Subject: Re: Jpeg in a .sav file
Posted by David Fanning on Thu, 13 Mar 2008 17:33:50 GMT
View Forum Message <> Reply to Message

Dan Larson writes:

> I am trying to put a jpeg into a .sav file for distribution. I know
> that variables and routines cannot be in the same .sav file, and I
> know this issue has been addressed over the years in this forum. BUT,
> most of the posts I found were quite old (1996, 1998), and I was
> wondering if newer versions of IDL have somehow corrected this problem
> or if there is a fix of which I am not aware.

You must be thinking of a zip file. What would a JPEG file even look like in the context of an IDL session? A JPEG file is something that exists on disk. It has nothing to do with IDL. If you read a JPEG file off the disk in IDL, of course, you have an image. You could certainly save an image in a save file.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Jpeg in a .sav file
Posted by Rick Towler on Thu, 13 Mar 2008 20:16:47 GMT
View Forum Message <> Reply to Message

Well, maybe he wants to embed an emblem or logo in a .sav file. Something a bit more "professional" than simply distributing a separate file. I mean, *anyone* can do that!

The trick is encoding the image into a function. Like so:

http://www.acoustics.washington.edu/~towler/programs/make_im ageFunction.pro

Like the header says, there are I'm sure a load of issues you could run into. I've used this on a number of smaller images and it works but I would expect this to fail with even "medium" resolution images. Also you'll want to tweak this a bit as I was working with .png files.

Enjoy!

-Rick

David Fanning wrote:
> Dan Larson writes:
>
>> I am trying to put a jpeg into a .sav file for distribution. I know
>> that variables and routines cannot be in the same .sav file, and I
>> know this issue has been addressed over the years in this forum. BUT,
>> most of the posts I found were quite old (1996, 1998), and I was
>> wondering if newer versions of IDL have somehow corrected this problem
>> or if there is a fix of which I am not aware.
>
> You must be thinking of a zip file. What would a
> JPEG file even look like in the context of an IDL
> session? A JPEG file is something that exists on
> disk. It has nothing to do with IDL. If you read
> a JPEG file off the disk in IDL, of course, you
> have an image. You could certainly save an image
> in a save file.
>
> Cheers,
>
> David

Subject: Re: Jpeg in a .sav file
Posted by mmiller3 on Thu, 13 Mar 2008 20:37:18 GMT
View Forum Message <> Reply to Message

>>>> > "Rick" == Rick Towler <rick.towler@nomail.noaa.gov> writes:

> The trick is encoding the image into a function. Like so:

> http://www.acoustics.washington.edu/~towler/programs/make_im ageFunction.pro

Nice one Rick - I've done a similar thing for widget bitmaps.
Probably it was originally based on something I saw from you or
someone else on this newsgroup, but I was bad and did not comment
my code.

Mike

pro bmp_to_function, bmp_file, function_name

```
print, 'reading bitmap from ', bmp_file

test = query_bmp(bmp_file, info)
case info.channels of
  3: begin
    ;; 3 channel bit map, so use it as is...
    bmp = read_bmp(bmp_file)
    result = bytarr(info.dimensions[0], info.dimensions[0], 3)
    result[*,*,0] = bmp[0,*,*]
    result[*,*,1] = bmp[1,*,*]
    result[*,*,2] = bmp[2,*,*]
  end
  1: begin
    ;; single channel bit map ==> use RGB colors
    bmp = read_bmp(bmp_file, R, G, B)
    result = [[[R[bmp]]], [[G[bmp]]], [[B[bmp]]]]
  end
endcase

print, 'writing function ', function_name, ' to ', function_name+'.pro'
openw, lun, function_name+'.pro', /get_lun
printf, lun, 'function ' + function_name
printf, lun, 'bmp = bytarr(' + strtrim(info.dimensions[0],2) + ',' + strtrim(info.dimensions[1],2) + ',3)'
for x = 0, info.dimensions[0]-1 do begin
  for y = 0, info.dimensions[1]-1 do begin
    for c = 0, 2 do begin
      printf, lun, 'bmp[' + strtrim(x,2) + ','+ strtrim(y,2) + ','+ strtrim(c,2) + '] = ' +
strtrim(fix(result[x,y,c]),2)
    endfor
  endfor
endfor
printf, lun, 'return, bmp'
printf, lun, 'end'
free_lun, lun

end
```

Subject: Re: Jpeg in a .sav file
Posted by David Fanning on Thu, 13 Mar 2008 20:53:45 GMT
View Forum Message <> Reply to Message

Rick Towler writes:

> Well, maybe he wants to embed an emblem or logo in a .sav file.
> Something a bit more "professional" than simply distributing a separate
> file. I mean, *anyone* can do that!
>

> The trick is encoding the image into a function. Like so:
>
> http://www.acoustics.washington.edu/~towler/programs/make_im ageFunction.pro
>
> Like the header says, there are I'm sure a load of issues you could run
> into. I've used this on a number of smaller images and it works but I
> would expect this to fail with even "medium" resolution images. Also
> you'll want to tweak this a bit as I was working with .png files.

Well, I'm sure this has a use somewhere. I'm not sure "professional"
is the word I would use to describe it, though. "Rube Goldberg
solution" comes to mind. ;-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Jpeg in a .sav file
Posted by Dan Larson on Thu, 13 Mar 2008 21:05:35 GMT
View Forum Message <> Reply to Message

On Mar 13, 4:53 pm, David Fanning <n...@dfanning.com> wrote:
> Rick Towler writes:
>> Well, maybe he wants to embed an emblem or logo in a .sav file.
>> Something a bit more "professional" than simply distributing a separate
>> file. I mean, *anyone* can do that!
>
>> The trick is encoding the image into a function. Like so:
>
>> http://www.acoustics.washington.edu/~towler/programs/make_im ageFuncti...
>
>> Like the header says, there are I'm sure a load of issues you could run
>> into. I've used this on a number of smaller images and it works but I
>> would expect this to fail with even "medium" resolution images. Also
>> you'll want to tweak this a bit as I was working with .png files.
>
> Well, I'm sure this has a use somewhere. I'm not sure "professional"
> is the word I would use to describe it, though. "Rube Goldberg
> solution" comes to mind. ;-)
>
> Cheers,
>

> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming (www.dfanning.com)
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi -

Rick is correct -- I wanted the image to be embedded, not simply included as a separate file which can be deleted, moved, etc. And the Rube Goldberg methods seems to be the only option available. So i have hard-coded the image, similar to what was suggested. But am I missing something here, in terms of IDL design? Is there some philosophical reason why one *shouldn't* want to include an embedded image in a .sav file?

thanks for the input.

dan

Subject: Re: Jpeg in a .sav file
Posted by David Fanning on Thu, 13 Mar 2008 22:24:04 GMT
View Forum Message <> Reply to Message

Dan Larson writes:

> Is there some
> philosophical reason why one *shouldn't* want to include an embedded
> image in a .sav file?

Well, I guess in this sense PostSript files are carrying around "embedded" images. So, if you don't mind the size of those, a bloated save file is not going to make much difference to you.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Jpeg in a .sav file
Posted by Rick Towler on Fri, 14 Mar 2008 00:05:34 GMT
View Forum Message <> Reply to Message

Dan Larson wrote:

> am I missing something here, in terms of IDL design? Is there some
> philosophical reason why one *shouldn't* want to include an embedded
> image in a .sav file?

No. I can't see any philosophical reason why and there are no general technical reasons why one couldn't do this. I can't think of any specific technical hurdles for IDL except that it would (probably) require a change to the .sav file format breaking forward compatibility.

There are certainly cases where this would be useful. Embedding logos or icons is one, or LUT's or... Sometimes you want to distribute an application with data that is not accessible to the user so packaging them with image files or .dat files or even other .sav files isn't ideal. Though without further changes to the .sav file format data stored in a "hybrid" format wouldn't be protected whereas now at least the data is obfuscated inside a function.

I doubt any of the reasons would justify breaking forward compatibility. For the 10 users ITT makes happy, there will be hundreds bent that they can no longer load IDL 8 .sav files in their older versions. So I think that variations on the hack I posted are going to be the only route, for now.

-Rick