
Subject: Re: MPEG creation with IDL

Posted by [scott](#) on Thu, 18 Jan 1996 08:00:00 GMT

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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

```
