larger than 100Mb. It
    is likely that on any directory (or, for that  matter,  total  size  of  a
    number  of directories) larger than 4Gb will produce garbage (most likely,
    an incorrect size). The technical reason for this is that a 32-bit  number
    is  used  to  store  the  size.  One  gigabyte  represented  in  bytes  is
    1,073,741,824. The highest unsigned 32-bit number possible to represent is
    4,294,967,295,  which is 4Gb less one byte. If demand is high, I could use
    64-bit numbers (my calculator approximates this  to  be  1.844674407E+19).
    But,  for  the  time  being,  try  to avoid summing the sizes of two RAID5
    drives!
```

1.9 Bug Reports

                    Reporting bugs.

First and foremost, ensure you have a sufficient stack available. DirSize
is recursive, and a large number of directories may crash the system.

If you come across any bugs, please report them by sending me the
following in as much detail as possible:

  * Characteristics of the bug, (e.g. program crash, incorrect directory
    sizes, etc.)

  * Your system:
       Machine type (e.g. A500, A1200, A4000T).
       Processor + co-processor (e.g. 68020+68882, 68030 no MMU).
       Memory available (chip ram, fast ram (16/32-bit), Retina).
       Graphics type (OCS, ECS, AGA, graphics card - type?).
       Kickstart/Workbench release (About in Workbench will tell you this).
       Hardware peripherals.

  * Software you were running at the time (try to re-create the bug
    without this software).

  * Take sometime trying to re-create the bug (i.e. cause it to occur
    again).

  * Any other details you feel relevant (e.g. Mungwall/Enforcer hits).

Send the report to me at the
             address
               listed.

1.10 Program Future

                   Future of DirSize.

I have the following features planned for DirSize in the near future:

  * Pattern matching for directories. For example, DirSize arcs(0|1|2)
    would be equivalent to DirSize arcs1 arcs2 arcs3.

  * Graphic user-interface. Designed with Workbench in mind, it should
    show total size and current directory.

  * Localisation. Although it is unlikely that any catalogs will be
    supplied (I don't speak any other language well enough to create a
    catalog file), I will ask for you for help.

  * Terse/verbose modes for Shell interface. Terse should only display the
    directory being sized, verbose should show sizes of all
    sub-directories. This would be similar to the UNIX du -s command.

  * Real-time updating display of 'size-so-far' in the Shell.

* Use floating-points for sizes.

* Stack checking – since a recursive function is used, a large number of
  directories may cause a stack-overflow and corrupt memory.

* Maybe use 64-bit numbers for sizes larger than 4Gb (see
          limitations
).

Further items maybe added at a later date. If you have any suggestions,

          contact me
           and I'll see what can be done.

1.11 Program History

History of DirSize.

1.0 (10 Jul. 1995) INTERNAL.   Program size: 4052 bytes.

                   – Started program.

1.1 (12 Jul. 1995) INTERNAL.   Program size: 4704 bytes.

                   – Added BYTE, KB, MB, GB and AUTO keyword options.

1.2 (13 Sep. 1995) INTERNAL.   Program size: 5260 bytes.

                   – Names are enclosed in quotes to avoid confusion if
                     there contains a space.
                   – Added a version string.
                   – Added a file and directory counter.

1.3 (5 Jan. 1996) INTERNAL.   Program size: 5628 bytes.

                   – Removed some debugging statements I left in.
                   – Added pattern matching. Only works on files matching
                     given pattern.

1.4 (2 Aug. 1996) PUBLIC RELEASE. Program size: 5392 bytes.

                   – Made some optimisations (compare the size with 1.3).
                   – Remove a function which is no longer needed (it
                     contained a Mungwall hit since version 1.0).
                   – Altered text output. Now it is clearer and less
                     verbose.
                   – Added ctrl-c checking whilst recurring through
                     directories.
                   – Added an AmigaGuide® document.
                   – Made an Installer script.
                   – Finally released it!

1.12   Acknowledgements

                    Acknowledgements.

  All of the code was written by
                  myself
                    .

  I wish to thank Rafael D'Halleweyn for his CatEdit program, the .guide
  file of which was used as a guideline for this AmigaGuide® file. In
  particular, the copyright disclaimer based on the one supplied with
  CatEdit.

1.13   Author

                    About the author.

  DirSize was written by Steve Robb.

  If you have any queries, suggestions,
                  bug reports
                  , etc. please contact me.
  Use one of the following e-mail addresses, if possible:

    steve@seatac.demon.co.uk   (preferable)
    smrobb@essex.ac.uk   (until June 1997)

  Normal mail to the following address:

    Steve Robb
    Meadow Lodge
    19 School Road
    Bradenham
    Thetford
    Norfolk
    IP25 7QU

    UNITED KINGDOM

  Telephone is not available – I'm not living at that address but mail is
  guaranteed to reach me (with a delay of a day or two).

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1.14   Copyright Notice

                    Copyright Notice.

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                  Steve Robb

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  * DMS is not used to archive the files (see dms-sucks.txt from Aminet)

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Listing of archive contents:

  DirSize.info   1188
  DirSize/
    DirSize   5392
    DirSize.guide   14449
    DirSize.guide.info   1911
    DirSize.readme   922
    DirSize.readme.info   1907
    Install_DirSize   2372
    Install_DirSize.info   1256