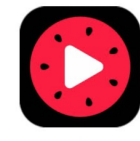


# JVET-AD0197

## EE2-related: Worst-Case Timing Reduction for ECM RA Simulations

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# Introduction/Proposed Method

- Current ECM is drastically slower than VTM.
- Simulations for RA configuration takes 12 days to finish.
- The slowest QP points for RA configurations are QP 22 of class A1/A2, as well as QP 27 of ParkRunning3.
- It is proposed that for these tests, intra period be reduced from 64 to 32
- All other configurations are kept the same as the current common test conditions (CTC).
- This will lead to more parallelization and, thus allowing all RA simulations to be finished in 7 days.

# Simulation Results

- Intra period is modified to 32 all QP points in class A1/A2

|                | Random access Main10 |        |        |      |      |
|----------------|----------------------|--------|--------|------|------|
|                | Over ECM-8.0         |        |        | EncT | DecT |
|                | Y                    | U      | V      |      |      |
| Class A1       | 2.47%                | -0.92% | -0.03% | 103% | 104% |
| Class A2       | 6.50%                | 0.86%  | 1.80%  | 107% | 106% |
| Class B        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class C        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class E        |                      |        |        |      |      |
| <b>Overall</b> | 1.79%                | -0.01% | 0.36%  | 102% | 102% |
| Class D        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class F        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |

- Intra period is modified to 32 for slow QP points in class A1/A2

|                | Random access Main10 |        |        |      |      |
|----------------|----------------------|--------|--------|------|------|
|                | Over ECM-8.0         |        |        | EncT | DecT |
|                | Y                    | U      | V      |      |      |
| Class A1       | 0.14%                | -0.18% | -0.10% | 101% | 101% |
| Class A2       | 0.35%                | -0.49% | -0.59% | 103% | 102% |
| Class B        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class C        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class E        |                      |        |        |      |      |
| <b>Overall</b> | 0.10%                | -0.13% | -0.14% | 101% | 101% |
| Class D        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |
| Class F        | 0.00%                | 0.00%  | 0.00%  | 100% | 100% |

# Conclusions

- It seems currently many of the EE-related/Non-EE and even EE tests are copying anchor and are not able to finish the tests.
- In this contribution, it is proposed to reduce intra period for slow QP points of class A1/A2 from 64 to 32.
- This will allow all RA simulations to be finished much faster (in 7 days, rather than 12 days).
- It is proposed to include this modification in CTC for ECM.

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