

## Results

The first number of the command indicate the latency constraint that multiply the ASAP time in order to obtain the overall latency constraint of the DFG.

The second number indicate the depth of the update of the parent and child in the FDS. -1 indicate the max depth possible

As underlined during the presentation the run time of the simultaneous scheduling, binding and reg allocation is much more higher than the sequential implementation.

./main file res/ 1.5 -1

| DFG                     |       | FDS + Binding/Allocation |        |    |          |      |       | Simultaneous FDS/Binding/Allocation |        |    |          |     |       |
|-------------------------|-------|--------------------------|--------|----|----------|------|-------|-------------------------------------|--------|----|----------|-----|-------|
| Name                    | Nodes | Time [s]                 | Area   | FU | Register | Mux  | DeMux | Time [s]                            | Area   | FU | Register | Mux | DeMux |
| arf                     | 28    | 0.0145                   | 47568  | 6  | 16       | 528  | 208   | 0.1446                              | 43794  | 6  | 17       | 32  | 11    |
| ewf                     | 34    | 0.0841                   | 26400  | 4  | 8        | 400  | 176   | 0.3540                              | 23610  | 4  | 9        | 34  | 13    |
| feedback point          | 53    | 0.0721                   | 66016  | 12 | 42       | 1040 | 464   | 0.7909                              | 58252  | 12 | 44       | 63  | 19    |
| hal                     | 11    | 0.0026                   | 25648  | 5  | 10       | 176  | 80    | 0.0186                              | 24196  | 5  | 10       | 10  | 4     |
| horner bezier surf      | 18    | 0.0160                   | 26704  | 5  | 10       | 320  | 112   | 0.0965                              | 24274  | 5  | 10       | 21  | 6     |
| interpolate aux         | 108   | 0.5992                   | 136956 | 18 | 96       | 2320 | 1088  | 10.9577                             | 118188 | 18 | 97       | 150 | 66    |
| invert matrix general   | 333   | 3.0441                   | 331916 | 56 | 154      | 8192 | 4048  | 693.0100                            | 262478 | 56 | 154      | 478 | 189   |
| matmul                  | 109   | 0.0246                   | 128880 | 20 | 50       | 2464 | 1152  | 8.0944                              | 108378 | 20 | 50       | 142 | 57    |
| motion vectors          | 32    | 0.0200                   | 58992  | 9  | 28       | 576  | 240   | 0.1999                              | 58828  | 9  | 29       | 41  | 17    |
| smooth color z triangle | 197   | 2.2321                   | 190576 | 20 | 130      | 4832 | 2272  | 108.9940                            | 150886 | 20 | 131      | 304 | 121   |
| write bmp header        | 106   | 0.5957                   | 87344  | 16 | 76       | 2480 | 1184  | 8.1511                              | 67820  | 16 | 79       | 155 | 63    |

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| DFG                     |       | FDS + Binding/Allocation |        |    |          |      |       | Simultaneous FDS/Binding/Allocation |        |    |          |     |       |
|-------------------------|-------|--------------------------|--------|----|----------|------|-------|-------------------------------------|--------|----|----------|-----|-------|
| Name                    | Nodes | Time [s]                 | Area   | FU | Register | Mux  | DeMux | Time [s]                            | Area   | FU | Register | Mux | DeMux |
| arf                     | 28    | 0.0012                   | 63840  | 8  | 16       | 368  | 224   | 0.0228                              | 60486  | 8  | 16       | 24  | 9     |
| ewf                     | 34    | 0.0008                   | 46056  | 7  | 9        | 480  | 224   | 0.0127                              | 42894  | 7  | 11       | 32  | 17    |
| feedback point          | 53    | 0.0160                   | 102272 | 19 | 42       | 896  | 416   | 0.2322                              | 94850  | 19 | 42       | 55  | 20    |
| hal                     | 11    | 0.0005                   | 33928  | 6  | 10       | 144  | 64    | 0.0066                              | 32728  | 6  | 10       | 7   | 1     |
| horner bezier surf      | 18    | 0.0018                   | 34984  | 6  | 10       | 272  | 112   | 0.0117                              | 32830  | 6  | 10       | 20  | 5     |
| interpolate aux         | 108   | 0.0283                   | 219152 | 40 | 96       | 2064 | 1072  | 3.9194                              | 201182 | 40 | 96       | 102 | 39    |
| invert matrix general   | 333   | 0.5783                   | 484940 | 93 | 154      | 7344 | 3600  | 548.9270                            | 423026 | 93 | 154      | 436 | 189   |
| matmul                  | 109   | 0.0234                   | 199640 | 31 | 50       | 2112 | 1088  | 1.8375                              | 181802 | 31 | 51       | 120 | 43    |
| motion vectors          | 32    | 0.0019                   | 108800 | 18 | 28       | 384  | 176   | 0.0321                              | 105650 | 18 | 28       | 24  | 11    |
| smooth color z triangle | 197   | 0.0834                   | 406432 | 72 | 130      | 3664 | 1824  | 77.7940                             | 375304 | 72 | 130      | 218 | 82    |
| write bmp header        | 106   | 0.2850                   | 102328 | 25 | 76       | 2416 | 1168  | 3.4823                              | 82078  | 25 | 76       | 147 | 62    |

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| DFG                     |       | FDS + Binding/Allocation |        |    |          |      |       | Simultaneous FDS/Binding/Allocation |        |    |          |     |       |
|-------------------------|-------|--------------------------|--------|----|----------|------|-------|-------------------------------------|--------|----|----------|-----|-------|
| Name                    | Nodes | Time [s]                 | Area   | FU | Register | Mux  | DeMux | Time [s]                            | Area   | FU | Register | Mux | DeMux |
| arf                     | 28    | 0.0687                   | 47280  | 6  | 16       | 480  | 208   | 0.3529                              | 43836  | 6  | 17       | 37  | 13    |
| ewf                     | 34    | 0.2043                   | 17544  | 3  | 7        | 416  | 176   | 0.7894                              | 14634  | 3  | 8        | 32  | 11    |
| feedback point          | 53    | 0.3373                   | 56752  | 9  | 42       | 1008 | 544   | 3.7495                              | 47908  | 9  | 43       | 68  | 26    |
| hal                     | 11    | 0.0128                   | 17080  | 4  | 10       | 160  | 96    | 0.0464                              | 15658  | 4  | 10       | 14  | 5     |
| horner bezier surf      | 18    | 0.0689                   | 18136  | 4  | 10       | 304  | 128   | 0.2748                              | 16864  | 4  | 13       | 23  | 5     |
| interpolate aux         | 108   | 1.4881                   | 100604 | 11 | 96       | 2416 | 1168  | 26.2902                             | 80900  | 11 | 97       | 168 | 68    |
| invert matrix general   | 333   | 12.6587                  | 310328 | 53 | 154      | 7840 | 3728  |                                     |        |    |          |     |       |
| matmul                  | 109   | 0.8614                   | 98096  | 11 | 50       | 2416 | 1136  | 15.9657                             | 78350  | 11 | 51       | 151 | 46    |
| motion vectors          | 32    | 0.0704                   | 36496  | 5  | 28       | 656  | 256   | 0.4206                              | 31792  | 5  | 29       | 45  | 19    |
| smooth color z triangle | 197   | 9.2340                   | 172288 | 18 | 130      | 4784 | 2128  | 370.0540                            | 133660 | 18 | 131      | 299 | 111   |
| write bmp header        | 106   | 2.0745                   | 82936  | 11 | 76       | 2528 | 1168  | 19.8010                             | 63220  | 11 | 79       | 155 | 63    |