
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>, 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.
> 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.

>

> --

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

From: 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

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

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

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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!

--

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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
```
