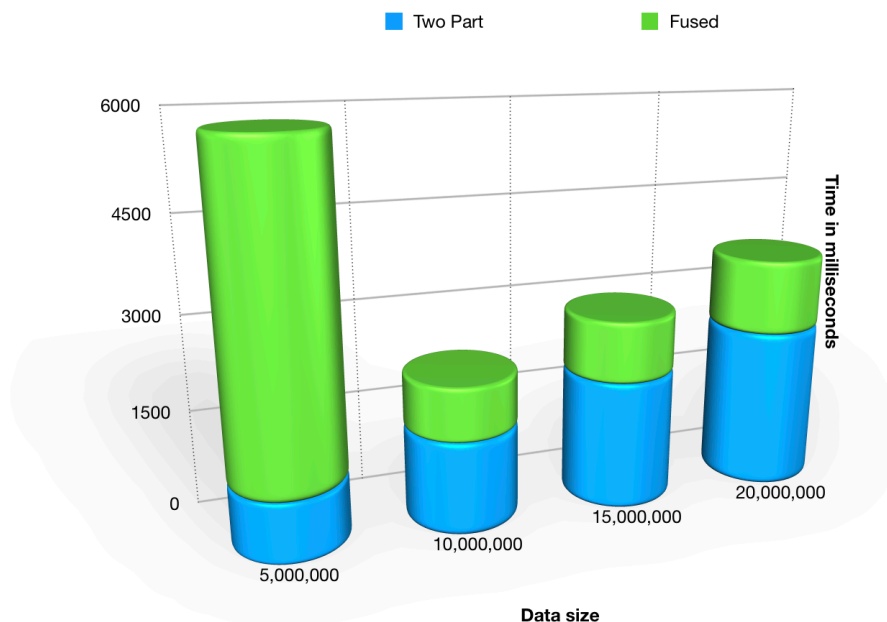


To: Chris Szalwinski
From: Yuriy Kartuzov
Re:

Thrust workshop

N	Two Part	Fused
5,000,000	927	4,899
10,000,000	1,423	825
15,000,000	1,991	943
20,000,000	2,482	1,144

← Anomaly



Conclusion:

I learned the use of Function object (functor), how to define a vector using Thrust library, as well as use of **transform** and **transform_reduce** functions. It was also clear that a small optimization is possible when using **transform_reduce** function to process two operations in one.

Note: A single txt file is attached showing code for both ways. Two functions are commented out below a single one.

```
C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Sample size: 50000000
initialization - took - 551 millisecs
magnitude calculation - took - 927 millisecs
Magnitude : 1790281418539008.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Sample size: 100000000
initialization - took - 1109 millisecs
magnitude calculation - took - 1423 millisecs
Magnitude : 3578665266839552.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Sample size: 150000000
initialization - took - 1684 millisecs
magnitude calculation - took - 1991 millisecs
Magnitude : 5368463233122304.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Sample size: 200000000
initialization - took - 2227 millisecs
magnitude calculation - took - 2482 millisecs
Magnitude : 7159120998170624.0000
Press any key to continue . . .
```

Output of two part version

```
C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Fused solution. Sample size: 50000000
initialization - took - 566 millisecs
magnitude calculation - took - 4899 millisecs
Magnitude : 1790281418539008.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Fused solution. Sample size: 100000000
initialization - took - 1139 millisecs
magnitude calculation - took - 825 millisecs
Magnitude : 3578665266839552.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Fused solution. Sample size: 150000000
initialization - took - 1712 millisecs
magnitude calculation - took - 943 millisecs
Magnitude : 5368463233122304.0000
Press any key to continue . . .

C:\Windows\system32\cmd.exe
M5 - Yuriy Kartuzov - 122365158
Fused solution. Sample size: 200000000
initialization - took - 2231 millisecs
magnitude calculation - took - 1144 millisecs
Magnitude : 7159120998170624.0000
Press any key to continue . . .
```

transform_reduce()