**表 2 R-MED算法应用在H.265及H.266的码率优化**

Tab.2 Bitrate optimization of R-MED algorithm applied in H.265 and H.266

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序列 类别 | 序列 | 分辨率 | 帧数 | H.265 + R-MED 对比 | | H.266 + R-MED 对比 | |
| H.265 跳过变换  量化/% | H.265 RDPCM[8]/% | H.266 跳过变换  量化/% | H.266 BDPCM[1]/% |
| A | PeopleOnStreet | 2560×1600 | 150 | -11.10 | -5.99 | -9.67 | -5.99 |
| A | Traffic | 2560×1600 | 150 | -10.10 | -3.54 | -8.60 | -3.77 |
| B | BasketballDrive | 1920×1080 | 500 | -2.19 | -0.49 | -1.42 | -0.52 |
| B | BQTerrace | 1920×1080 | 600 | -5.43 | -0.96 | -4.16 | -1.15 |
| B | Cactus | 1920×1080 | 500 | -2.92 | -0.99 | -2.14 | -1.05 |
| B | Kimono | 1920×1080 | 240 | -6.82 | -2.63 | -5.96 | -3.35 |
| B | ParkScene | 1920×1080 | 240 | -5.85 | -2.26 | -4.87 | -2.58 |
| C | BasketballDrill | 832×480 | 500 | -2.61 | -1.14 | -1.92 | -1.22 |
| C | BQMall | 832×480 | 600 | -4.16 | -0.66 | -3.10 | -0.86 |
| C | PartyScene | 832×480 | 500 | -3.80 | -0.51 | -2.65 | -0.69 |
| C | RaceHorsesC | 832×480 | 300 | -7.03 | -2.64 | -6.13 | -3.25 |
| D | BasketballPass | 416×240 | 500 | -9.10 | -1.92 | -7.71 | -2.69 |
| D | BlowingBubbles | 416×240 | 500 | -4.11 | -1.93 | -3.15 | -0.75 |
| D | BQSquare | 416×240 | 600 | -3.10 | -0.48 | -2.24 | -0.56 |
| D | RaceHorses | 416×240 | 300 | -8.29 | -3.53 | -7.23 | -3.58 |
| E | FourPeople | 1280×720 | 600 | -9.23 | -3.83 | -7.92 | -3.97 |
| E | Johnny | 1280×720 | 600 | -6.99 | -2.58 | -6.13 | -3.04 |
| E | KristenAndSara | 1280×720 | 600 | -7.35 | -2.60 | -6.40 | -2.82 |
| E | Vidyo1 | 1280×720 | 600 | -9.93 | -3.30 | -8.56 | -3.65 |
| E | Vidyo3 | 1280×720 | 600 | -9.10 | -3.60 | -7.64 | -3.80 |
| E | Vidyo4 | 1280×720 | 600 | -8.92 | -2.65 | -7.36 | -3.04 |
| F | BasketballDrillText | 832×480 | 500 | -3.01 | -1.19 | -2.21 | -1.17 |
| F | ChinaSpeed | 1024×768 | 500 | -9.13 | -1.35 | -7.86 | -1.47 |
| F | SlideEditing | 1280×720 | 300 | -7.33 | -0.51 | -7.20 | -0.80 |
| F | SlideShow | 1280×720 | 500 | -18.45 | -5.16 | -17.36 | -6.73 |

**表 3 R-MED算法应用在H.265及H.266的性能统计**

Tab.3 Performance statistics of R-MED algorithm applied in H.265 and H.266

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 性能指标 | H.265 + R-MED 对比 | | H.266 + R-MED 对比 | |
| H.265 跳过变换量化/% | H.265 RDPCM[8]/% | H.266 跳过变换量化/% | H.266 BDPCM[1]/% |
| 平均码率 | -7.04 | -2.26 | -5.98 | -2.50 |
| 编码时间 | 104 | 107 | 117 | 111 |
| 解码时间 | 95 | 98 | 83 | 93 |

**表 4 R-MED与其他算法的码率优化（****对比H.265）**

Tab.4 Bitrate optimization of R-MED and other algorithms (versus H.265)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序列 类别 | 序列 | SAP-HV[7]/% | SAP[9]/% | SAP1[10]/% | SAP+SWP2  +DTM[11]/% | RDPCM+  pwm[7]/% | Proposed  R-MED/% |
| B | Kimono | -2.32 | -4.42 | -4.47 | -5.84 | -5.07 | -6.82 |
| B | ParkScene | -3.38 | -4.95 | -4.97 | -6.12 | -5.31 | -5.85 |
| F | BasketballDrillText | -1.38 | -5.77 | -5.93 | -6.19 | -3.33 | -3.01 |
| F | SlideEditing | -8.03 | -9.50 | -9.76 | -11.15 | -8.20 | -7.33 |
| F | SlideShow | -9.59 | -12.69 | -12.74 | -14.07 | -13.04 | -18.45 |

**表 5 R-MED与其他算法的性能统计（对比H.265）**

Tab.5 Performance statistics of R-MED and other algorithms (versus H.265)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 性能指标 | SAP-HV[7]/% | SAP[9]/% | SAP1[10]/% | SAP+SWP2  +DTM[11]/% | RDPCM+  pwm[7]/% | Proposed  R-MED/% |
| 平均码率 | -4.94 | -7.47 | -7.57 | -8.67 | -6.99 | -8.29 |
| 编码时间 | 97 | 97 | 97 | 273 | 104 | 104 |
| 解码时间 | 99 | 99 | 98 | 196 | 103 | 95 |