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**Subject:** MPEG creation with IDL  
Posted by [Bringfried Stecklum](#) on Tue, 16 Jan 1996 08:00:00 GMT  
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Probably, this is almost a FAQ but, nevertheless, here is the question. Is anybody aware of an procedure coded in IDL to create MPEG movies from a datacube?

Any suggestions are highly appreciated.

Best regards,

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+-----+
| Bringfried Stecklum           |
| MPG research unit "Dust in Star Forming Regions"   |
| Schillergaesschen 3, FRG-07745 Jena, Germany        |
| Internet: stecklum@astro.uni-jena.de                |
| FAX: 049 3641 55594                                |
| Phone: 049 3641 55593 or 049 3641 630307          |
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**Subject:** Re: MPEG creation with IDL  
Posted by [Eric Deutsch](#) on Wed, 17 Jan 1996 08:00:00 GMT  
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Bringfried Stecklum wrote:

>  
> Probably, this is almost a FAQ but, nevertheless, here is the question. Is  
> anybody aware of an procedure coded in IDL to create MPEG movies from a  
> datacube?  
> Any suggestions are highly appreciated.

As far as I know there is nothing in IDL to create MPEG movies.  
To make MPEG movies, I use IDL to create a series of .GIF images  
and then use a unix utility called mpeg\_encode (available somewhere  
via anonymous ftp; ask archie) to create the movie from the GIF series.

For example, I have a script set up which gets an image from an IR  
sky scanner, stretches the image appropriately, overlays coordinate grids,  
etc. and writes a GIF image. Then, the script calls mpeg\_encode to  
make a movie. If anyone is interested, you can see archived Apache Point  
Observatory all-sky image movies at the address:

<http://www.astro.washington.edu/deutsch/apoinfo/cloudscan/mp egarchive.html>  
and  
<http://www.astro.washington.edu/deutsch/apoinfo/cloudscan/la testimage.html>

This page also points to various other pages that allows one to view each

all-sky image as it comes from the camera, etc. The camera only runs at night and when there is no precipitation.

Eric

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Eric Deutsch                           email: deutsch@astro.washington.edu  
Department of Astronomy              Voice: (206) 616-2788  
University of Washington              FAX: (206) 685-0403  
Box 351580                           WWW: <http://www.astro.washington.edu/deutsch>  
Seattle, WA 98195-1580              Physics/Astronomy Bldg., Room B356F

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**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 inthe 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                   [scott@abyss.Atmos.ColoState.edu](mailto:scott@abyss.Atmos.ColoState.edu)  
Dept. of Atmospheric Science      Phone (970)491-2134  
Colorado State University         Fax1 (970)491-8428  
Fort Collins, CO 80523-1371       Fax2 (970)491-8449

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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 IBBBBBBBBBBB'
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: MPEG creation with IDL**  
Posted by [jacobsen](#) on Thu, 18 Jan 1996 08:00:00 GMT  
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If you write a bunch of GIF files, there are unix packages  
for turning them into an MPEG file. Search yahoo under  
make\_mpeg

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Chris Jacobsen, Department of Physics, SUNY at Stony Brook  
E-mail: [jacobsen@xray1.physics.sunysb.edu](mailto:jacobsen@xray1.physics.sunysb.edu)  
Home page: <http://xray1.physics.sunysb.edu/~jacobsen/>

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**Subject: Re: MPEG creation with IDL**  
Posted by [dean](#) on Sat, 20 Jan 1996 08:00:00 GMT  
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The mpeg\_encode I use requires PPM (24-bit files) as input. IDL 4.0+  
has WRITE\_PGM which setup correctly will create a 24-bit PPM file. The  
MPEG\_ENCODE - free from s2k-ftp.cs.berkeley.edu - will except these  
PPM with no problem. This removes the GIF to PPM step I did once before.

Kelly Dean  
CSU/CIRA

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