

Πολυμέσα
2 Σετ Ασκήσεων
Πρίφτη Ιωάννης
AM:3321

Ερώτημα 4)

Αλλάζω το NumberBFrames=0 ώστε να έχουμε IDR P P P P P P P....

25*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
      Rmin      Bmin      Fmin
      83160     39016     39016
      103950     29967     29967
      124740     29274     29274
      145530     28581     28581
      166320     28280     28280
      187110     28280     28280
      207900     28280     28280
      228690     28280     28280
----- Average data all frames -----

Total encoding time for the seq. : 27.266 sec (11.00 fps)
Total ME time for sequence      : 13.870 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 34.548, 34.103, 25.27784 }
U { PSNR (dB), cSNR (dB), MSE } : { 39.468, 39.221, 7.78036 }
V { PSNR (dB), cSNR (dB), MSE } : { 40.100, 39.741, 6.90233 }

Total bits                      : 831920 (I 28280, P 803320, NVB 320)
Bit rate (kbit/s) @ 30.00 Hz    : 83.19
Bits to avoid Startcode Emulation : 2282
Bits for parameter sets         : 320
Bits for filler data             : 0
-----
Exit JM 19 (FRExt) encoder ver 19.0
```

45*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin  Bmin  Fmin
149520  45664  45664
186900  28280  28280
224280  28280  28280
261660  28280  28280
299040  28280  28280
336420  28280  28280
373800  28280  28280
411180  28280  28280
----- Average data all frames -----

Total encoding time for the seq. : 28.482 sec (10.53 fps)
Total ME time for sequence      : 13.601 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 37.566, 37.258, 12.22728 }
U { PSNR (dB), cSNR (dB), MSE } : { 41.067, 40.869, 5.32373 }
V { PSNR (dB), cSNR (dB), MSE } : { 41.935, 41.613, 4.48488 }

Total bits                      : 1495568 (I 28280, P 1466968, NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 149.56
Bits to avoid Startcode Emulation : 2131
Bits for parameter sets        : 320
Bits for filler data           : 0
-----

Exit JM 19 (FRExt) encoder ver 19.0
```

65*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin  Bmin  Fmin
215760  43200  43200
269700  31236  31236
323640  28280  28280
377580  28280  28280
431520  28280  28280
485460  28280  28280
539400  28280  28280
593340  28280  28280
----- Average data all frames -----

Total encoding time for the seq. : 30.074 sec (9.98 fps)
Total ME time for sequence      : 13.620 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 39.527, 39.303, 7.63379 }
U { PSNR (dB), cSNR (dB), MSE } : { 42.301, 42.132, 3.98006 }
V { PSNR (dB), cSNR (dB), MSE } : { 43.313, 43.019, 3.24457 }

Total bits                      : 2158064 (I 28280, P 2129464, NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 215.81
Bits to avoid Startcode Emulation : 1869
Bits for parameter sets        : 320
Bits for filler data           : 0
-----

Exit JM 19 (FRExt) encoder ver 19.0
```

85*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin    Bmin    Fmin
  282360  69632   69632
  352950  44792   44792
  423540  44792   44792
  494130  44792   44792
  564720  44792   44792
  635310  44792   44792
  705900  44792   44792
  776490  44792   44792
----- Average data all frames -----

Total encoding time for the seq. : 30.201 sec (9.93 fps)
Total ME time for sequence      : 13.020 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 40.958, 40.731, 5.49516 }
U { PSNR (dB), cSNR (dB), MSE } : { 43.292, 43.119, 3.17121 }
V { PSNR (dB), cSNR (dB), MSE } : { 44.376, 44.070, 2.54709 }

Total bits                      : 2824088 (I 44792, P 2778976, NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 282.41
Bits to avoid Startcode Emulation : 2224
Bits for parameter sets         : 320
Bits for filler data            : 0
-----

Exit JM 19 (FRExt) encoder ver 19.0
```

Ερώτημα 5) Για να έχουμε IDR BPBPB.... Θε πρέπει να αλλάξουμε NumberBFrames=1

25*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin    Bmin    Fmin
  82800   34592   34592
  103500  33310   33310
  124200  32620   32620
  144900  31930   31930
  165600  31240   31240
  186300  30550   30550
  207000  29860   29860
  227700  29170   29170
----- Average data all frames -----

Total encoding time for the seq. : 30.796 sec (9.74 fps)
Total ME time for sequence      : 15.726 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 35.136, 34.656, 22.25900 }
U { PSNR (dB), cSNR (dB), MSE } : { 39.911, 39.673, 7.01039 }
V { PSNR (dB), cSNR (dB), MSE } : { 40.607, 40.307, 6.05923 }

Total bits                      : 828440 (I 28608, P 644888, B 154624 NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 82.84
Bits to avoid Startcode Emulation : 2250
Bits for parameter sets         : 320
Bits for filler data            : 0
-----

Exit JM 19 (FRExt) encoder ver 19.0
```

45*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin   Bmin   Fmin
149400  31780  31780
186750  30535  30535
224100  29290  29290
261450  28608  28608
298800  28608  28608
336150  28608  28608
373500  28608  28608
410850  28608  28608
----- Average data all frames -----

Total encoding time for the seq. : 32.749 sec (9.16 fps)
Total ME time for sequence      : 15.866 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 38.073, 37.677, 11.10157 }
U { PSNR (dB), cSNR (dB), MSE } : { 41.533, 41.301, 4.81962 }
V { PSNR (dB), cSNR (dB), MSE } : { 42.432, 42.107, 4.00280 }

Total bits                      : 1494448 (I 28608, P 1110912, B 354608 NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 149.44
Bits to avoid Startcode Emulation : 2261
Bits for parameter sets        : 320
Bits for filler data           : 0
-----
Exit JM 19 (FRExt) encoder ver 19.0
```

65*AM

```
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
  Rmin   Bmin   Fmin
215730  35331  35331
269640  29940  29940
323550  28608  28608
377460  28608  28608
431370  28608  28608
485280  28608  28608
539190  28608  28608
593100  28608  28608
----- Average data all frames -----

Total encoding time for the seq. : 36.835 sec (8.14 fps)
Total ME time for sequence      : 17.150 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 40.001, 39.695, 6.97608 }
U { PSNR (dB), cSNR (dB), MSE } : { 42.690, 42.482, 3.67199 }
V { PSNR (dB), cSNR (dB), MSE } : { 43.749, 43.439, 2.94597 }

Total bits                      : 2157656 (I 28608, P 1597936, B 530792 NVB 320)
Bit rate (kbit/s) @ 30.00 Hz   : 215.77
Bits to avoid Startcode Emulation : 1911
Bits for parameter sets        : 320
Bits for filler data           : 0
-----
Exit JM 19 (FRExt) encoder ver 19.0
```

85*AM

```
00293( B )    5280    19  42.853  44.861  45.298        151    67    FRM    0
00296( P )   12176    20  42.580  44.224  44.691        114    47    FRM    2
00295( B )    3784    19  42.930  44.505  44.944        144    57    FRM    0
00298( P )   18192    19  43.370  44.538  44.892        148    60    FRM    2
00297( B )     880    20  42.626  44.431  44.745        154    69    FRM    0
00299( P )   13184    19  43.222  44.522  44.933        107    39    FRM    2
-----
Total Frames: 300
Leaky BucketRateFile does not have valid entries.
Using rate calculated from avg. rate
Number Leaky Buckets: 8
      Rmin      Bmin      Fmin
282360    54252    54252
352950    48131    48131
423540    45778    45778
494130    44984    44984
564720    44984    44984
635310    44984    44984
705900    44984    44984
776490    44984    44984
----- Average data all frames -----
Total encoding time for the seq. : 34.430 sec (8.71 fps)
Total ME time for sequence      : 15.071 sec

Y { PSNR (dB), cSNR (dB), MSE } : { 41.276, 41.043, 5.11416 }
U { PSNR (dB), cSNR (dB), MSE } : { 43.512, 43.331, 3.01973 }
V { PSNR (dB), cSNR (dB), MSE } : { 44.650, 44.352, 2.38734 }

Total bits                      : 2823944 (I 44984, P 1930288, B 848352 NVB 320)
Bit rate (kbit/s) @ 30.00 Hz    : 282.39
Bits to avoid Startcode Emulation : 1790
Bits for parameter sets         : 320
Bits for filler data            : 0
-----
Exit JM 19 (FRExt) encoder ver 19.0
```

Ερώτημα 8) 27*AM

```
SUMMARY -----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
          300      a      89.7624  37.0390  41.3805  42.2783  37.6047

I Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
          1        i      765.1200  40.8267  43.3984  45.4734  41.7097

P Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
          0        p      -nan      -nan      -nan      -nan      -nan

B Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
        299        b      87.5037  37.0264  41.3737  42.2676  37.5958

RVM: 0.000
Bytes written to file: 112203 (89.762 kbps)

Total Time:      122.189 sec.
```

47*AM

```
SUMMARY -----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                300   a    156.6840   40.0812   43.2513   44.2366   40.5258

I Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                1    i    939.6000   42.4222   44.5705   46.6259   43.2230

P Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                0    p         -nan         -nan         -nan         -nan         -nan

B Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                299   b    154.0656   40.0734   43.2469   44.2286   40.5191

RVM: 0.000
Bytes written to file: 195855 (156.684 kbps)

Total Time:      147.950 sec.
```

67*AM

```
SUMMARY -----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                300   a    221.8552   41.9676   44.5409   45.5991   42.3929

I Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                1    i   1103.5200   43.6927   45.4734   47.7098   44.4326

P Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                0    p         -nan         -nan         -nan         -nan         -nan

B Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
                299   b    218.9065   41.9618   44.5377   45.5921   42.3875

RVM: 0.000
Bytes written to file: 277319 (221.855 kbps)

Total Time:      167.414 sec.
```

87*AM

```
SUMMARY -----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              300  a      286.9376   43.3458   45.4291   46.5865   43.7403

I Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              1    i      1138.0800   44.0346   45.7039   47.7605   44.7362

P Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              0    p          -nan      -nan      -nan      -nan      -nan

B Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              299  b      284.0910   43.3435   45.4282   46.5825   43.7373

RVM: 0.000
Bytes written to file: 358672 (286.938 kbps)

Total Time:      185.651 sec.
```

Ερώτημα 9) 27*AM

```
SUMMARY -----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              300  a       90.8112   37.3131   42.1052   43.0425   37.9403

I Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              10   i      963.6480   40.6173   43.1055   44.3561   41.1775

P Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              0    p          -nan      -nan      -nan      -nan      -nan

B Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              290  b       60.7134   37.1991   42.0707   42.9972   37.8623

RVM: 0.000
Bytes written to file: 113514 (90.811 kbps)

Total Time:      94.824 sec.
```

47*AM

```
SUMMARY -----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              300  a    157.2400  40.2284  43.7984  44.8503  40.8275

I Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              10   i    1221.8400  42.7383  44.6780  45.9849  43.1513

P Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              0    p         -nan    -nan    -nan    -nan    -nan

B Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              290  b    120.5297  40.1419  43.7681  44.8112  40.7659

RVM: 0.000
Bytes written to file: 196550 (157.240 kbps)

Total Time:      114.418 sec.
```

67*AM

```
SUMMARY -----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              300  a    223.6760  42.1844  45.0675  46.1510  42.7318

I Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              10   i    1423.2720  44.1823  45.7514  46.9687  44.4963

P Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              0    p         -nan    -nan    -nan    -nan    -nan

B Slices-----
      Total Frames | Bitrate   Y-PSNR   U-PSNR   V-PSNR   YUV-PSNR
              290  b    182.3106  42.1155  45.0439  46.1228  42.6821

RVM: 0.000
Bytes written to file: 279595 (223.676 kbps)

Total Time:      133.399 sec.
```


87*AM

```
SUMMARY -----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              300  a    290.1392   43.6706   46.0811   47.1812   44.1575

I Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              10   i    1572.8640   45.1882   46.4166   47.7014   45.4643

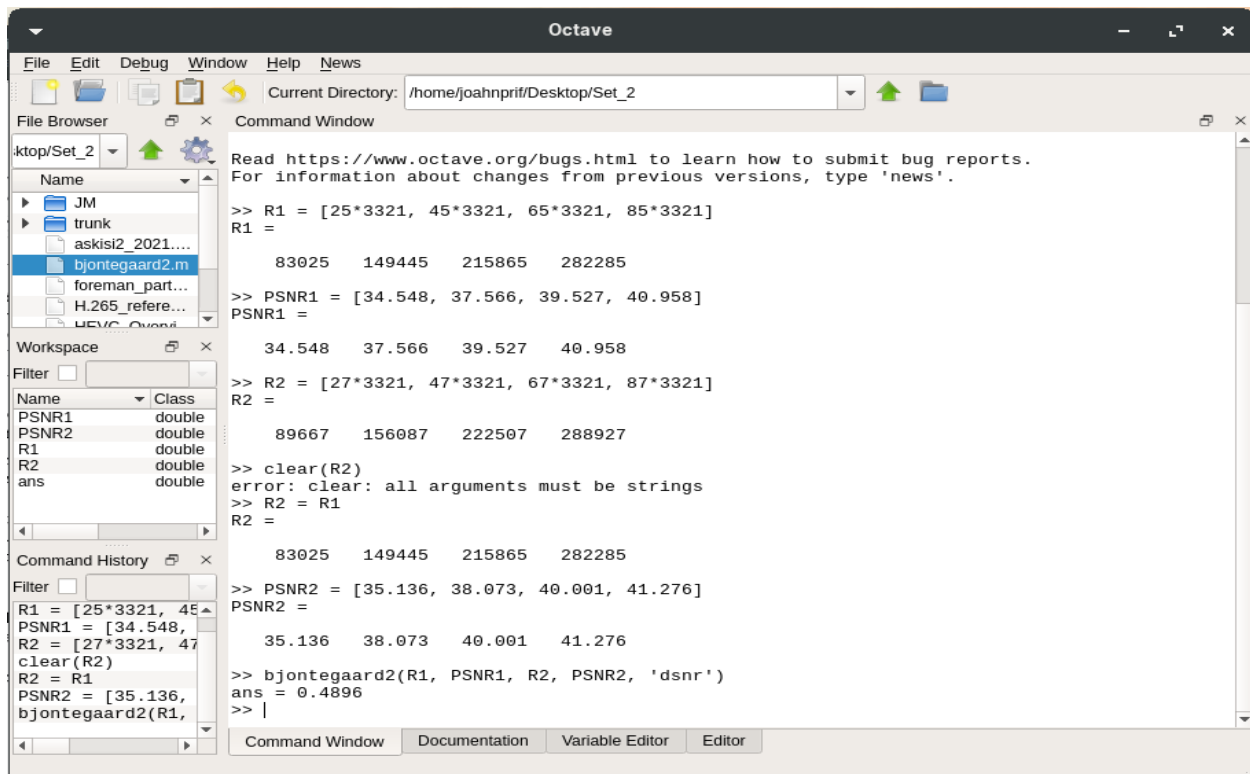
P Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              0    p         -nan         -nan         -nan         -nan

B Slices-----
      Total Frames | Bitrate    Y-PSNR    U-PSNR    V-PSNR    YUV-PSNR
              290  b    245.9073   43.6183   46.0695   47.1633   44.1187

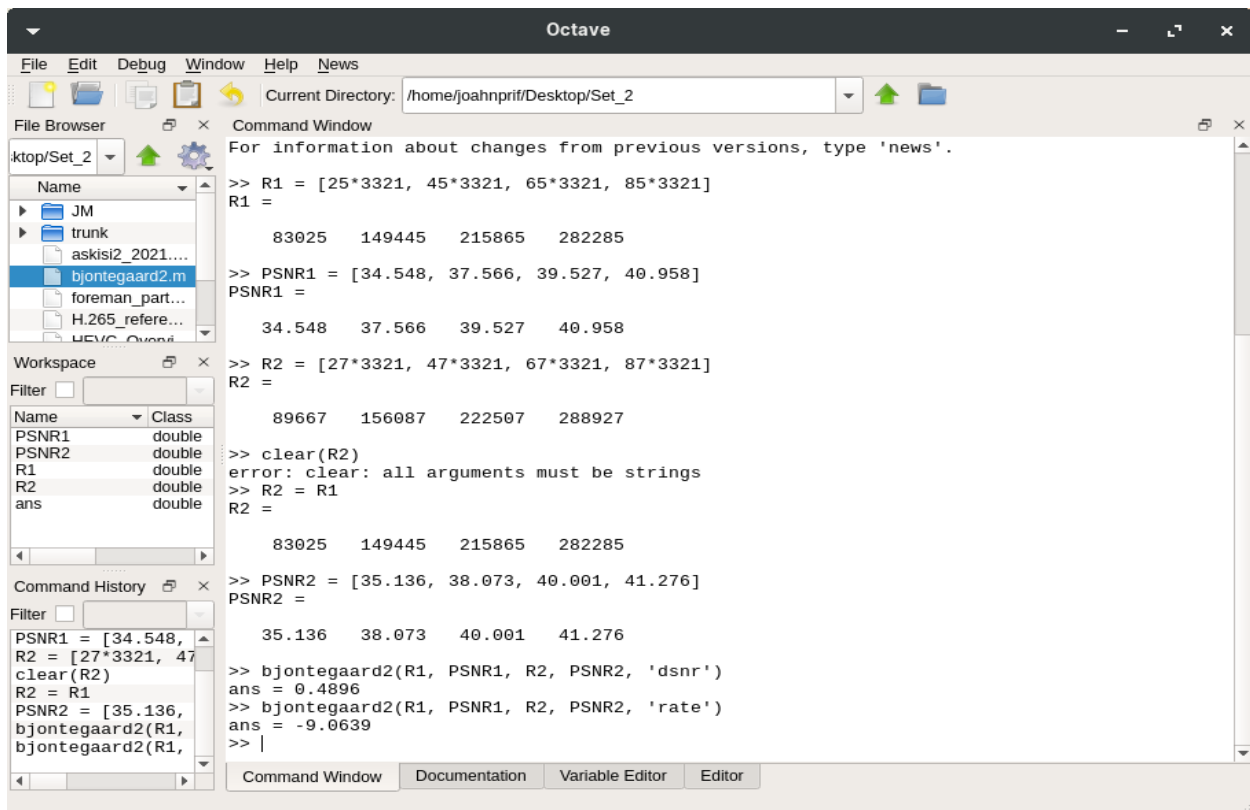
RVM: 0.000
Bytes written to file: 362674 (290.139 kbps)

Total Time:      145.769 sec.
```

Ερώτημα 10)



```
Octave
File Edit Debug Window Help News
Current Directory: /home/joahnprif/Desktop/Set_2
File Browser
ktp/Set_2
Name
JM
trunk
askisi2_2021....
bjontegaard2.m
foreman_part...
H.265_refere...
H.265_Op...
Workspace
Filter
Name Class
PSNR1 double
PSNR2 double
R1 double
R2 double
ans double
Command History
Filter
R1 = [25*3321, 45*3321, 65*3321, 85*3321]
PSNR1 = [34.548, 37.566, 39.527, 40.958]
R2 = [27*3321, 47*3321, 67*3321, 87*3321]
clear(R2)
R2 = R1
PSNR2 = [35.136, 38.073, 40.001, 41.276]
bjontegaard2(R1,
Command Window
Documentation Variable Editor Editor
Read https://www.octave.org/bugs.html to learn how to submit bug reports.
For information about changes from previous versions, type 'news'.
>> R1 = [25*3321, 45*3321, 65*3321, 85*3321]
R1 =
    83025    149445    215865    282285
>> PSNR1 = [34.548, 37.566, 39.527, 40.958]
PSNR1 =
    34.548    37.566    39.527    40.958
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927
>> clear(R2)
error: clear: all arguments must be strings
>> R2 = R1
R2 =
    83025    149445    215865    282285
>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =
    35.136    38.073    40.001    41.276
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> |
```



```
Octave
File Edit Debug Window Help News
Current Directory: /home/joahnprif/Desktop/Set_2
File Browser
ktp/Set_2
Name
JM
trunk
askisi2_2021....
bjontegaard2.m
foreman_part...
H.265_refere...
H.265_Op...
Workspace
Filter
Name Class
PSNR1 double
PSNR2 double
R1 double
R2 double
ans double
Command History
Filter
PSNR1 = [34.548, 37.566, 39.527, 40.958]
R2 = [27*3321, 47*3321, 67*3321, 87*3321]
clear(R2)
R2 = R1
PSNR2 = [35.136, 38.073, 40.001, 41.276]
bjontegaard2(R1,
Command Window
Documentation Variable Editor Editor
For information about changes from previous versions, type 'news'.
>> R1 = [25*3321, 45*3321, 65*3321, 85*3321]
R1 =
    83025    149445    215865    282285
>> PSNR1 = [34.548, 37.566, 39.527, 40.958]
PSNR1 =
    34.548    37.566    39.527    40.958
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927
>> clear(R2)
error: clear: all arguments must be strings
>> R2 = R1
R2 =
    83025    149445    215865    282285
>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =
    35.136    38.073    40.001    41.276
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -9.0639
>> |
```

Octave

File Edit Debug Window Help News

Current Directory: /home/joahnprif/Desktop/Set_2

File Browser

ktop/Set_2

Name

- JM
- trunk
- askisi2_2021....
- bjontegaard2.m**
- foreman_part...
- H.265_refere...
- HEVC_Openni...

Workspace

Filter

Name	Class
PSNR1	double
PSNR2	double
R1	double
R2	double
ans	double
psnr2	double

Command History

Filter

```
R2 = R1
PSNR2 = [35.136, 38.073, 40.001, 41.276]
bjontegaard2(R1,
bjontegaard2(R1,
R2 = [27*3321, 47
psnr2 = [37.0390,
bjontegaard2(R1,
```

```
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927

>> clear(R2)
error: clear: all arguments must be strings
>> R2 = R1
R2 =
    83025    149445    215865    282285

>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =
    35.136    38.073    40.001    41.276

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -9.0639
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927

>> psnr2 = [37.0390, 40.0812, 41.9676, 43.3458]
psnr2 =
    37.039    40.081    41.968    43.346

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.2574
>> |
```

Command Window Documentation Variable Editor Editor

Octave

File Edit Debug Window Help News

Current Directory: /home/joahnprif/Desktop/Set_2

File Browser

ktop/Set_2

Name

- JM
- trunk
- askisi2_2021....
- bjontegaard2.m**
- foreman_part...
- H.265_refere...
- HEVC_Openni...

Workspace

Filter

Name	Class
PSNR1	double
PSNR2	double
R1	double
R2	double
ans	double
psnr2	double

Command History

Filter

```
PSNR2 = [35.136,
bjontegaard2(R1,
bjontegaard2(R1,
R2 = [27*3321, 47
psnr2 = [37.0390,
bjontegaard2(R1,
bjontegaard2(R1,
```

```
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927

>> clear(R2)
error: clear: all arguments must be strings
>> R2 = R1
R2 =
    83025    149445    215865    282285

>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =
    35.136    38.073    40.001    41.276

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -9.0639
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =
    89667    156087    222507    288927

>> psnr2 = [37.0390, 40.0812, 41.9676, 43.3458]
psnr2 =
    37.039    40.081    41.968    43.346

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.2574
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -4.7718
>> |
```

Command Window Documentation Variable Editor Editor

Octave

File Edit Debug Window Help News

Current Directory: /home/joahnprif/Desktop/Set_2

File Browser

ktop/Set_2

Name

JM

trunk

askisi2_2021....

bjontegaard2.m

foreman_part...

H.265_refere...

HEVC_Opensi...

Workspace

Filter

Name	Class
PSNR1	double
PSNR2	double
R1	double
R2	double
ans	double
psnr2	double

Command History

Filter

bjontegaard2(R1,

R2 = [27*3321, 47

psnr2 = [37.0390,

bjontegaard2(R1,

bjontegaard2(R1,

PSNR2 = [37.3131,

bjontegaard2(R1,

Command Window

Documentation

Variable Editor

Editor

```

83025    149445    215865    282285

>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =

    35.136    38.073    40.001    41.276

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -9.0639
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =

    89667    156087    222507    288927

>> psnr2 = [37.0390, 40.0812, 41.9676, 43.3458]
psnr2 =

    37.039    40.081    41.968    43.346

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.2574
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -4.7718
>> PSNR2 = [37.3131, 40.2284, 42.1844, 43.6706]
PSNR2 =

    37.313    40.228    42.184    43.671

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 2.4498
>> |

```

Octave

File Edit Debug Window Help News

Current Directory: /home/joahnprif/Desktop/Set_2

File Browser

ktop/Set_2

Name

JM

trunk

askisi2_2021....

bjontegaard2.m

foreman_part...

H.265_refere...

HEVC_Opensi...

Workspace

Filter

Name	Class
PSNR1	double
PSNR2	double
R1	double
R2	double
ans	double
psnr2	double

Command History

Filter

R2 = [27*3321, 47

psnr2 = [37.0390,

bjontegaard2(R1,

bjontegaard2(R1,

PSNR2 = [37.3131,

bjontegaard2(R1,

Command Window

Documentation

Variable Editor

Editor

```

>> PSNR2 = [35.136, 38.073, 40.001, 41.276]
PSNR2 =

    35.136    38.073    40.001    41.276

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.4896
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -9.0639
>> R2 = [27*3321, 47*3321, 67*3321, 87*3321]
R2 =

    89667    156087    222507    288927

>> psnr2 = [37.0390, 40.0812, 41.9676, 43.3458]
psnr2 =

    37.039    40.081    41.968    43.346

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 0.2574
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -4.7718
>> PSNR2 = [37.3131, 40.2284, 42.1844, 43.6706]
PSNR2 =

    37.313    40.228    42.184    43.671

>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'dsnr')
ans = 2.4498
>> bjontegaard2(R1, PSNR1, R2, PSNR2, 'rate')
ans = -36.680
>> |

```