

compare.module

Leo Davidson

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	<i>TITLE :</i> compare.module		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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REVISION HISTORY

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Chapter 1

compare.module

1.1 compare.module guide

compare.module v1.2 (14th October 1996) for Directory Opus 5.5
Written by Leo 'Nudel' Davidson for Gods'Gift Utilities

A plug-in module for Directory Opus 5.5 to compare two files, report how many differences there are, and show exactly what is different.

Requirements

Introduction

Installation

Setting Up

Arguments

Using

-
Example Full Report

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Credits

Purchasing Directory Opus 5.5

The Amiga is in a perilous state right now, and, apart from the ageing OS, ←

all that we have left are devoted developers and their innovative programs, and a whole lot of hopes and dreams. Developers like GPSoftware keep this platform alive by keeping it at the cutting edge with software like Directory Opus 5.5. If you are using a pirate version of Directory Opus, send a signal that you want there to be further versions by purchasing it. Don't let the bridge to our dreams die. The only way you can support the

Amiga is by supporting Amiga Developers.

1.2 compare.module: example full report

Example Full Report

Please note that if you are not using the AmigaOS3 AmigaGuide datatype this page will not be coloured and so you won't really get a good idea of exactly what a full report shows you: the bytes which are different should be highlighted in another colour.

In the example below a copy of the compare module was made and edited. The word "contents" and two occurrences of the word "files" were made uppercase. Later on in the file the version-string was changed so that the file pretends to be v9.3 when it is really only v1.1, and the date of release has also been modified.

Apart from these changes the two files are identical, so most of them is not shown.

If all this doesn't really sound that useful to you, I guess you haven't been using computers for very long. <grin>

If you do not understand the Hex/ASCII dump format, read up on the HexRead command in your Opus5.5 manual.

```
----- 8< -----
Left: RAM:Temp/compare.module
Right: RAM:Temp/compare.module_fake

00001ce0 | 6d706172 696e6720 mparing | 6d706172 696e6720 mparing
00001ce8 | 66696c65 732e2e2e files... | 46494c45 532e2e2e FILES...
00001cf0 | 00000000 03ea0022 ..... | 00000000 03ea0022 .....
00001cf8 | 436f6d70 61726520 Compare | 436f6d70 61726520 Compare
00001d00 | 74686520 636f6e74 the cont | 74686520 434f4e54 the CONT
00001d08 | 656e7473 206f6620 ents of | 454e5453 206f6620 ENTS of
00001d10 | 74776f20 66696c65 two file | 74776f20 46494c45 two FILE
00001d18 | 73000000 03eb0004 s..... | 53000000 03eb0004 S.....
00001d20 | 4f4b0000 000003ec OK..... | 4f4b0000 000003ec OK.....

00002ee8 | 6f6d7061 72652e6d ompare.m | 6f6d7061 72652e6d ompare.m
00002ef0 | 6f64756c 6520312e odule 1. | 6f64756c 6520392e odule 9.
00002ef8 | 31202833 2e31302e 1 (3.10. | 33202836 2e31312e 3 (6.11.
00002f00 | 39362900 00000000 96)..... | 39392900 00000000 99).....
00002f08 | 00010000 064a0000 .....J.. | 00010000 064a0000 .....J..

----- 8< -----
```

1.3 compare.module: requirements

Requirements

This module requires Directory Opus version 5.5 -- it will not work with version 5.11 or other earlier versions.

If you're using a pirate copy of Opus5.5, I'll pretend it's YOU I'm shooting at in Quake and Descent 2. =8-| ...and something nasty might just happen to either your harddisk or your genitals, depending on my mood and the phase of the moon.

When generating full difference reports on large files you will need quite a lot of free memory. Doing simple compares only requires around 100k of free RAM.

Apart from that there are no unusual requirements. If you have any problems running it on your system, please contact me and I will do my best to help out, or write to the Directory Opus 5 mailing list.

1.4 compare.module: introduction

Introduction:

Have you ever had two files which look the same and wondered if they really are the same? Then compare.module may be useful.

Given two files, compare.module looks at every byte of them and tells you how many are different. You can also get it to show you the parts of the files which are different so you can see exactly what has changed.

Because it is specially written for Directory Opus 5.5 it is extremely easy to install and use, and you also get bonuses like a standard progress bar while it works.

1.5 compare.module: installation

Installation:

Use the supplied Installer script, it won't bite.

To install by hand, simply copy the file compare.module to DOpus5:modules, and compare.module.guide to DOpus5:help. Although you probably won't have to, you may need to reboot or restart Opus for the module to be activated.

If you don't want to use the built-in English strings and a catalog exists for your preferred language, copy the appropriate directory from catalogs/ to DOpus5:catalogs/.

1.6 compare.module: setting up

Setting Up

Once installed, this module adds a command called Compare to Opus.

The Compare command will now be shown in the pop-up list of commands with all the other internal commands of Opus.

You should setup a function in a button bank or lister toolbar/menu which just runs the Compare command. You can drag'n'drop exactly the button you need from the example button bank which comes with compare.module in the archive (the Installer script will have asked you if you want it or not and given you further instructions).

1.7 compare.module: arguments

Arguments:

The Compare command installed by the module only has the following arguments:

BUFSIZE (OPTIONAL KEYWORD)

This keyword allows you to specify the size, in bytes, of each of the two buffers used during comparison. If you do not give the argument a default size of 30k will be used (i.e. 60k in total).

For example, `compare BUFSIZE 512000` to use two 1/2 meg buffers.

NOSIZEWARN (OPTIONAL SWITCH)

If you give this switch you will not be shown a warning requester before comparing two files which are not the same size.

For example, `compare nosizewarn` or `compare bufsize 10240 nosizewarn` .

1.8 compare.module: usage

Usage:

To do its work, compare.module needs to know which files you want to compare. When you execute your function which runs the Compare command the module will:-

- o compare the first two files which are selected in the source lister, or,
- o if there is only one file selected in the source lister it will compare it with the first file selected in the destination lister.

If you haven't selected enough files it will abort.

Note that if you launch the Compare command from a lister's toolbar, that

lister is considered the 'source' lister, even if it is not really a source lister. (This is a good thing, not a bad thing!)

Also note that selected directories in both source and destination listers are completely ignored.

You can compare two files of different length, but the comparison will stop at the end of the shortest file. You will be warned about this before the comparison starts if you choose two such files, unless you use the

NOSIZEWARN argument

Progress!

Once it has worked out which files are to be compared, a progress window will open showing you which files are being compared, how much of them has been done, and how many differences have been found so far.

The Abort Button

Press the abort button at any stage if you do not want the operation to continue.

Speed

The comparison algorithm is quite simple and should be reasonably fast, but if there are a lot of differences in certain patterns the time taken to perform the comparison can grow quite considerably. Of course, if there are thousands of differences between the two files you are comparing, it is unlikely that you'll want to see a full report of them (see below) and your question of "are they really the same" has already been answered, so you might as well abort the operation.

Full Reports

Once the comparison has finished you will be told the total number of differences, and, if there were any, you will have the option of generating a full report.

When knowing how many differences there are between two files isn't enough, generating a full report is the answer. Looking at a full report is similar to looking at a Hex/ASCII dump of a file (e.g. using the Opus HexRead command) except that there are two files shown in parallel and the differences between them are colour coded. Also, only those parts of the file where differences occur are shown -- large portions of identical data are skipped.

Have a look at the

example full report
to see for yourself.

When you choose to generate a full report a new progress window will open. During the comparison the files were split-up into chunks depending on where the differences were, and the progress bar only gets updated after each chunk is processed. Full reports can also be several times the size of the original files. Because of these factors, if there are few

similarities between the two files the progress bar may appear to be 'stuck' for several seconds. Don't worry, it hasn't crashed and it will continue.

Memory

Also, since the full reports are generated in T: and then read into memory a second time by the Opus text reader, you may require a very large amount of memory to create them for very large files or files with a large number of differences. This behaviour can be changed to some extent if there is anyone out there who would like it, but I have assumed that most people won't be interested in seeing all 2 million (literally) differences between the original Aminet INDEX and an encrypted version or anything like that, because, frankly, it's not very interesting or useful.

In general, you do not need large amounts of memory when you are just comparing two files, no matter how big they are -- it's only full reports which are the beasts. If you run out of memory while a full report is being generated the operation should abort gracefully and free all memory which it was using.

1.9 compare.module: history

History:

- ```

```
- v1.0 -- 27/Sep/1996
    - o Initial release.
  
  - v1.1 -- 03/Oct/1996
    - o Side-by-side
      - full report
      - Hex/ASCII dump of differences implimented.
    - o Can now compare files of different length.
    - o Unbusies the destination lister, if any, during the comparison so that you are free to use it. (I really hate it when listers are left busy when they're not really doing anything as it always seems to happen to the lister I was about to use as soon as I had started what I was about to do first... grr.)
    - o Major source code cleanup.
    - o Catalog strings have changed. (Shouldn't cause any problems because there have been no translations yet, but just in case, now you know.)
  
  - v1.2 -- 14/Oct/1996
    - o Removed a potential problem from v1.1 where Opus would crash if you closed (or used for certain tasks) the destination lister before the comparison was completed. Totally my fault, BTW.
    - o German language catalog now included & installed by Installer script. Huge thanks to Georg Rottlaender for the translations.
    - o Now ignores selected directories in destination listers.
    - o You can now
      - specify the buffer size
  
  - o If you change the icon image/snapshot/tooltypes for this AmigaGuide you no longer have to worry about the Installer script overwriting it.
-

- o I have
  - plans
  - for a special ASCII-compare mode.
- o You can now disable the warning requester shown before you compare two files of different size by giving the NOSIZEWARN argument

## 1.10 compare.module: the future

The Future of compare:

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At some point I plan to add a 'diff'-style algorithm for comparing ASCII files which will be able to tell you which lines need adding, removing, and changing.

Adaptive buffer-size code has also been thought of, although I don't have a clue how to do it and I'm not sure how much of a difference it would make.

I don't really have more plans for new features, but if there is something you don't like or something you would like to see added, please let me know and I'll consider adding it. Optionally writting full reports to a temp directory on the harddrive instead of to T: is something I'd be happy to add if anyone out there wants it.

More modules?

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As well as many other add-ons for Opus including numerous ARexx scripts, the wonderfully simply yet extremely useful (IMO) CDOpus (in Assembler), the very-nice-indeedy (IMO) hotlist.module (in C), I have also contributed to the creation of the MagicWorkbench-DOpus icon set (Trevor Morris deserves as much if not more credit, although I did initiate the project), and an AmigaGuide to the ARexx commands of Directory Opus. I also wrote about half a page of the manual to Opus 5.5 and have myself hidden somewhere in Opus itself. :-) Yes, I'm Opus obsessed and possessed. I still manage to have something of a life. Well, you have to eat, don't you? It sure does beat writting /X BBS utilities, at any rate.

Among other things I want to write the final-be-all-and-end-all xpk.module for Opus, basically taking my most recent attempt (DOpusPack or whatever I called it) and making it perfect, which I can finally do now that the OpusSDK is here. I'll probably include xfddecrunch.library support too, for the hell of it. Finding the time is going to be a problem though. :-)

After that I may dissolve a few small ARexx scripts (and DOpusFuncs) into a 'C' module, and then maybe write a beavis.module who follows the mouse pointer with his eyes, speaks randomly, and moves his mouth when he speaks.

## 1.11 compare.module: source code & updates

Source code & Updates

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The source code (SAS/C) should be available in a separate archive from the same place you found the main archive in which this guide came from.

You should be able to find it on the GPSoftware web page in the Opus 5 section under Support.

<http://www.livewire.com.au/gpsoft/index.html>

You should also be able to find it on Aminet in biz/dopus.

...and it's likely that my Web Page will also point to the files in my own Opus 5 section:

<http://users.ox.ac.uk/~kebl0364>

Updates of this and other Opus-related things done by myself should turn up in the same places, although MWB\_DOpus will be in pix/mwb on Aminet, not biz/dopus.

## 1.12 compare.module: credits

Credits

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Written by Leo 'Nudel' Davidson  
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<http://users.ox.ac.uk/~kebl0364>

Please mail me if you find any bugs, or have any ideas for new features.

Many thanks are due to Nick Christie, Jonathan Potter, and Greg Perry for their advice, examples, and general help beyond the call of duty.

Thanks guys!

Directory Opus 5 developed by Jonathan Potter and GPSoftware.  
 Please support this amazing piece of software and the equally amazing creators by purchasing it.

Additional ideas, support, and advice

-----

Dave Clarke  
 Georg Rottlaender (German catalog)  
 Martin Steigerwald  
 Ahmed's Kebab Van, Oxford & Ali's Kebeb Van, Oxford.  
 (The 'Babylonian Army of Babshit will kick your arse!')

Recent musical support (in alphabetical)

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Bjork (Debut/Post),  
 BT (Ima) This is amazing!,

Corrosion Of Conformity (Wiseblood),  
Flotsam & Jetsam (Drift),  
Fugees (The Score) "I'll be right out...",  
Jamiroquai (Travelling Without Moving),  
Metallica (Load),  
Nine Inch Nails (Pretty Hate Machine/Quake),  
Nirvana (In Utero/Unplugged),  
Rage Against The Machine (Evil Empire),  
The Prodigy (Experience/Music For The Gilted Generation),  
Tool (Opiate/Undertow).

This guide was tested with  
CheckGuide  
1.0 by Eddy Carroll  
No "AmigaGuide editors" were used. IMO they're as much use as HTML editors.

My setup:

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A500, 68000, 1/4 meg chip/fast, 300mb of harddrives, OS3.1  
A1200, 68030 50mhz FPU MMU, 2/8 meg chip/fast, one 810mb harddrive, OS3.0  
(And a bloody nice Wizard Developments 3-button mouse sitting on a  
tasteless Hamburger mouse mat!) + an XLink 28.8k Fax/Modem.  
(And another A500 which doesn't work very well anymore...)

Ego-Ramblings...

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I run DOpus5 in workbench replacement mode (please not you don't HAVE to)  
on a 64 colour workbench using the dark MWB palette and Pal: Hires,  
720 \* 282 (overscan). One day I'll have a seventy-eight inch monitor  
which can sync down to lhz. One day, just after I take over the world.  
My current backdrop picture is of Babylon 5 :-)

MCP does almost all of my system enhancing -- it rulez.

I'm a registered MUI user and I think anyone who doesn't like MUI needs  
their head examining, or maybe they should stop using a 68000-based  
machine. Not that I really want to start this war yet again, but even  
if you ignore how amazing you can make a MUI look (which is a  
quarter of the reason I like it), I have yet to see any other GUI  
engine produce anything which impressed me, and I doubt that a GUI  
written with anything else which was as complex as the average MUI  
and which worked as well would take less time to load. As for  
redraw/refresh times, I don't know what the anti-MUI people are  
talking about, and, to be honest, I don't think they do either. :-)  
(Sorry, I just couldn't resist it.) That isn't to say I think  
everything should be written with MUI -- for some tasks it is  
overkill, IMO. There are also several extremely good programs which use  
'other evil GUI engines', although I'd rather they used MUI :-).

I'm also a registered Thor user and I like Thor a lot, although I do  
recognise its faults. It's certainly not the perfect emailer, but it's  
extremely good at the same time, and it's my choice.

I still use CygnusEd for editing. It's getting old now and I'd like to  
use something really flash like GoldEd, but only when and if it supports  
REAL TABS (dream, dream) and irons out a couple of really quirky things  
about how it works. I have to respect GoldEd and its author, even if I

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```

J000 ¶00000Ñw¶Ç$ \mathrm{\mu}$E000000@5æE0#w \ensuremath{\l
lnot}000
a00# _ \ensuremath{\lnot}¶0#¶15æ000000P" ¶00000Ñ #00L
000F _aE0m_ _$ \mathrm{\mu}$æ000000Ñ\textdegree{}- \ ←
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000000m E00#
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"\textdegree{}¶Ñ000000000#@ \textdegree{}" You know ←
it makes sense.

```

## 1.13 CheckGuide by Eddy Carroll

CheckGuide 1.0 -- Checks AmigaGuide files for common errors

by Eddy Carroll, September 1994. Freely distributable.

### Introduction

If you've ever tried creating even a modestly sized AmigaGuide file by hand, you'll have discovered that it can be quite difficult to keep track of all the various links and cross references. As your help file gets larger, it gets increasingly harder to ensure that you have remembered to reference all the nodes in the file from at least one place, and haven't left any unresolved links.

CheckGuide is a simple utility that can detect several common errors in AmigaGuide files. The errors it can detect are:

- Extra plain text between an ENDNODE and NODE (AmigaGuide won't allow such text to ever be displayed)
- Nodes that are defined but not referenced from any other node. Unless your program directly instructs AmigaGuide to access such nodes, the user won't easily be able to access them.
- Links to help nodes that aren't defined within the file.

- Open braces with no preceding @ character (usually a simple typo).
- @{" Button "} constructs with no LINK command (an easy mistake to make if you're entering a lot of them).

All of these options can be selectively enabled or disabled.

CheckGuide was used in the creation of THIS document!

## 1.14 Purchasing Directory Opus 5.5

### Purchasing Directory Opus 5.5

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Directory Opus 5.5 can be ordered direct from GPSoftware, or from one of the distributors listed below.

If you already own a previous version of Directory Opus you may be able to upgrade to version 5.5 for a reduced fee.

For further information about Directory Opus 5.5 and purchasing, please mail Greg Perry <zzgperry@mailbox.uq.oz.au> or check the GPSoftware Web Page <<http://www.livewire.com.au/gpsoft/>>.

Please note that France-Festival-Distribution (FFD) no longer distribute any GPSoftware products. Read this  
press release  
for further details.

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## 1.15 Official Notice From GPSoftware: FFD

GPSoftware French Distribution - France-Festival-Distribution  
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After recent actions by FFD, we have officially withdrawn all of our products and licences from FFD and refuse to let them ever be associated with any of our products again. I have advised all of my other distributors that they may not supply FFD with any of our products. Further, being the copyright holder of trademarks, product names and other copyrights for our products, we officially withdraw permission for FFD or any associated company to use the name Directory Opus, GPFax, or GPSoftware in any advertising or related activities.

Because of unreconciled differences, FFD is no longer a distributor or reseller of GPSoftware products and GPSoftware will no longer honour warranty or support for any of our products purchased from FDD after 30th June 1996.

Dr Greg Perry, GPSoftware 11th September 1996

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