`foo.001.rgb`, `foo.002.rgb`, `foo.003.rgb`, etc., to a fixed 1.15 megabit stream:

```
vmpegcomp io read prefix=foo. suffix=.rgb \
      ndigits=3 start=1 stop=100 \
   color type=rawycrcb \
   resample method=bilinear sample=420 \
   io write=foo.mpg type=mpeg -M0 -b1150000
```

SEE ALSO

imageop, smpegcomp, audiocomp, compressor

-M*a[,r]* Select a motion estimation algorithm, *a*, and an optional motion estimation radius, *r*. The algorithms are

0	Exhaustive minimum absolute difference (MAD).
1	Logarithmic MAD. The radius for this algorithm is fixed at 16. This should only be used for previewing because the quality is generally low .
3	Multi-processor exhaustive MAD (SGI only). This should be used with the -P option
4	Exhaustive minimum square error .

All motion estimation does a final half-pel refinement search.

-p*r* Specify a picture rate, *r*. It must be a standard rate, one of: 23.976, 24.0, 25.0, 29.97, 30.0, 50.0, 59.94, or 60.0. It may also be one of a few non-standard rates: 5, 6, 10, 15 or 20 (but these will soon be obsolete). The rate *r* is used to define the MPEG pictures per second field and to implement the time code pictures per second.

-P*n* For the -M3 option, this specifies the number of processors to use during motion estimation.

-q*n* Define a fixed scale *n* (1 to 31). Fixed bit rate is disabled.

-o<file descriptor>
Send compressor events to this file descriptor (stderr default). After every frame compressed, the compressor sends separate events specifying frame number , bits per picture, and compression ratio. Generally , this is never used by the end user .

-s*s* Specify a slice size s, measured in macroblock widths. The default is a value equal to the length of one row of macroblocks. For example, a picture 320 pixels wide is 20 macroblocks wide.

-Bi,p,b Specify the initial complexities of I, P and B pictures as described in the MPEG 2 document. Default values are 160.0/1 15.0 for I, 60.0/1 15.0 for P and 42.0/1 15.0 for B.

DESCRIPTION

This program is a server/engine used by `compressor`. It is documented here for the customers that have requirements not supported by the graphical user interface.

`Vmpegcomp` is an MPEG encoder/compressor that takes a variety of video data and produces an MPEG video data stream. The `imageop` man page describes all of the image pipeline operators and their arguments. The same usage applies to `vmpegcomp`, except that the final pipeline operator and arguments must be:

```
... io write=filename type=mpeg
```

This is followed by the compressor options (I know this is ugly , soon it will all be symmetric). The only constraint on the input to this final pipeline member is that it be4:2:0 YCrCb. The pipeline operators make this simple. For example, to compress 100 sgirgb files named

NAME

Vmpegcomp - MPEG video compression engine

SYNOPSIS

`vmpegcomp [pipeline options] [compression options]`

PIPELINE OPTIONS

See `imageop` for a description of the pipeline options. All operators are valid except `io write`. The final pipeline must be:

```
io write=filename type=mpeg
```

Followed by the compression options described below .

COMPRESSION OPTIONS

-b*r[,s[,d[,i]]]* Specify the bitrate, *r* (bits/second), buffer size, *s* (bits), danger margin, *d* (float fraction of full buffer size) and the initial buffer fullness, *i* (bits or float buffer fraction).

-cpf Force the "constrained parameters" flag as described in the MPEG 1 standard. This option makes sure that the other selected options fit the constraints and will print an error if they done. This also ensures that the V ideo Buffering V erifier size is set correctly , and that no motion vectors exceed a magnitude of 64. This flag is necessary for some hardware MPEG players. CD-I authoring systems typically insist on this.

-C*c* Center the quantizer matrices around the specified center , *c*. For example, the default quantizer matrices assume an average quantizer value of 16. If the combination of pictures and bitrate yields an average quantizer of, say 3, then more dynamic range could be realized by specifying a new center of between 3 and 16.

-e*n,n,n ...* Specify scene endings by frame number *n*. Each n specifies the end of a scene; frame numbers begin with frame 0. Note that this implies the next scene begins with frame *n+1*. For example, the argument `-e121,402` will cause the compressor to place a P picture at frames 121 and 402 and an I picture at frames 122 and 403.

-fN Specify the start frame. This does not affect which frame it starts compressing, but instead specifies the starting value for the SMPTE time code stored in the Group of Pictures (GOP) header . For example, the options -f33 -p25, mean that the first GOP timecode will be 0:0:1:8, or 1 second and 8 frames.

-g*p,b* Specify The Number Of P Pictures, *P* , Per Gop And The Number Of B Pictures *B*, Per I/p Picture In The Gop. If unspecified, the default is -g4,2 which will produce an I frame every 15 frames.

-h*n* Specify the frequency of sequence headers for each I frame. For example, -h4 means to put out a sequence header every four I frames. If the frame rate is 30fps (-p30) and the default GOP is used (-g4,2), this will produce a sequence header every two seconds (a desirable thing for V ideo CD and CD-i). This helps hardware decoders to do random access.