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Subject: Curious FindFile behavior

Posted by [lesht](#) on Wed, 25 Nov 1998 08:00:00 GMT

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I'm running IDL5.1 on an SGI (IRIX6.2). I'm using FindFile to create an array of data filenames that I can pass to some processing code. There are (as it turns out) 515 files in the directory I'm searching. The filenames are all of the form xxxxxxxx.xx.yymmdd.hhmmss.cdf. I get the following from FindFile-

```
IDL> files=FindFile('*.*', COUNT=nf)
IDL> PRINT, nf
      0
IDL> files=FindFile('*.cdf', COUNT=nf)
IDL> PRINT, nf
      0
IDL> files=FindFile('*98*.cdf', COUNT=nf)
IDL> PRINT, nf
      0
IDL> files=FindFile('*980*.cdf', COUNT=nf)
IDL> PRINT, nf
     425
IDL> files=FindFile('*981*.cdf', COUNT=nf)
IDL> PRINT, nf
      90
```

I don't see why cases 2 and (especially) 3 didn't result in nf=515. Can anyone explain this? Thanks.

Barry Lesht  
bmlesht@anl.gov

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Subject: Re: Curious FindFile behavior

Posted by [mallors](#) on Thu, 26 Nov 1998 08:00:00 GMT

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In article <73holl\$fts@milo.mcs.anl.gov>,

lesht@ANLER.ER.ANL.GOV (Barry Lesht) writes:

```
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> an array of data filenames that I can pass to some processing code.
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> IDL> PRINT, nf
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> IDL> files=FindFile('*981*.cdf', COUNT=nf)
> IDL> PRINT, nf
>      90
>
> I don't see why cases 2 and (especially) 3 didn't result in nf=515.
> Can anyone explain this? Thanks.
```

This problem should really be addressed by RSI. What is happening, I believe, is that FINDFILE is spawning a shell to get the file list via something like "ls". However, the shell has limits on the byte length of command line arguments - for long lists, the command will fail. RSI should really be using another UNIX tool meant for this job - that is the "find" command. See the UNIX man pages exec(2), find(1), xargs(1) for more info.

I have a program FINDFILES on my web page that should work for you, and also "fixes" searching for files recursively. See <http://cspar.uah.edu/~mallozzir/idl/idl.html>

--

```
~~~~~
Robert S. Mallozzi                                256-544-0887
                                                Mail Code ES 84
Work: http://www.batse.msfc.nasa.gov/    Marshall Space Flight Center
Play: http://cspar.uah.edu/~mallozzir/    Huntsville, AL 35812
~~~~~
```

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Subject: Re: Curious FindFile behavior  
Posted by [Nigel Wade](#) on Thu, 26 Nov 1998 08:00:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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Barry Lesht wrote:  
:> I'm running IDL5.1 on an SGI (IRIX6.2). I'm using FindFile to create  
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> I don't see why cases 2 and (especially) 3 didn't result in nf=515.
> Can anyone explain this? Thanks.
>
> Barry Lesht
> bmlesht@anl.gov
```

We had a problem on our system when the filesystem holding /tmp was short of room.

I discovered that findfile was creating a temporary file in /tmp containing the matched filenames. When this list was large and file filesystem containing /tmp didn't have room to hold it a truncated list of filenames was returned. There was no error indication. The number of matched files also varied with how much space was available in /tmp.

Have a look and see how much space is left in /tmp.

Or was it /var/tmp? Now I'm not sure which it was...

Check both, it was one of the two.

--

-----  
Nigel Wade, System Administrator, Space Plasma Physics Group,  
University of Leicester, Leicester, LE1 7RH, UK

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Phone : +44 (0)116 2523568, Fax : +44 (0)116 2523555

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Subject: Re: Curious FindFile behavior  
Posted by [Martin Schultz](#) on Fri, 27 Nov 1998 08:00:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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Barry Lesht wrote:

```
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> an array of data filenames that I can pass to some processing code.
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> IDL> PRINT, nf
>      0
> [...]
>
> I don't see why cases 2 and (especially) 3 didn't result in nf=515.
> Can anyone explain this? Thanks.
>
> Barry Lesht
> bmlesht@anl.gov
```

Yup,

this seems to be an SGI related problem. I have never heard of other machines with this behaviour. I had once contacted RSI about a similar problem, and they replied it may have to do with the shell expansion (in my case I was getting into trouble using '~' identifiers even in small directories). It would probbaly help if you could forward this bug report to RSI -- maybe they will fix it at some point...

Please find below a third variant of a routine that has been designed to overcome the problem you posted,

Regards,  
Martin.

--

-----  
Dr. Martin Schultz  
Department for Engineering&Applied Sciences, Harvard University  
109 Pierce Hall, 29 Oxford St., Cambridge, MA-02138, USA

phone: (617)-496-8318

fax : (617)-495-4551

e-mail: mgs@io.harvard.edu

Internet-homepage: <http://www-as.harvard.edu/people/staff/mgs/>

```
-----  
; $Id: mfindfile.pro,v 1.1 1998/10/09 19:53:32 mgs Exp $  
;-----  
;+  
; NAME:  
;   MFINDFILE  
;  
; PURPOSE:  
;   find all the files that match a given specification.  
;   On our system, the IDL findfile function does not  
;   work correctly!!  
;  
; CATEGORY:  
;   System routines  
;  
; CALLING SEQUENCE:  
;   listing = MFINDFILE(filemask)  
;  
; INPUTS:  
;   FILEMASK -> a path and filename specification to look  
;   for.  
;  
; KEYWORD PARAMETERS:  
;   none  
;  
; OUTPUTS:  
;   A string list containing all the files that match the  
;   specification.  
;  
; SUBROUTINES:  
;  
; REQUIREMENTS:  
;  
; NOTES:  
;   Spawns a unix ls -l command !  
;  
; EXAMPLE:  
;   list = mfindfile('~mgs/terra/chem1d/code/*.f')  
;  
;   ; returns all fortran files in Martin's chem1d directory.
```

```
;
;
; MODIFICATION HISTORY:
;   mgs, 14 Sep 1998: VERSION 1.00
;
;
;
;
;
; Copyright (C) 1998, Martin Schultz, Harvard University
; This software is provided as is without any warranty
; whatsoever. It may be freely used, copied or distributed
; for non-commercial purposes. This copyright notice must be
; kept with any copy of this software. If this software shall
; be used commercially or sold as part of a larger package,
; please contact the author to arrange payment.
; Bugs and comments should be directed to mgs@io.harvard.edu
; with subject "IDL routine mfindfile"
;-----
```

```
function mfindfile,mask
```

```
    if (!version.os_family eq 'unix') then begin
        ; make my own findfile

        path = extract_path(mask,filename=fname)
        path = expand_path(path)
        newpath = path+fname

;   print,'fname:',fname,' path:',path,' newpath:',newpath

        command = 'ls -l'
        cstr = command+' '+newpath
        spawn,cstr,listing

        return,listing

    endif else begin      ; other OS - use IDL's original

        return,findfile(mask)

    endelse

end
```

## File Attachments

1) [mfindfile.pro](#), downloaded 117 times

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