
Subject: Re: mpeg movies from Wave
Posted by [Christian Soeller](#) on Tue, 11 Feb 1997 08:00:00 GMT
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Included is an IDL routine that does what you wants (you have to check if it runs without modifications under wave). It uses mpeg_encode to do the actual encoding. The doc gives information on how to get it.

Cheers,

Christian

FUNCTION pseudo_to_true, image8

```
s = SIZE(image8)
IF s(0) NE 2 THEN BEGIN
  MESSAGE, 'input array must be 2D BYTE array.'
  RETURN, -1
ENDIF
```

```
width = s(1)
height = s(2)
```

```
; Load current color table into byte arrays
TVLCT, red, green, blue, /GET
```

```
image24 = BYTARR(3,width, height)
image24(0,*,*) = red(image8(*, *))
image24(1,*,*) = green(image8(*, *))
image24(2,*,*) = blue(image8(*, *))
```

```
RETURN, image24
```

```
END
```

```
PRO WRITE_MPEG, mpegFileName, image_array, delaft=delaft, rep=rep
```

```
:+
; NAME: WRITE_MPEG
```

```
;
;
;
;
;
; PURPOSE: write a sequence of images as an mpeg movie
;
;
;
;
```

```
; CATEGORY: utility
;
```

```
; ;  
;  
; CALLING SEQUENCE:  
;   WRITE_MPEG,'movie.mpg',ims  
;  
;  
; INPUTS:  
;   ims: sequence of images as a 3D array with dimensions [sx, sy, nims]  
;       where sx = xsize of images  
;             sy = ysize of images  
;             nims = number of images  
;  
; OPTIONAL INPUTS:  
;  
;  
;  
; KEYWORD PARAMETERS:  
;   delaft: if set delete temporary array after movie was created,  
;           you should actually always do it otherwise you get  
;           problems with permissions on multiuser machines (since  
;           /tmp normally has the sticky bit set)  
;  
; OUTPUTS: None  
;  
; OPTIONAL OUTPUTS:  
;  
; COMMON BLOCKS:  
;  
; SIDE EFFECTS:  
;   creates some files in TMPDIR which are only removed when  
;   the DELAFT keyword is used  
;  
;  
; RESTRICTIONS:  
;   depends on the program mpeg_encode from University of  
;   California, Berkeley, which must be installed in /usr/local/bin  
;   You find mpeg_encode at  
;   ftp://mm-ftp.cs.berkeley.edu/pub/multimedia/mpeg/encode  
;   (they even have binaries for a number of platforms).  
;  
;  
; PROCEDURE:  
;   writes a parameter file based on the dimensions of the image  
;   array + the sequence of images in ppm format into a  
;   temporary directory; finally spawns mpeg_encode to build the  
;   movie  
;  
;
```

```

; EXAMPLE:
;
;
;
;
; MODIFICATION HISTORY:
;
;   Mon Nov 18 13:13:53 1996, Christian Soeller
;   <csoelle@mbcsg1.sghms.ac.uk>
;
;   grabbed original from the net and made slight modifications
;
;

if n_elements(rep) eq 0 then rep=0

movieSize = SIZE(image_array)
xSize = movieSize(1)
ySize = movieSize(2)
nFrames = movieSize(3)*rep

nDigits = 1+FIX ALOG10(nFrames))
formatString = STRCOMPRESS('i'+STRING(nDigits)+'.'+STRING(nDigits)$
    +      '), /REMOVE_ALL)
ON_IOERROR, badWrite

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

; Write each frame into TMPDIR as a 24-bit .ppm image file
framenum=0
FOR ino = 0, movieSize(3)-1 DO BEGIN
    image = pseudo_to_true(image_array(*,*,ino))
    for j=0,rep-1 do begin
        fileName = TMPDIR + '/frame.' + STRING(frameNum,FORMAT=formatString)$
            + '.ppm'
        WRITE_PPM, fileName, image
        PRINT, 'Wrote temporary PPM file for frame ', frameNum+1
        framenum=framenum+1
    endfor
ENDFOR

; Build the mpeg parameter file
paramFile = TMPDIR + '/idl2mpeg.params'

```

```
OPENW, unit, paramFile, /GET_LUN
PRINTF, unit, 'PATTERN IBBBBBBBBBBB'
PRINTF, unit, 'OUTPUT ' + mpegFileName
PRINTF, unit, 'GOP_SIZE 16'
PRINTF, unit, 'SLICES_PER_FRAME 5'
PRINTF, unit, 'BASE_FILE_FORMAT PNM'
PRINTF, unit, 'INPUT_CONVERT *'
PRINTF, unit, 'INPUT_DIR /tmp/idl2mpeg.frames'
PRINTF, unit, 'INPUT'
PRINTF, unit, 'frame.*.ppm ['+string(FORMAT=formatString,0) + $  
  '-'+ string(FORMAT=formatString,nFrames-1) + ']'
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 6'
PRINTF, unit, 'PQSCALE 6'
PRINTF, unit, 'BQSCALE 6'
PRINTF, unit, 'REFERENCE_FRAME ORIGINAL'
PRINTF, unit, 'FORCE_ENCODE_LAST_FRAME'
FREE_LUN, unit
```

```
; spawn a shell to process the mpeg_encode command
SPAWN, '/usr/local/bin/mpeg_encode ' + paramFile
```

```
IF KEYWORD_SET(delaft) then $
  SPAWN, 'rm -r ' + TMPDIR
```

```
RETURN
```

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

```
END
```
