DADDA MULTIPLIER DELAY ANALYSIS

Each layer will give maximum of one full adder delay and the last layer gives the delay of the brent kung adder. It can be seen from the dot diagram of the multiplier. So the total delay is given by

Total delay=6(full adder delay)+1(brent kung adder)+routing delay.

```
Data Path: mltpd<4> to product<30>
                           Gate     Net
  Cell:in->out      fanout   Delay   Delay  Logical Name (Net Name)
  ----------------------------------------  ------------
   IBUF:I->O             23   0.715   1.616  mltpd_4_IBUF (mltpd_4_IBUF)
   LUT2:I1->O             2   0.479   1.040  partial_products[0].p5/c1 (part_prod<4><0>)
   LUT4:I0->O             2   0.479   1.040  f115/Mxor_sum_xo<0>1 (sixth_1<4>)
   LUT4:I0->O             2   0.479   1.040  last_stage[4].f120/Mxor_sum_xo<0>1 (seventh_1<4>)
   LUT3:I0->O             2   0.479   0.915  b1/Mxor_sum<5>_Result_SW0 (N392)
   LUT3:I1->O             2   0.479   1.040  b1/carry2[1].g8/out1 (b1/carry<6>)
   LUT3:I0->O             3   0.479   0.941  b1/Mxor_sum<7>_Result_SW0 (N394)
   LUT3:I1->O             2   0.479   0.804  b1/fourth_order[0].g4/out1 (b1/carry<8>)
   LUT3:I2->O             1   0.479   0.740  b1/carry2[2].g8/out1_SW0 (N424)
   LUT3:I2->O             3   0.479   0.830  b1/carry2[2].g8/out1 (b1/carry3[1].g9/out20)
   LUT3:I2->O             1   0.479   0.740  b1/carry3[1].g9/out50_SW0 (N428)
   LUT3:I2->O             5   0.479   0.953  b1/carry3[1].g9/out50 (b1/carry<12>)
   LUT4:I1->O             1   0.479   0.976  b1/fifth_order[0].g5/out29 (b1/fifth_order[0].g5/out29)
   LUT4:I0->O             5   0.479   0.842  b1/fifth_order[0].g5/out57 (b1/carry<16>)
   LUT4:I2->O             1   0.479   0.740  b1/carry3[2].g9/out30 (b1/carry3[2].g9/out30)
   LUT4:I2->O             5   0.479   0.953  b1/carry3[2].g9/out77 (b1/carry<20>)
   LUT4:I1->O             1   0.479   0.976  b1/g12/out29 (b1/g12/out29)
   LUT4:I0->O             2   0.479   1.040  b1/g12/out57 (b1/carry<24>)
   LUT3:I0->O             2   0.479   0.915  b1/Mxor_sum<25>_Result_SW0 (N408)
   LUT3:I1->O             2   0.479   1.040  b1/carry2[6].g8/out1 (b1/carry<26>)
   LUT3:I0->O             2   0.479   0.915  b1/Mxor_sum<27>_Result_SW0 (N410)
   LUT3:I1->O             2   0.479   1.040  b1/carry3[3].g9/out1 (b1/carry<28>)
   LUT3:I0->O             2   0.479   0.915  b1/Mxor_sum<29>_Result_SW0 (N412)
   LUT3:I1->O             2   0.479   1.040  b1/carry2[7].g8/out1 (b1/carry<30>)
   LUT4:I0->O             1   0.479   0.681  b1/Mxor_sum<30>_Result1 (product_30_OBUF)
   OBUF:I->O                  4.909          product_30_OBUF (product<30>)
  ----------------------------------------
  Total                     40.896ns (17.120ns logic, 23.776ns route)
                                     (41.9% logic, 58.1% route)
```