benchmarking

N = 1e3

test_n1e3_p5_b50

```
##       test replications elapsed relative
## 2 new1_cpp          100    0.14    1.000
## 3   new2_R          100    0.14    1.000
## 1      old          100    0.17    1.214
```

test_n1e3_p5_b100

```
##       test replications elapsed relative
## 2 new1_cpp          100    0.14    1.273
## 3   new2_R          100    0.11    1.000
## 1      old          100    0.32    2.909
```

test_n1e3_p5_b500

```
##       test replications elapsed relative
## 2 new1_cpp           50    0.06    1.000
## 3   new2_R           50    0.07    1.167
## 1      old           50    0.63   10.500
```

test_n1e3_p20_b50

```
##       test replications elapsed relative
## 2 new1_cpp          100    0.61    1.488
## 3   new2_R          100    0.41    1.000
## 1      old          100    2.56    6.244
```

test_n1e3_p20_b100

```
##       test replications elapsed relative
## 2 new1_cpp          100    0.46    1.437
## 3   new2_R          100    0.32    1.000
## 1      old          100    4.61   14.406
```

test_n1e3_p20_b500

```
##       test replications elapsed relative
## 2 new1_cpp           50    0.33    2.357
## 3   new2_R           50    0.14    1.000
## 1      old           50    8.94   63.857
```

test_n1e3_p50_b50

```
##       test replications elapsed relative
## 2 new1_cpp          100    1.32    1.737
```

```
## 3    new2_R            100     0.76     1.000
## 1      old            100    15.02    19.763
```

test_n1e3_p50_b100

```
##        test replications elapsed relative
## 2 new1_cpp          100     1.30    1.566
## 3    new2_R          100     0.83    1.000
## 1      old          100    29.22   35.205
```

test_n1e3_p50_b500

```
##        test replications elapsed relative
## 2 new1_cpp           50     0.67    1.971
## 3    new2_R           50     0.34    1.000
## 1      old           50    56.33  165.676
```

test_n1e3_p100_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100     2.70    1.343
## 3    new2_R          100     2.01    1.000
## 1      old          100    61.33   30.512
```

test_n1e3_p100_b100

```
##        test replications elapsed relative
## 2 new1_cpp          100     3.21    1.745
## 3    new2_R          100     1.84    1.000
## 1      old          100   118.99   64.668
```

N = 1e4

test_n1e4_p5_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100     1.72    1.483
## 3    new2_R          100     1.16    1.000
## 1      old          100     2.78    2.397
```

test_n1e4_p20_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100     5.50    1.436
## 3    new2_R          100     3.83    1.000
## 1      old          100    31.96    8.345
```

test_n1e4_p50_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100    14.36    1.147
## 3    new2_R          100    12.52    1.000
## 1      old          100   173.43   13.852
```

```
test_n1e4_p100_b50

##        test replications elapsed relative
## 2 new1_cpp          100   33.22    1.175
## 3   new2_R          100   28.28    1.000
## 1      old          100  664.33   23.491

test_n1e4_p5_b100

##        test replications elapsed relative
## 2 new1_cpp          100    1.92    1.239
## 3   new2_R          100    1.55    1.000
## 1      old          100    4.81    3.103

test_n1e4_p20_b100

##        test replications elapsed relative
## 2 new1_cpp          100    5.72    1.000
## 3   new2_R          100    6.11    1.068
## 1      old          100   67.10   11.731

test_n1e4_p50_b100

##        test replications elapsed relative
## 2 new1_cpp          100   14.61     1.01
## 3   new2_R          100   14.47     1.00
## 1      old          100  356.11    24.61

test_n1e4_p100_b100

##        test replications elapsed relative
## 2 new1_cpp          100   47.60    1.000
## 3   new2_R          100   57.33    1.204
## 1      old          100 1609.38   33.811

test_n1e4_p5_b500

##        test replications elapsed relative
## 2 new1_cpp           50    0.86    1.830
## 3   new2_R           50    0.47    1.000
## 1      old           50    9.72   20.681

test_n1e4_p20_b500

##        test replications elapsed relative
## 2 new1_cpp           50    2.73    1.645
## 3   new2_R           50    1.66    1.000
## 1      old           50  155.34   93.578

test_n1e4_p50_b500

##        test replications elapsed relative
## 2 new1_cpp           50    7.18    1.091
```

```
## 3    new2_R           50    6.58    1.000
## 1      old            50  850.33  129.229
```

N = 1e5;

test_n1e5_p5_b50

```
##         test replications elapsed relative
## 2 new1_cpp          100   25.44    1.601
## 3    new2_R          100   15.89    1.000
## 1      old           100   34.44    2.167
```

test_n1e5_p20_b50

```
##         test replications elapsed relative
## 2 new1_cpp          100   85.72    1.740
## 3    new2_R          100   49.27    1.000
## 1      old           100  326.50    6.627
```

test_n1e5_p50_b50

```
##         test replications elapsed relative
## 2 new1_cpp          100  220.35    1.758
## 3    new2_R          100  125.33    1.000
## 1      old           100 1735.65   13.849
```

test_n1e5_p100_b50

```
##         test replications elapsed relative
## 2 new1_cpp          100  484.69    1.711
## 3    new2_R          100  283.29    1.000
## 1      old           100 9615.46   33.942
```

test_n1e5_p5_b100

```
##         test replications elapsed relative
## 2 new1_cpp          100   27.02    1.617
## 3    new2_R          100   16.71    1.000
## 1      old           100   72.83    4.358
```

test_n1e5_p20_b100

```
##         test replications elapsed relative
## 2 new1_cpp          100  101.74    1.765
## 3    new2_R          100   57.64    1.000
## 1      old           100  705.75   12.244
```

test_n1e5_p50_b100

```
##         test replications elapsed relative
## 2 new1_cpp          100  280.88    1.833
## 3    new2_R          100  153.26    1.000
## 1      old           100 3929.86   25.642
```

```
test_n1e5_p100_b100

##       test replications  elapsed relative
## 2 new1_cpp          100   653.75    1.770
## 3   new2_R          100   369.39    1.000
## 1      old          100 14820.67   40.122

test_n1e5_p5_b500

##       test replications elapsed relative
## 2 new1_cpp           50   12.53    1.735
## 3   new2_R           50    7.22    1.000
## 1      old           50  170.81   23.658

test_n1e5_p20_b500

##       test replications elapsed relative
## 2 new1_cpp           50   42.26    1.710
## 3   new2_R           50   24.72    1.000
## 1      old           50 1682.73   68.072

test_n1e5_p50_b500

##       test replications  elapsed relative
## 2 new1_cpp           50   114.19    1.781
## 3   new2_R           50    64.10    1.000
## 1      old           50 11041.97  172.262
```

N = 1e6

```
test_n1e6_p5_b50

##       test replications elapsed relative
## 2 new1_cpp          100  479.67    3.171
## 3   new2_R          100  151.25    1.000
## 1      old          100  379.91    2.512

test_n1e6_p5_b100

##       test replications elapsed relative
## 2 new1_cpp          100  412.33    2.864
## 3   new2_R          100  143.95    1.000
## 1      old          100  733.52    5.096

test_n1e6_p5_b500

##       test replications elapsed relative
## 2 new1_cpp           50  203.23    2.890
## 3   new2_R           50   70.31    1.000
## 1      old           50 1810.08   25.744

test_n1e6_p20_b500
```

```
##        test replications  elapsed relative
## 2 new1_cpp           50   737.48    2.934
## 3   new2_R           50   251.36    1.000
## 1      old           50 23628.59   94.003
```

test_n1e6_p20_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100 1477.59    2.936
## 3   new2_R          100  503.22    1.000
## 1      old          100 3416.73    6.790
```

test_n1e6_p20_b50

```
##        test replications elapsed relative
## 2 new1_cpp          100 1477.59    2.936
## 3   new2_R          100  503.22    1.000
## 1      old          100 3416.73    6.790
```

test_n1e6_p20_b100

```
##        test replications elapsed relative
## 2 new1_cpp          100 3082.89    6.076
## 3   new2_R          100  507.35    1.000
## 1      old          100 7152.53   14.098
```

test_n1e6_p50_b50

```
##        test replications  elapsed relative
## 2 new1_cpp          100  3955.95    1.371
## 3   new2_R          100  2885.70    1.000
## 1      old          100 21832.78    7.566
```

test_n1e6_p50_b100

```
##        test replications  elapsed relative
## 2 new1_cpp          100  6805.78    2.568
## 3   new2_R          100  2650.38    1.000
## 1      old          100 43756.09   16.509
```

```r
print('end')
```

```
## [1] "end"
```