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Subject: Writing mpeg from IDL  
Posted by [esmith](#) on Tue, 12 Nov 1996 08:00:00 GMT  
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Several weeks ago someone posted an IDL procedure to write MPEG movie files which I saved and attempted to run. The output files of this procedure are not recognized by the UNIX mpeg\_encode program which may be related to the fact that I do not have the subroutine PSEUDO\_TO\_TRUE. Unfortunately, in saving the file I truncated the poster's name and cannot contact him/her directly. Does anyone have the full post or the subroutine PSEUDO\_TO\_TRUE? Thanks in advance.

--  
Eric P. Smith      Laboratory for Astronomy & Solar Physics  
Code 681            [esmith@hubble.gsfc.nasa.gov](mailto:esmith@hubble.gsfc.nasa.gov)  
NASA/GSFC          [ericsmith@uit.gsfc.nasa.gov](mailto:ericsmith@uit.gsfc.nasa.gov)  
Greenbelt, MD 20771      (301)-286-8549

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Subject: Re: Writing mpeg from IDL  
Posted by [Robert.M.Candey](#) on Tue, 12 Nov 1996 08:00:00 GMT  
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In article <[esmith-1211961607150001@news.gsfc.nasa.gov](mailto:esmith-1211961607150001@news.gsfc.nasa.gov)>, [esmith@hubble.gsfc.nasa.gov](mailto:esmith@hubble.gsfc.nasa.gov) (Eric P. Smith) wrote:

> Several weeks ago someone posted an IDL procedure to write MPEG movie  
> files which I saved and attempted to run. The output files of this  
> procedure are not recognized by the UNIX mpeg\_encode program which may be  
> related to the fact that I do not have the subroutine PSEUDO\_TO\_TRUE.  
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> Eric P. Smith      Laboratory for Astronomy & Solar Physics  
> Code 681            [esmith@hubble.gsfc.nasa.gov](mailto:esmith@hubble.gsfc.nasa.gov)  
> NASA/GSFC          [ericsmith@uit.gsfc.nasa.gov](mailto:ericsmith@uit.gsfc.nasa.gov)  
> Greenbelt, MD 20771      (301)-286-8549

Eric, here is the post. Let me know how it works since I want to something similar. Bobby

From: [scott@abyss.ATMOS.ColoState.Edu](mailto:scott@abyss.ATMOS.ColoState.Edu) (Scott Denning)  
Newsgroups: [comp.lang.idl-pvwave](#)  
Subject: Re: MPEG creation with IDL  
Date: 18 Jan 1996 21:45:16 GMT  
Organization: Colorado State University, Fort Collins, CO 80523

Lines: 90

Message-ID: <4dmf1c\$1j9i@yuma.ACNS.ColoState.EDU>

References: <JACOBSEN.96Jan18065620@xray1.physics.sunysb.edu>

Reply-To: scott@abyss.ATMOS.ColoState.Edu (Scott Denning)

NNTP-Posting-Host: abyss.atmos.colostate.edu

The following idl procedure will produce an mpeg file from a series of images stored in a 3D array (width x height x # of frames). It requires the "mpeg\_encode" executable to be in the unix search path. This can be obtained from <ftp://s2k-ftp.cs.berkeley.edu/pub/multimedia/mpeg/encode>.

There are lots of options that can be handled differently, to make tradeoffs between image quality, speed, and disk space. See the documentation for mpeg\_encode for more details.

If your animation is stored in the array "image\_array" and you want to write it to a file called "movie.mpg," you would do so by typing

```
WRITE_MPEG, 'movie.mpg', image_array
```

Best of luck!

--

A. Scott Denning

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===== C U T H E R E =====

```
PRO WRITE_MPEG, mpegFileName, image_array
```

```
movieSize = SIZE(image_array)
```

```
xSize = movieSize(1)
```

```
ySize = movieSize(2)
```

```
nFrames = movieSize(3)
```

```
nDigits = 1+FIX(ALOG10(nFrames))
```

```
formatString = STRCOMPRESS('(i'+STRING(nDigits)+'.'+STRING(nDigits)$  
+      ' '), /REMOVE_ALL)
```

```
; Load current color table into byte arrays
```

```
TVLCT, red, green, blue, /GET
```

```
red = BYTE(red)
```

```
green = BYTE(green)
```

```
blue = BYTE(blue)
```

```
ON_IOERROR, badWrite
```

```

; Make a temporary directory if necessary or clear it otherwise'
TMPDIR = '/tmp/idl2mpeg.frames'
SPAWN, 'if (-d ' + TMPDIR + ') echo "exists"', result
dirExists = result(0) EQ 'exists'
IF dirExists THEN command = 'rm ' + TMPDIR + '/*' $
ELSE command = 'mkdir ' + TMPDIR
SPAWN, command

; Write each frame into TMPDIR as an 8-bit .gif image file
FOR frameNum = 0, nFrames-1 DO BEGIN
    fileName = TMPDIR + '/frame.' + STRING(frameNum,FORMAT=formatString)$
        + '.gif'
    WRITE_GIF, fileName, image_array(*,*,frameNum), red, green, blue
ENDFOR

; Build the mpeg parameter file
paramFile = TMPDIR + '/idl2mpeg.params'
OPENW, unit, paramFile, /GET_LUN
PRINTF, unit, 'PATTERN      IBBBBBBBBBBBP'
PRINTF, unit, 'OUTPUT      ' + mpegFileName
PRINTF, unit, 'GOP_SIZE 12'
PRINTF, unit, 'SLICES_PER_FRAME 5'
PRINTF, unit, 'BASE_FILE_FORMAT PPM'
PRINTF, unit, 'INPUT_CONVERT  giftoppm *'
PRINTF, unit, 'INPUT_DIR    /tmp/idl2mpeg.frames'
PRINTF, unit, 'INPUT'
PRINTF, unit, 'ls *.gif'
PRINTF, unit, 'END_INPUT'
PRINTF, unit, 'PIXEL      FULL'
PRINTF, unit, 'RANGE      5'
PRINTF, unit, 'PSEARCH_ALG    LOGARITHMIC'
PRINTF, unit, 'BSEARCH_ALG    SIMPLE'
PRINTF, unit, 'IQSCALE      8'
PRINTF, unit, 'PQSCALE      8'
PRINTF, unit, 'BQSCALE      8'
PRINTF, unit, 'REFERENCE_FRAME DECODED'
PRINTF, unit, 'FORCE_ENCODE_LAST_FRAME'
FREE_LUN, unit

; spawn a shell to process the mpeg_encode command
SPAWN, 'mpeg_encode ' + paramFile

RETURN

badWrite:
alert, 'Unable to write MPEG file!'

END

```

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Subject: Re: Writing mpeg from IDL  
Posted by [dwu](#) on Tue, 12 Nov 1996 08:00:00 GMT  
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Please repost the procedure to write MPEG movie files.  
Thanks.

Eric P. Smith ([esmith@hubble.gsfc.nasa.gov](mailto:esmith@hubble.gsfc.nasa.gov)) wrote:  
: Several weeks ago someone posted an IDL procedure to write MPEG movie  
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: --  
: Eric P. Smith      Laboratory for Astronomy & Solar Physics  
: Code 681            [esmith@hubble.gsfc.nasa.gov](mailto:esmith@hubble.gsfc.nasa.gov)  
: NASA/GSFC           [ericsmith@uit.gsfc.nasa.gov](mailto:ericsmith@uit.gsfc.nasa.gov)  
: Greenbelt,MD 20771      (301)-286-8549

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Subject: Re: Writing mpeg from IDL  
Posted by [Sereno A. Barr-Kumara](#) on Thu, 14 Nov 1996 08:00:00 GMT  
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I have seen a recent post else where about a freeware Package called  
Plot Plus. The web page  
<http://www.halcyon.com/www2/dwd/>  
has the following blurb

#### Plot Plus Features

Multiple output devices supported:

- X-windows

- PostScript

- GIF

- MPEG animation files

- hdf animation files

Powerful and flexible scripting language

Multiple input formats supported

- ASCII

- binary

- netCDF

Integrated with nccalc for netCDF reading, writing, and

calculations

MPEG animations generated using a modified version of the  
Berkeley MPEG-1 Software

Encoder

Data display options include:

x-y line plot

contour plot

color area fill

Map projections supported:

Mercator

Polar Stereographic

Peters Projection

Linear, Log, and Time axes

Over 30 built in fonts

Colored labels, plot lines, and contour lines

The web page has links to sites that have used the graphics

Links to Web sites that use Plot Plus

NOAA/PMEL EPIC analysis programs:

CTD data

Time Series data

Acoustic Doppler Current Profiler (ADCP) data

NOAA/PMEL TAO program

TAO real-time data display

TAO Display Software System

Other Web Sites using EPIC/PPLUS

JAMSTEC Ocean model simulation home page

PPLUS at Seoul National University

Seem like a decent solution to Web implementations where multiple  
licences would be needed.

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