

Benchmark TwelveLongAttributesLessThan - kompletní výsledky

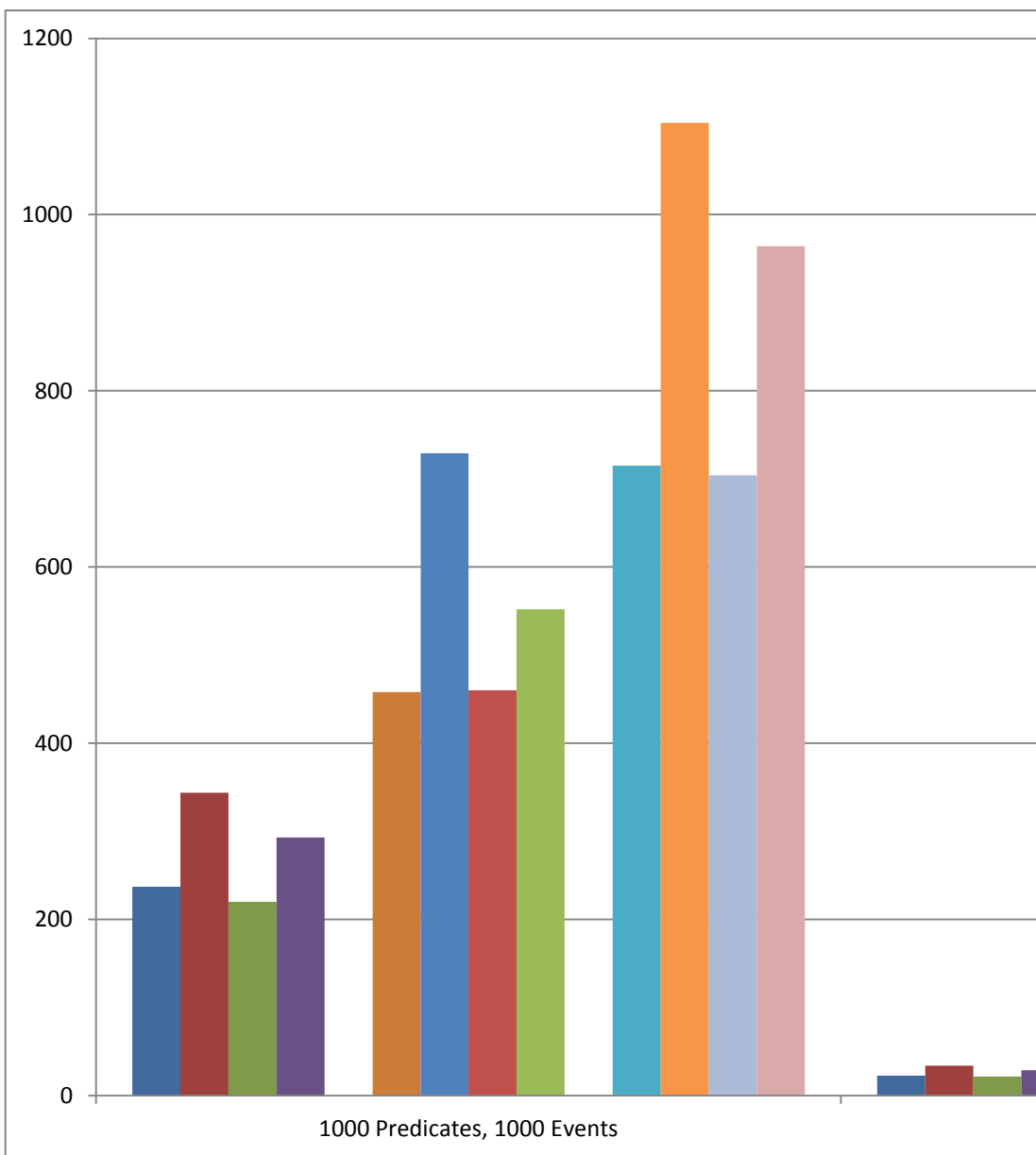
Zdrojový kód: <https://github.com/ngmon/ngmon-pub-sub-benchn>

Popis v textu diplomové práce (Publish-subscribe založený na obsahu pro účely monitorování)

Testovací prostředí: Hardware: Intel Core i5-760 (2.8 GHz), 4 GB RAM; Software: Ubuntu 13.0

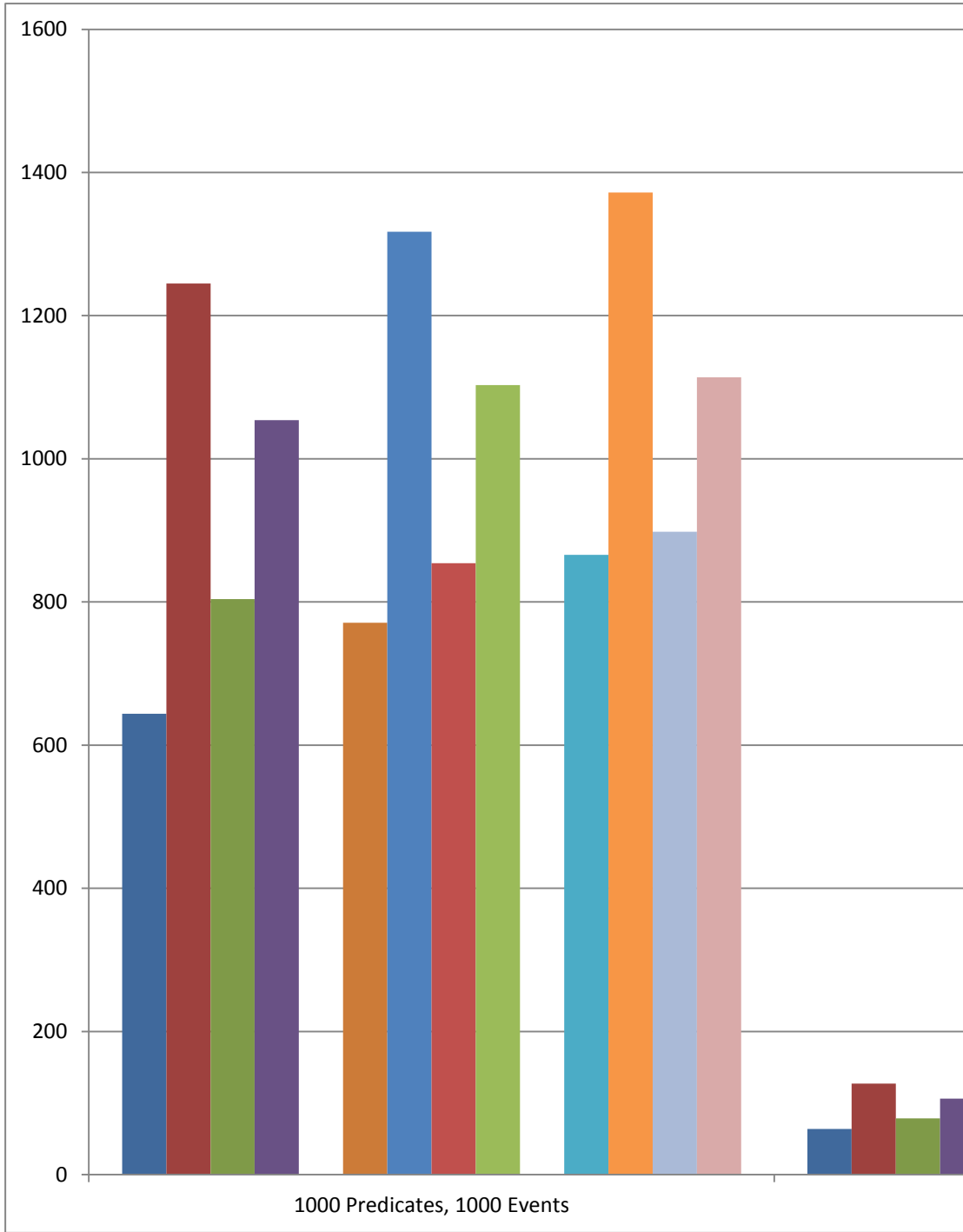
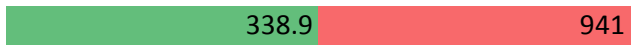
Všechny hodnoty jsou v milisekundách

	Match_25_random - Mat	Match_25_random - Cour
1000 Predicates, 1000 Events	237	344
1000 Predicates, 100 Events	22.8	34.1
2000 Predicates, 100 Events	45.8	75.3
4000 Predicates, 100 Events	96.1	164



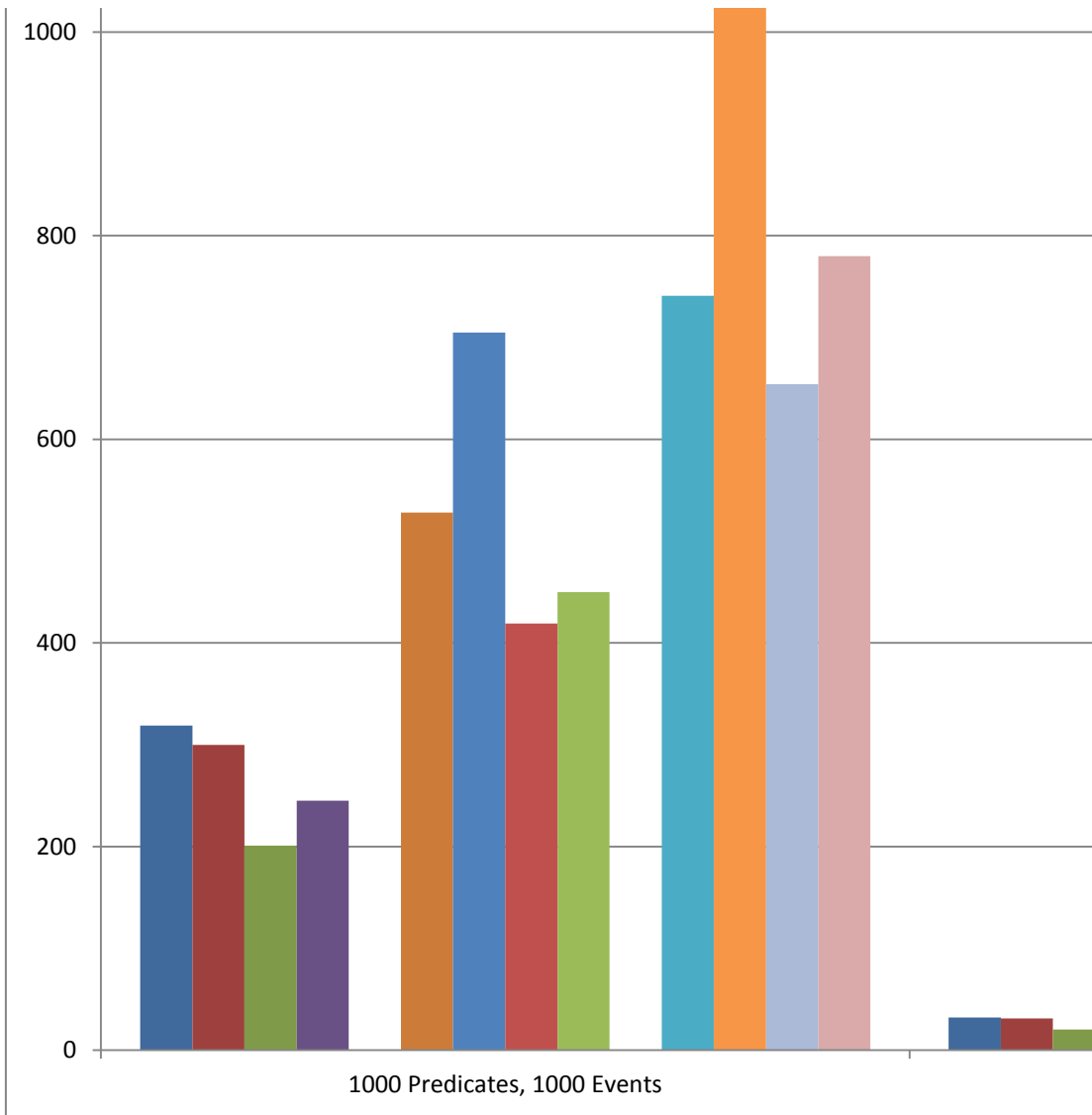
	Match2_25_random - Ma	Match2_25_random - Coi
1000 Predicates, 1000 Events	644	1245
1000 Predicates, 100 Events	63.7	127.1
2000 Predicates, 100 Events	151.3	283.6

4000 Predicates, 100 Events



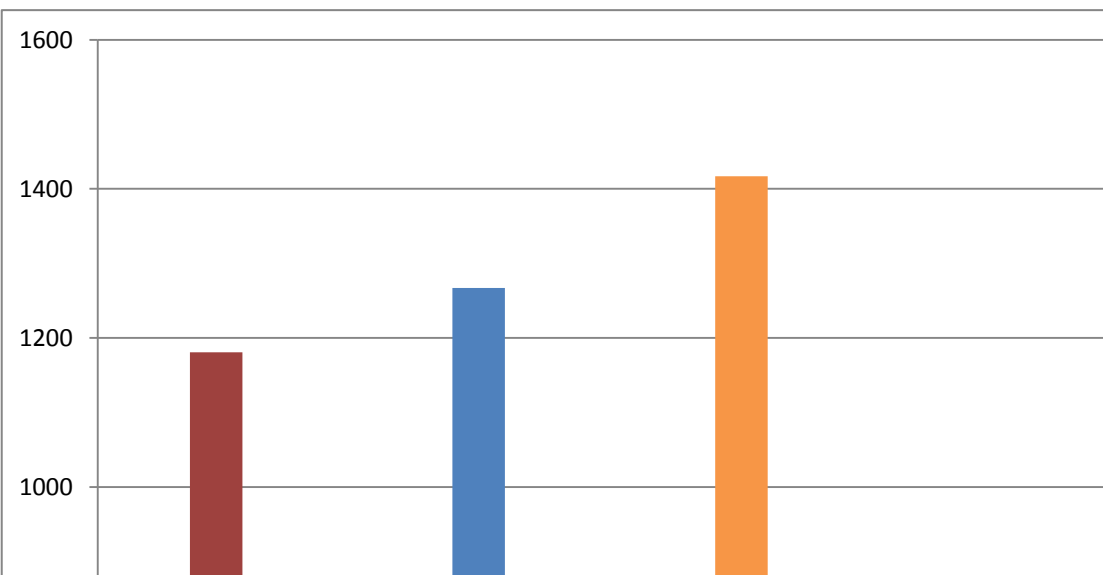
	Match_25 - Matching Tree	Match_25 - Counting (mu)
1000 Predicates, 1000 Events	319	300
1000 Predicates, 100 Events	32.2	31.1
2000 Predicates, 100 Events	64.3	69
4000 Predicates, 100 Events	141.4	143

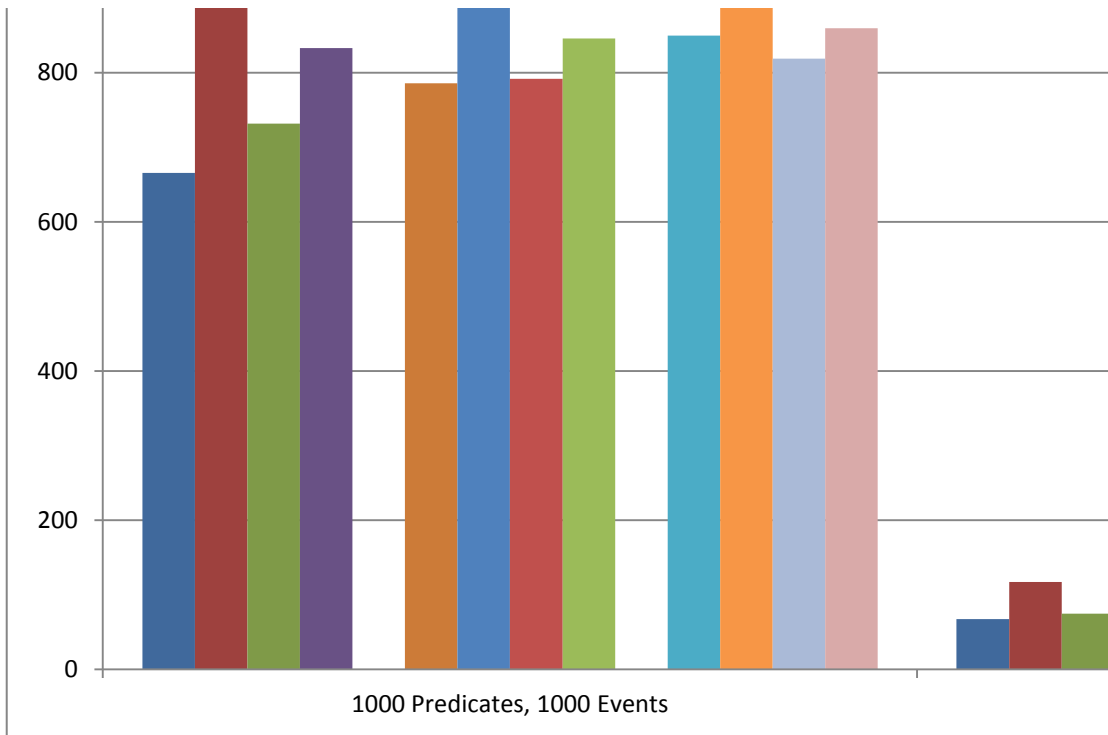




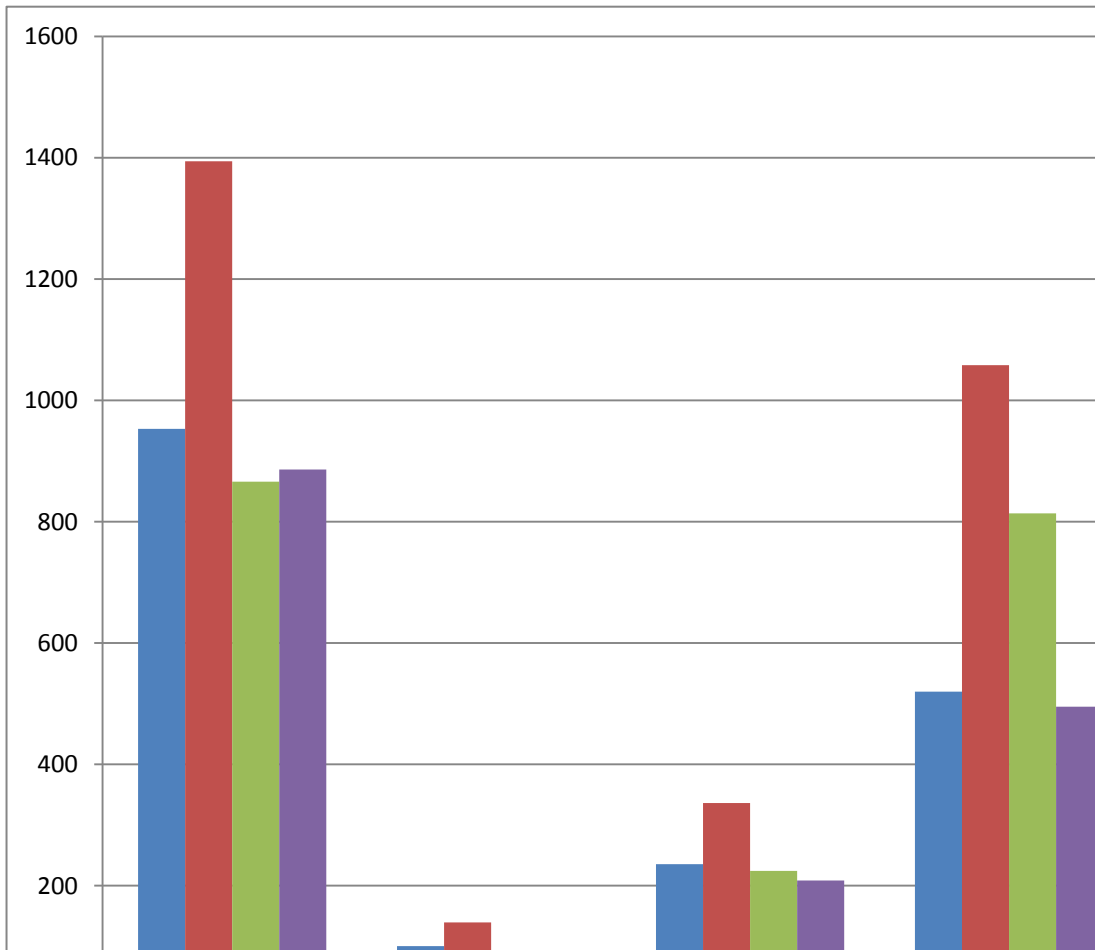
1000 Predicates, 1000 Events  
 1000 Predicates, 100 Events  
 2000 Predicates, 100 Events  
 4000 Predicates, 100 Events

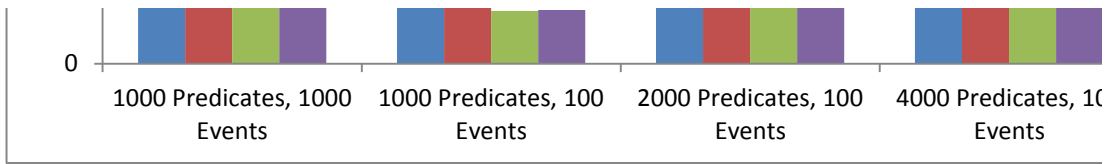
	Match2_25 - Matching Tr	Match2_25 - Counting (m)
1000 Predicates, 1000 Events	666	1181
1000 Predicates, 100 Events	67.4	117.1
2000 Predicates, 100 Events	160.8	269.3
4000 Predicates, 100 Events	385	896





	Match_100 - Matching Tr	Match_100 - Counting (m)
1000 Predicates, 1000 Events	953	1394
1000 Predicates, 100 Events	100.6	139.5
2000 Predicates, 100 Events	235.3	336.2
4000 Predicates, 100 Events	520	1058





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l a ve zdrojovém kódu

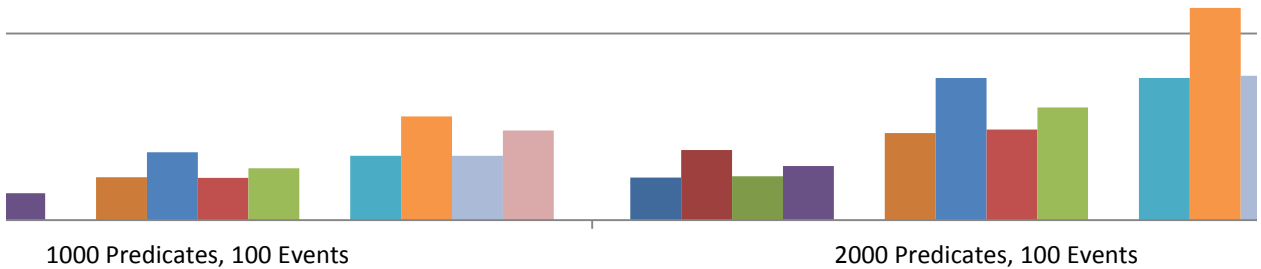
4 64bit, Oracle JDK 1.7.0\_21 64bit; Parametry: -Xss2m, -Xms8m, -Xmx256m

Match\_25\_random - Cour Match\_25\_random - Siena

220	293
21.8	28.9
47.1	57.9
93.7	121.1

Match\_50\_random - Mat

458
46
93.3
225.2



Match2\_25\_random - Coi Match2\_25\_random - Siena

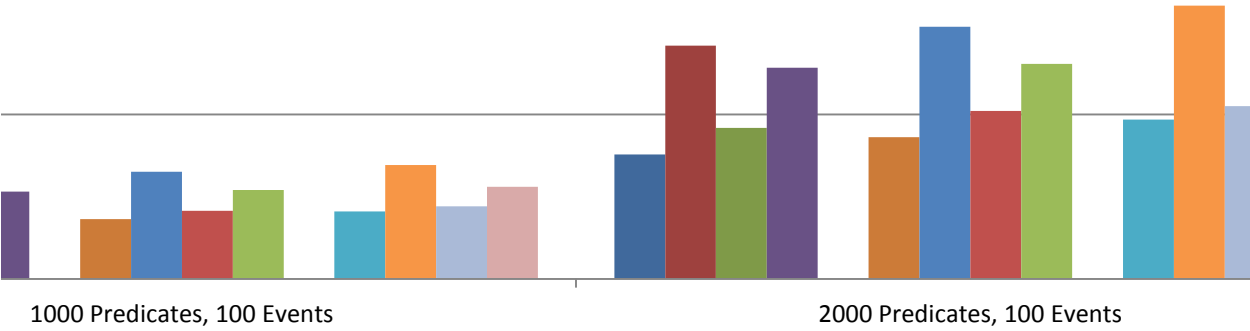
804	1054
78.5	106.3
183.5	256.7

Match2\_50\_random - Ma

771
72.6
172.4

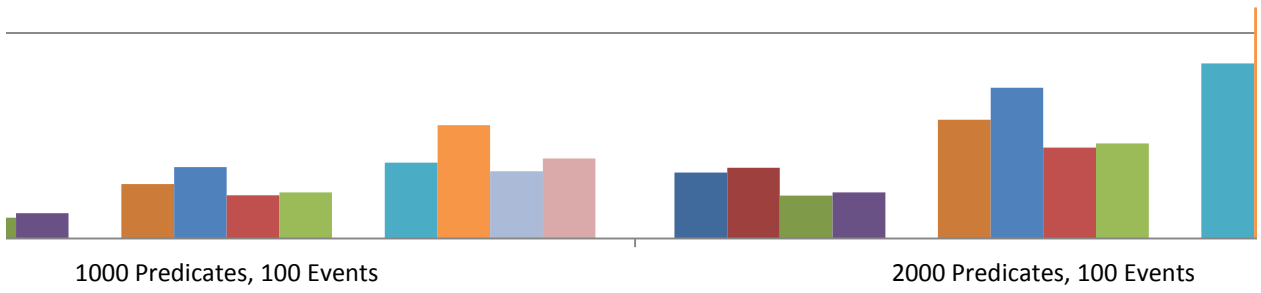
731.8 645.6

389.9



Match_25 - Counting (sing)		Match_25 - Siena	
201	20.2	245	24.6
41.7	87.8	44.8	89.1

Match_50 - Matching Tre	
528	52.9
115.6	295.5



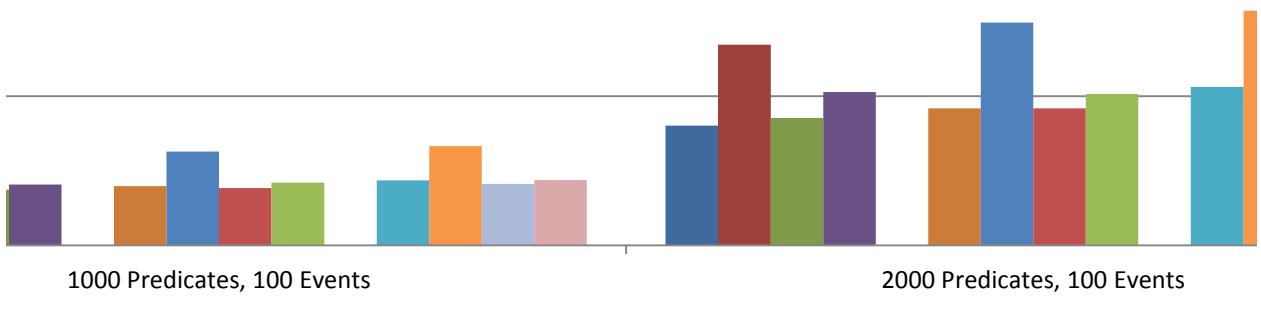
Match2\_25 - Counting (sir Match2\_25 - Siena

732	833
74.7	81.5
171.1	205.5
689.9	464.6

Match2\_50 - Matching Tr

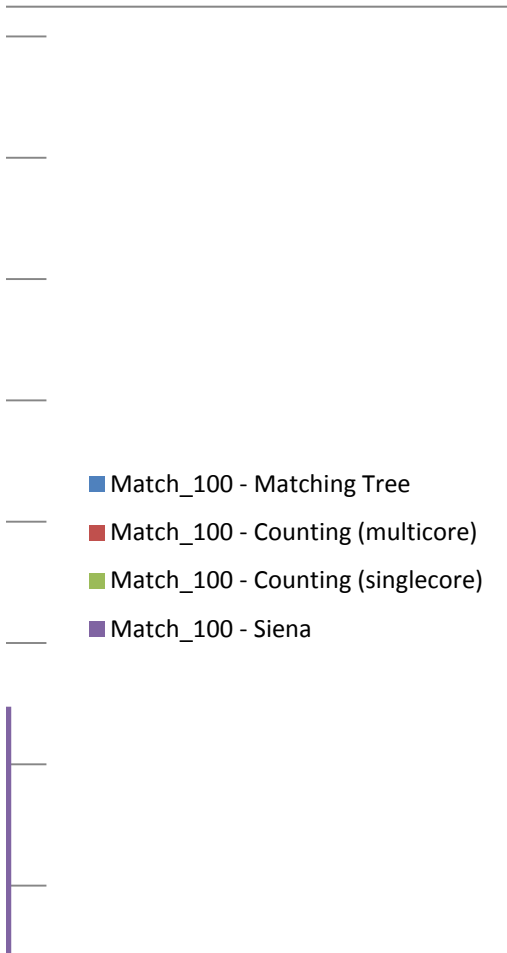
786
79.5
184
436.5





Match\_100 - Counting (si Match\_100 - Siena

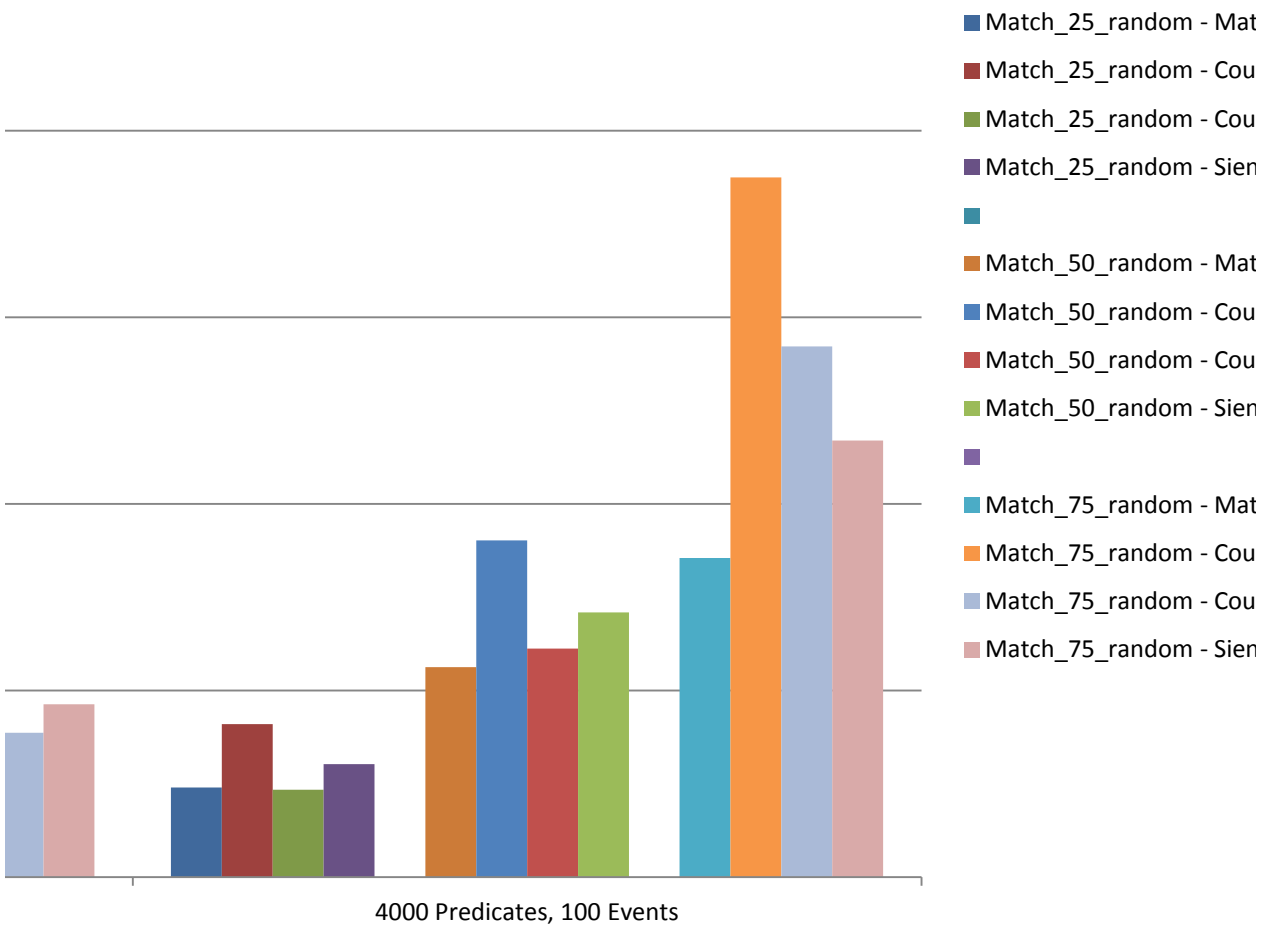
866	886
86.8	88.3
224.7	208.8
813.5	495.1



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Match\_50\_random - Cour Match\_50\_random - Cour Match\_50\_random - Siena

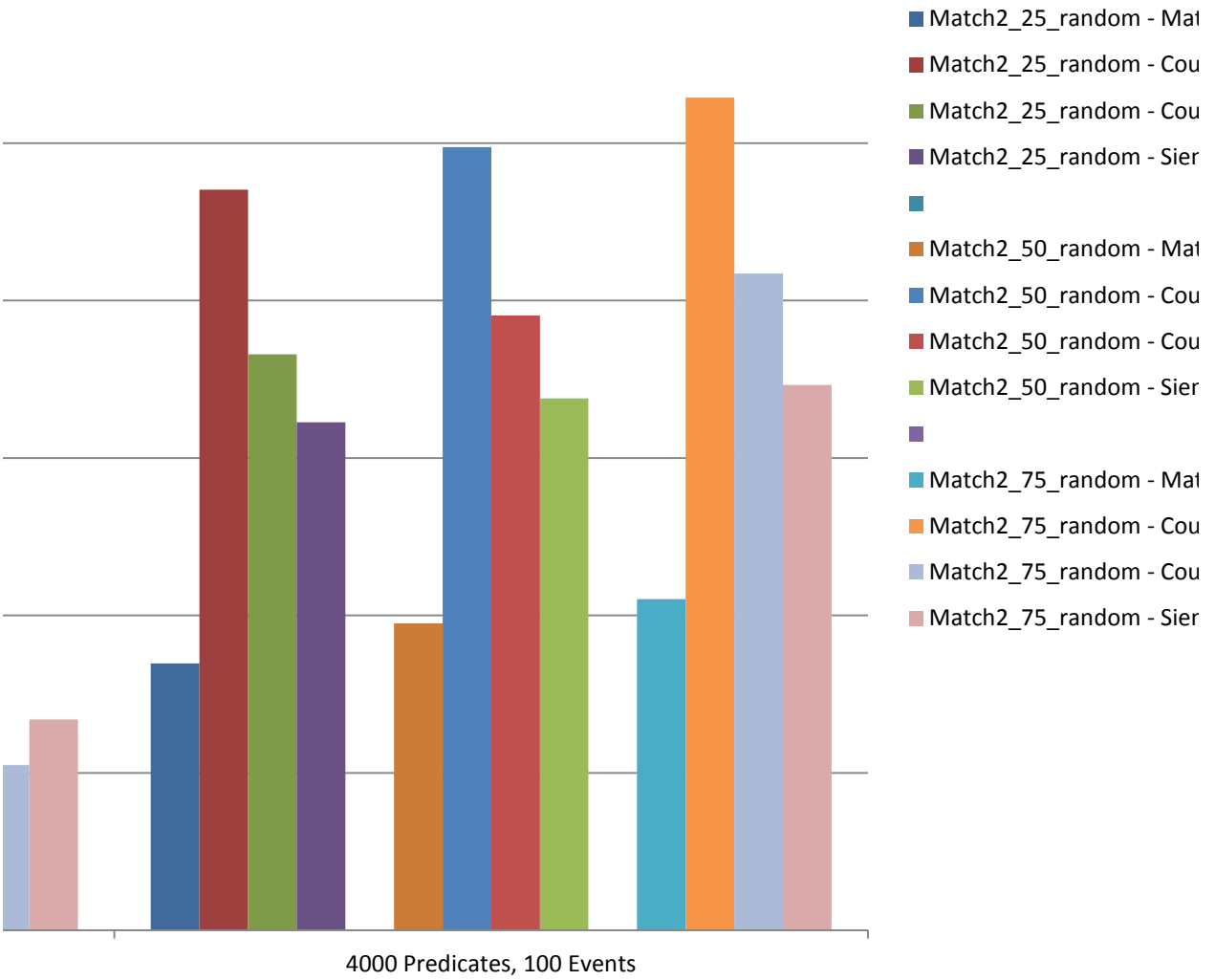
729	460	552
72.8	45.4	55.6
152.3	97.3	120.7
361	245.2	283.7



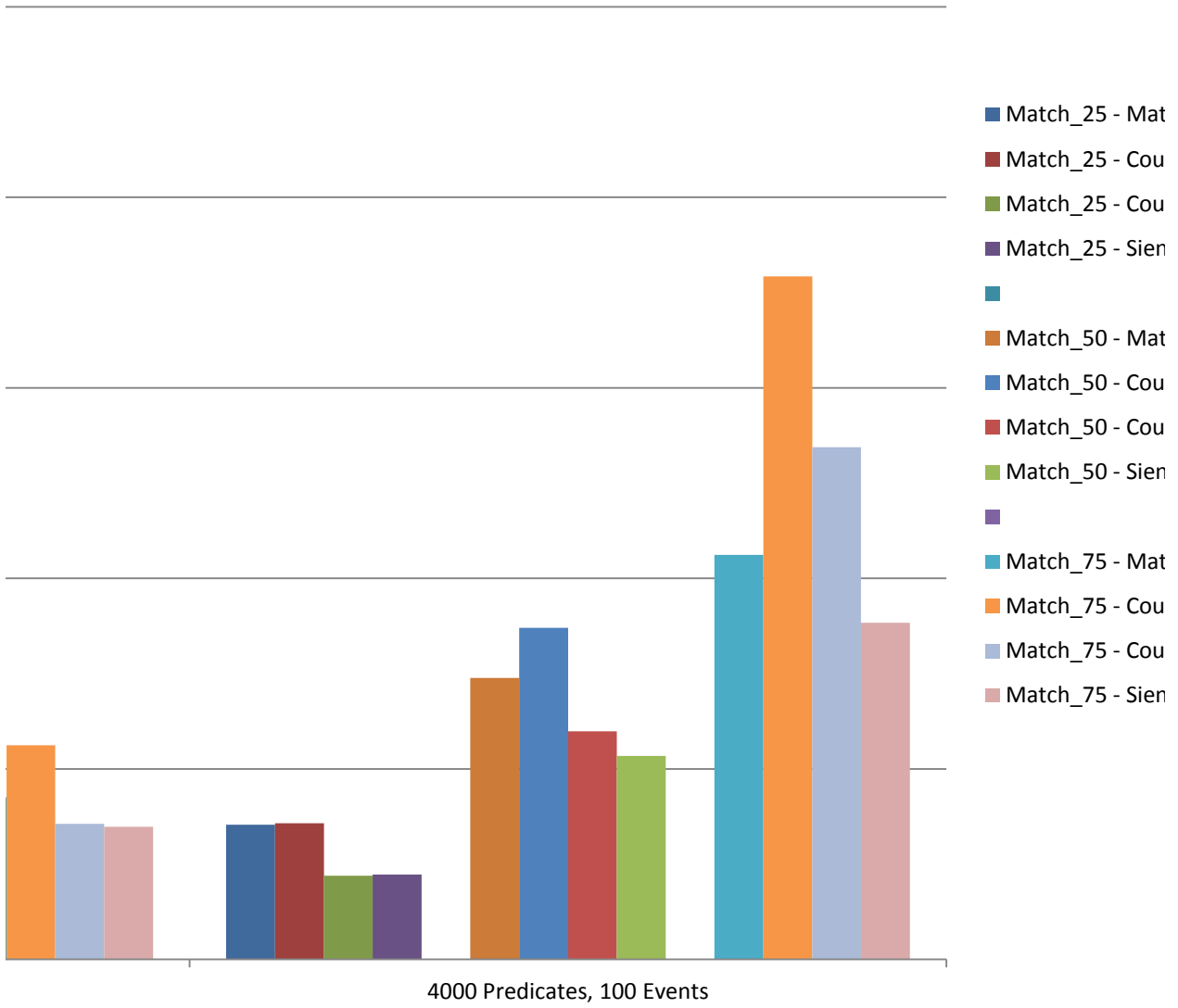
Match2\_50\_random - Cour Match2\_50\_random - Cour Match2\_50\_random - Siena

1317	854	1103
130.4	82.9	108.1
306.4	204.3	261.3

995	781.2	675.9
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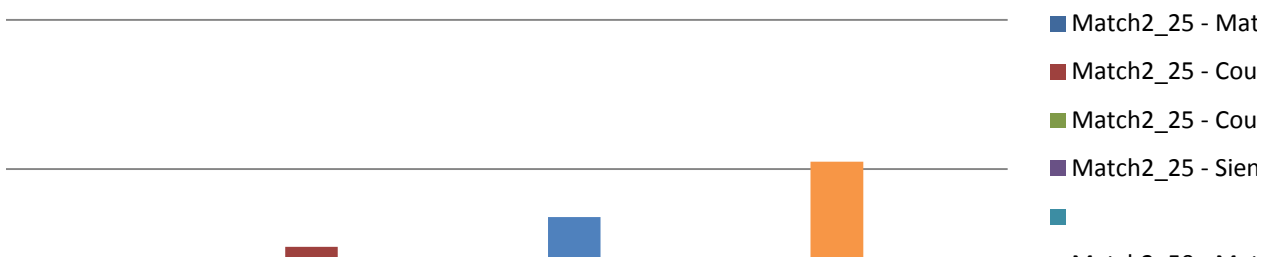


Match_50 - Counting (mu	Match_50 - Counting (sin	Match_50 - Siena
705	419	450
69.6	42	44.8
146.7	88.5	92.6
348	239.6	213.7



Match2\_50 - Counting (m Match2\_50 - Counting (si Match2\_50 - Siena

1267	792	846
125.9	76.8	84.3
298.8	183.6	203.3
936	728.1	489







Match_75_random - Mat	Match_75_random - Cour	Match_75_random - Cour	Match_75_random - Sien
715	1104	704	964
68.9	111.2	69	96
152.4	227.4	154.8	185.2
342.2	750	569	468.2

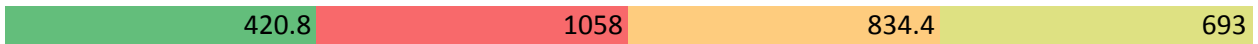
tching Tree  
 inting (multicore)  
 inting (singlecore)  
 1a

tching Tree  
 inting (multicore)  
 inting (singlecore)  
 1a

tching Tree  
 inting (multicore)  
 inting (singlecore)  
 1a

Match2_75_random - Ma	Match2_75_random - Coi	Match2_75_random - Coi	Match2_75_random - Sier
866	1372	898	1114
82.2	138.3	88.3	112
193.5	332.1	209.9	267.8





Matching Tree  
 Counting (multicore)  
 Counting (singlecore)  
 Siena

Matching Tree  
 Counting (multicore)  
 Counting (singlecore)  
 Siena

Matching Tree  
 Counting (multicore)  
 Counting (singlecore)  
 Siena

Match_75 - Matching Tree	Match_75 - Counting (multicore)	Match_75 - Counting (singlecore)	Match_75 - Siena
741	1053	654	780
74	110.2	65.4	77.9
170.5	224.9	142.4	139.3
424.7	717	537.7	353.5

Matching Tree  
Counting (multicore)  
Counting (singlecore)  
1a

Matching Tree  
Counting (multicore)  
Counting (singlecore)  
1a

Matching Tree  
Counting (multicore)  
Counting (singlecore)  
1a

Match2\_75 - Matching Tr Match2\_75 - Counting (m Match2\_75 - Counting (si Match2\_75 - Siena

850	1417	819	860
87.2	133.1	82.4	87.6
212.4	314.7	204.2	206.9
496	1010	779.8	488.1

Matching Tree  
Counting (multicore)  
Counting (singlecore)  
1a

tching Tree

nting (multicore)

nting (singlecore)

ra

tching Tree

nting (multicore)

nting (singlecore)

ra



a

na

Matching Tree	Counting (multicore)	Counting (singlecore)	
	237	344	220
	22.8	34.1	21.8
	45.8	75.3	47.1
	96.1	164	93.7
	458	729	460
	46	72.8	45.4
	93.3	152.3	97.3
	225.2	361	245.2
	715	1104	704
	68.9	111.2	69
	152.4	227.4	154.8
	342.2	750	569
	644	1245	804
	63.7	127.1	78.5
	151.3	283.6	183.5
	338.9	941	731.8
	771	1317	854
	72.6	130.4	82.9
	172.4	306.4	204.3
	389.9	995	781.2
	866	1372	898
	82.2	138.3	88.3
	193.5	332.1	209.9
	420.8	1058	834.4
	319	300	201
	32.2	31.1	20.2
	64.3	69	41.7
	141.4	143	87.8
	528	705	419
	52.9	69.6	42
	115.6	146.7	88.5
	295.5	348	239.6
	741	1053	654
	74	110.2	65.4
	170.5	224.9	142.4
	424.7	717	537.7
	953	1394	866
	100.6	139.5	86.8
	235.3	336.2	224.7
	520	1058	813.5
	666	1181	732
	67.4	117.1	74.7
	160.8	269.3	171.1
	385	896	689.9
	786	1267	792
	79.5	125.9	76.8

184	298.8	183.6
436.5	936	728.1
850	1417	819
87.2	133.1	82.4
212.4	314.7	204.2
496	1010	779.8

Siena

293  
28.9  
57.9  
121.1  
552  
55.6  
120.7  
283.7  
964  
96  
185.2  
468.2  
1054  
106.3  
256.7  
645.6  
1103  
108.1  
261.3  
675.9  
1114  
112  
267.8  
693  
245  
24.6  
44.8  
89.1  
450  
44.8  
92.6  
213.7  
780  
77.9  
139.3  
353.5  
886  
88.3  
208.8  
495.1  
833  
81.5  
205.5  
464.6  
846  
84.3



203.3  
489  
860  
87.6  
206.9  
488.1

	Match_25_random - mini	Match_25_random - Ma
1000 Predicates, 1000 Events	220	1.077272727
1000 Predicates, 100 Events	21.8	1.045871560
2000 Predicates, 100 Events	45.8	1.000000000
4000 Predicates, 100 Events	93.7	1.025613661
average		1.037189487
fastest		1

	Match2_25_random - mir	Match2_25_random - Ma
1000 Predicates, 1000 Events	644	1
1000 Predicates, 100 Events	63.7	1
2000 Predicates, 100 Events	151.3	1
4000 Predicates, 100 Events	338.9	1
average		1
fastest		4

	Match_25 - minimum	Match_25 - Matching Tre
1000 Predicates, 1000 Events	201	1.587064677
1000 Predicates, 100 Events	20.2	1.594059406
2000 Predicates, 100 Events	41.7	1.541966427
4000 Predicates, 100 Events	87.8	1.61047836
average		1.583392217
fastest		0

	Match2_25 - minimum	Match2_25 - Matching Tr
1000 Predicates, 1000 Events	666	1
1000 Predicates, 100 Events	67.4	1
2000 Predicates, 100 Events	160.8	1
4000 Predicates, 100 Events	385	1
average		1
fastest		4

	Match_100 - minimum	Match_100 - Matching Tr
1000 Predicates, 1000 Events	866	1.100461894
1000 Predicates, 100 Events	86.8	1.158986175
2000 Predicates, 100 Events	208.8	1.126915709
4000 Predicates, 100 Events	495.1	1.05029287
average		1.109164162
fastest		0

	Matching Tree	Counting (multicore)
Match_25_random	1.037189487	1.630557040
Match_50_random	1.003303965	1.607653882
Match_75_random	1.00390625	1.71648545

Match2_25_random	1	2.144893048
Match2_50_random	1	1.958378258
Match2_75_random	1	1.874328747
Match_25	1.583392217	1.578879782
Match_50	1.302165324	1.65644966
Match_75	1.172479362	1.734474163
Match2_25	1	1.878171492
Match2_50	1.009333725	1.75576577
Match2_75	1.038111346	1.73895856
Match_100	1.109164162	1.740984479
average	1.09684968	1.770460025
fastest	25	0

Match_25_random - Cour	Match_25_random - Cour	Match_25_random - Siena
1.563636364	1.000000000	1.331818182
1.564220183	1.000000000	1.325688073
1.644104803	1.028384279	1.264192140
1.750266809	1.000000000	1.292422625
1.630557040	1.007096070	1.303530255
0	3	0

Match2_25_random - Coi	Match2_25_random - Coi	Match2_25_random - Siena
1.933229814	1.248447205	1.636645963
1.995290424	1.232339089	1.668759812
1.874421679	1.212822208	1.696629213
2.776630274	2.159339038	1.904986722
2.144893048	1.463236885	1.726755427
0	0	0

Match_25 - Counting (mu	Match_25 - Counting (sin	Match_25 - Siena
1.492537313	1	1.218905473
1.53960396	1	1.217821782
1.654676259	1	1.074340528
1.628701595	1	1.014806378
1.578879782	1	1.13146854
0	4	0

Match2_25 - Counting (m	Match2_25 - Counting (si	Match2_25 - Siena
1.773273273	1.099099099	1.250750751
1.737388724	1.108308605	1.209198813
1.674751244	1.064054726	1.277985075
2.327272727	1.791948052	1.206753247
1.878171492	1.265852621	1.236171971
0	0	0

Match_100 - Counting (m	Match_100 - Counting (si	Match_100 - Siena
1.609699769	1	1.023094688
1.607142857	1	1.017281106
1.610153257	1.076149425	1
2.136942032	1.643102404	1
1.740984479	1.179812957	1.010093949
0	2	2

Counting (singlecore)	Siena
1.007096070	1.303530255
1.034012303	1.245838796
1.16999243	1.336517666

1.463236885	1.726755427
1.359537786	1.542193246
1.294701251	1.419936748
1	1.13146854
1.030299485	1.046745008
1.135832273	1.095948012
1.265852621	1.236171971
1.168918706	1.100391379
1.149405859	1.031597544
1.179812957	1.010093949
1.173746048	1.248245272
21	6

Match_50_random - mini	Match_50_random - Mat	Match_50_random - Cour	Match_50_random - Cour
458	1	1.591703057	1.004366812
45.4	1.013215859	1.603524229	1
93.3	1	1.632368703	1.042872454
225.2	1	1.603019538	1.088809947
	1.003303965	1.607653882	1.034012303
	3	0	1

Match2_50_random - mir	Match2_50_random - Ma	Match2_50_random - Coi	Match2_50_random - Coi
771	1	1.708171206	1.107652399
72.6	1	1.796143251	1.141873278
172.4	1	1.777262181	1.185034803
389.9	1	2.551936394	2.003590664
	1	1.958378258	1.359537786
	4	0	0

Match_50 - minimum	Match_50 - Matching Tre	Match_50 - Counting (mu	Match_50 - Counting (sin
419	1.260143198	1.682577566	1
42	1.25952381	1.657142857	1
88.5	1.306214689	1.657627119	1
213.7	1.382779598	1.6284511	1.121197941
	1.302165324	1.65644966	1.030299485
	0	0	3

Match2_50 - minimum	Match2_50 - Matching Tr	Match2_50 - Counting (m	Match2_50 - Counting (si
786	1	1.611959288	1.007633588
76.8	1.03515625	1.639322917	1
183.6	1.002178649	1.62745098	1
436.5	1	2.144329897	1.668041237
	1.009333725	1.75576577	1.168918706
	2	0	2



Match\_50\_random - Siena

1.205240175  
1.224669604  
1.293676313  
1.259769094  
1.245838796  
0

Match\_75\_random - mini Match\_75\_random - Mat

704  
68.9  
152.4  
342.2  
1.00390625  
3

Match2\_50\_random - Siena

1.430609598  
1.488980716  
1.515661253  
1.733521416  
1.542193246  
0

Match2\_75\_random - mir Match2\_75\_random - Ma

866  
82.2  
193.5  
420.8  
1  
4

Match\_50 - Siena

1.07398568  
1.066666667  
1.046327684  
1  
1.046745008  
1

Match\_75 - minimum Match\_75 - Matching Tre

654  
65.4  
139.3  
353.5  
1.133027523  
1.131498471  
1.223977028  
1.201414427  
1.172479362  
0

Match2\_50 - Siena

1.076335878  
1.09765625  
1.107298475  
1.120274914  
1.100391379  
0

Match2\_75 - minimum Match2\_75 - Matching Tr

819  
82.4  
204.2  
488.1  
1.037851038  
1.058252427  
1.040156709  
1.016185208  
1.038111346  
0





Match_75_random - Cour	Match_75_random - Cour	Match_75_random - Siena
1.568181818	1	1.369318182
1.613933237	1.001451379	1.393323657
1.492125984	1.015748031	1.215223097
2.19170076	1.66277031	1.368205728
1.71648545	1.16999243	1.336517666
0	1	0

Match2_75_random - Cour	Match2_75_random - Cour	Match2_75_random - Siena
1.584295612	1.036951501	1.286374134
1.682481752	1.074209246	1.362530414
1.71627907	1.084754522	1.383979328
2.514258555	1.982889734	1.646863118
1.874328747	1.294701251	1.419936748
0	0	0

Match_75 - Counting (mu	Match_75 - Counting (sin	Match_75 - Siena
1.610091743	1	1.19266055
1.685015291	1	1.191131498
1.614501077	1.022254128	1
2.028288543	1.521074965	1
1.734474163	1.135832273	1.095948012
0	2	2

Match2_75 - Counting (m	Match2_75 - Counting (si	Match2_75 - Siena
1.73015873	1	1.05006105
1.615291262	1	1.063106796
1.541136141	1	1.013222331
2.069248105	1.597623438	1
1.73895856	1.149405859	1.031597544
0	3	1

## Counting (multicore)

### 1000 Predicates, 1000 Events

Match_25_random	344
Match_50_random	729
Match_75_random	1104
Match2_25_random	1245
Match2_50_random	1317
Match2_75_random	1372
Match_25	300
Match_50	705
Match_75	1053
Match2_25	1181
Match2_50	1267
Match2_75	1417
Match_100	1394

1000 Predicates, 100 Events

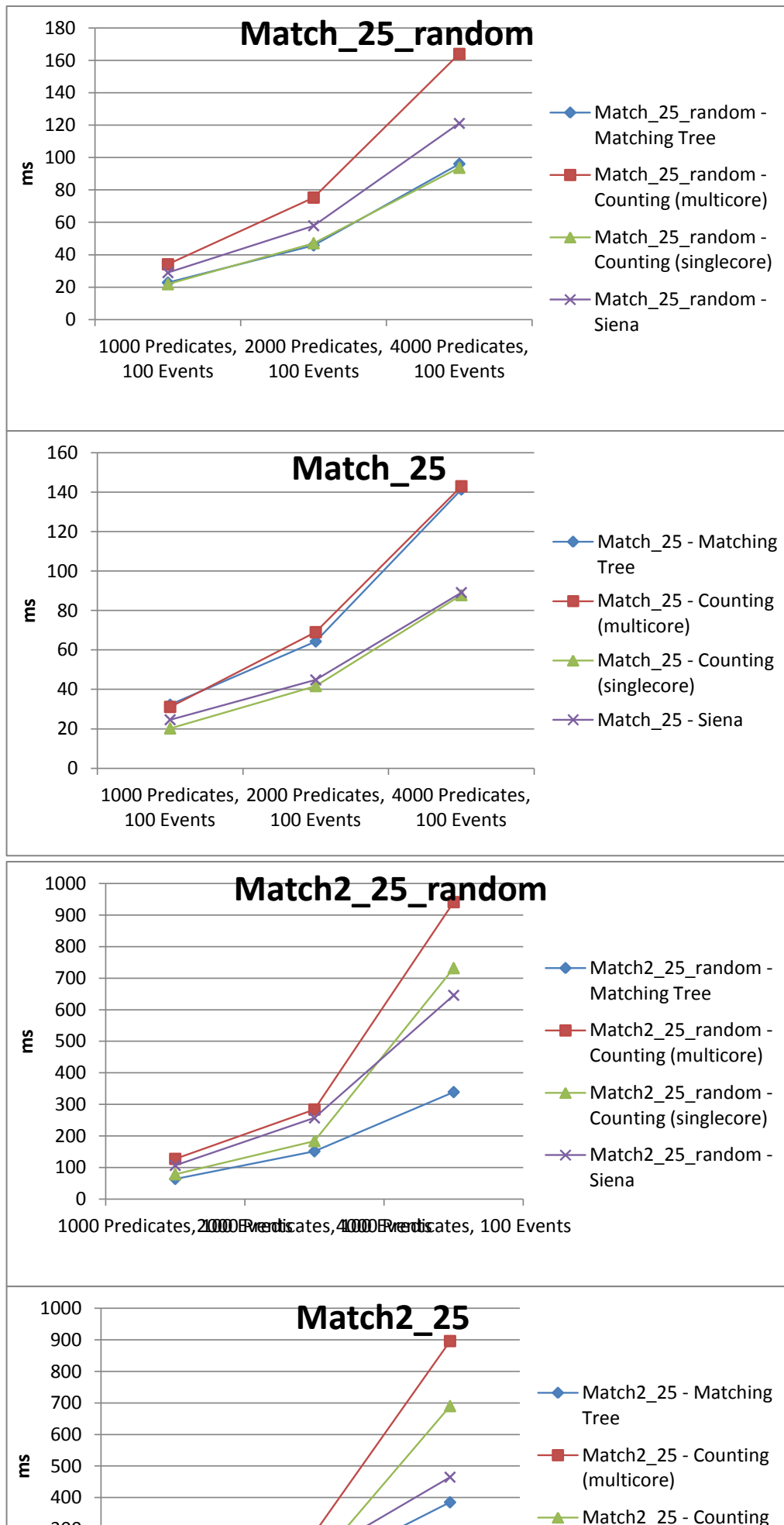
2000 Predicates, 100 Events

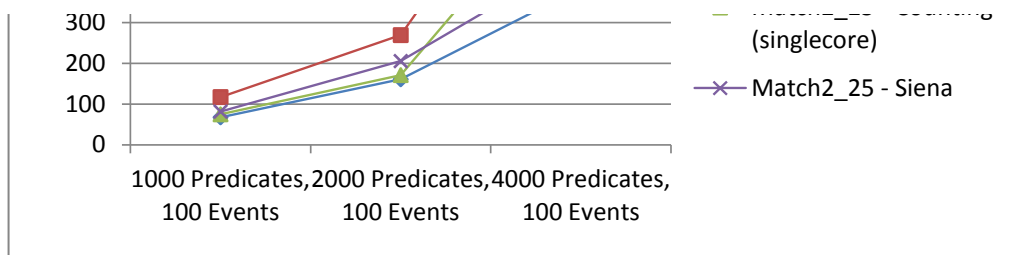
34.1	75.3
72.8	152.3
111.2	227.4
127.1	283.6
130.4	306.4
138.3	332.1
31.1	69
69.6	146.7
110.2	224.9
117.1	269.3
125.9	298.8
133.1	314.7
139.5	336.2

4000 Predicates, 100 Events

164  
361  
750  
941  
995  
1058  
143  
348  
717  
896  
936  
1010  
1058

## Závislost na počtu predikátů

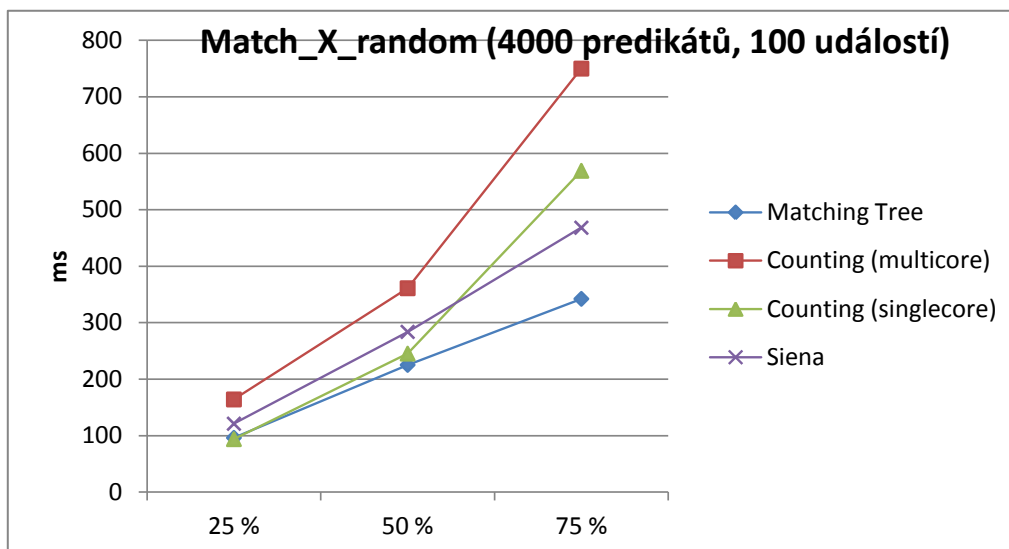




### Závislost na poměru splněných predikátů vůči všem predikátům

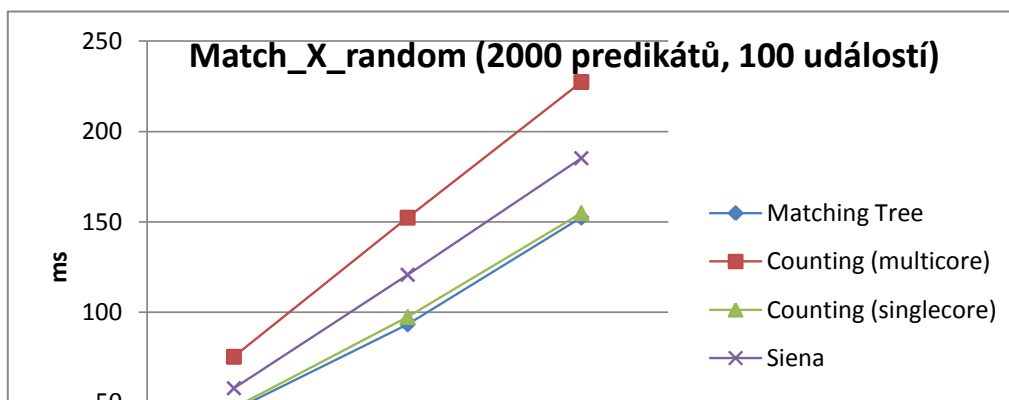
4000 Predicates, 100 Events, random

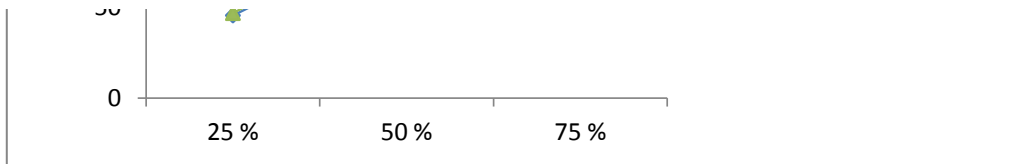
	25 %	50 %	75 %
Matching Tree	96.1	225.2	342.2
Counting (multicore)	164	361	750
Counting (singlecore)	93.7	245.2	569
Siena	121.1	283.7	468.2



2000 Predicates, 100 Events, random

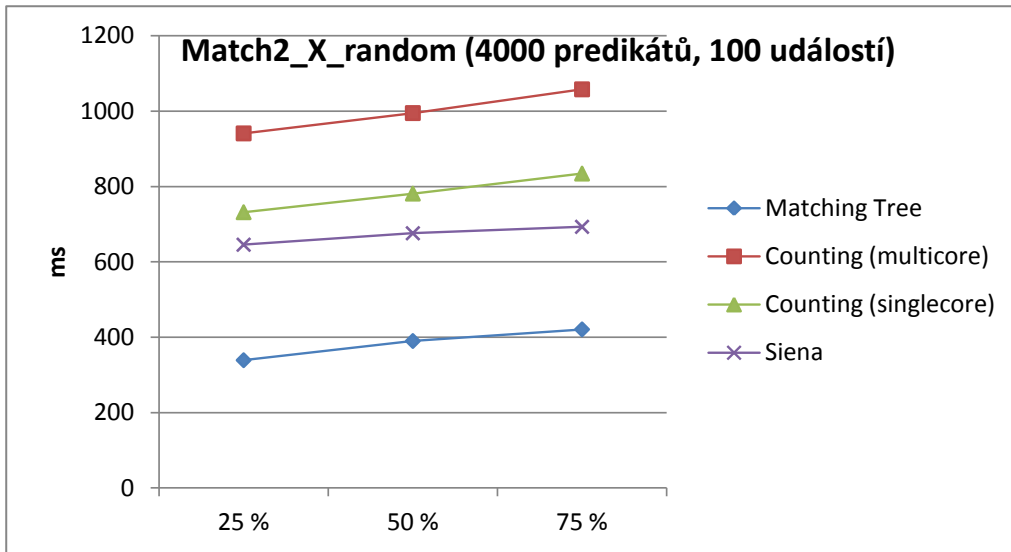
	25 %	50 %	75 %
Matching Tree	45.8	93.3	152.4
Counting (multicore)	75.3	152.3	227.4
Counting (singlecore)	47.1	97.3	154.8
Siena	57.9	120.7	185.2





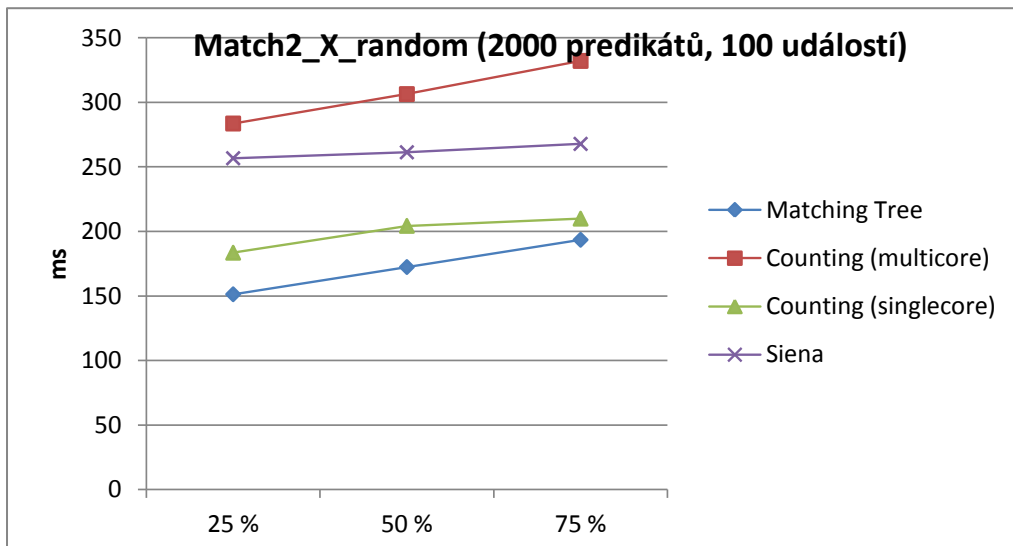
match2, 4000 Predicates, 100 Events, random

	25 %	50 %	75 %
Matching Tree	338.9	389.9	420.8
Counting (multicore)	941	995	1058
Counting (singlecore)	731.8	781.2	834.4
Siena	645.6	675.9	693

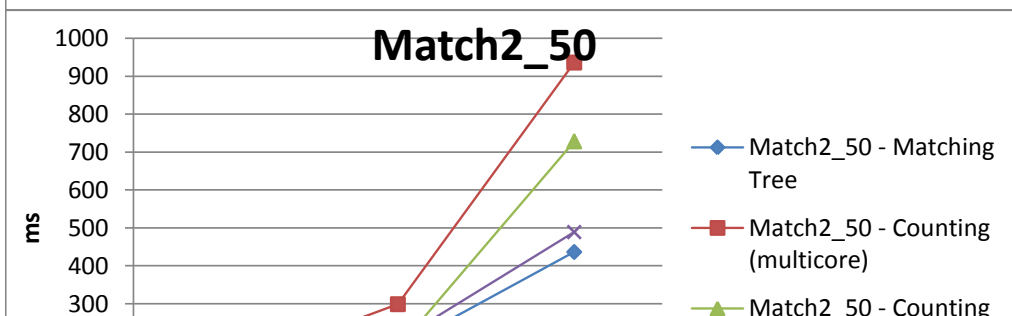
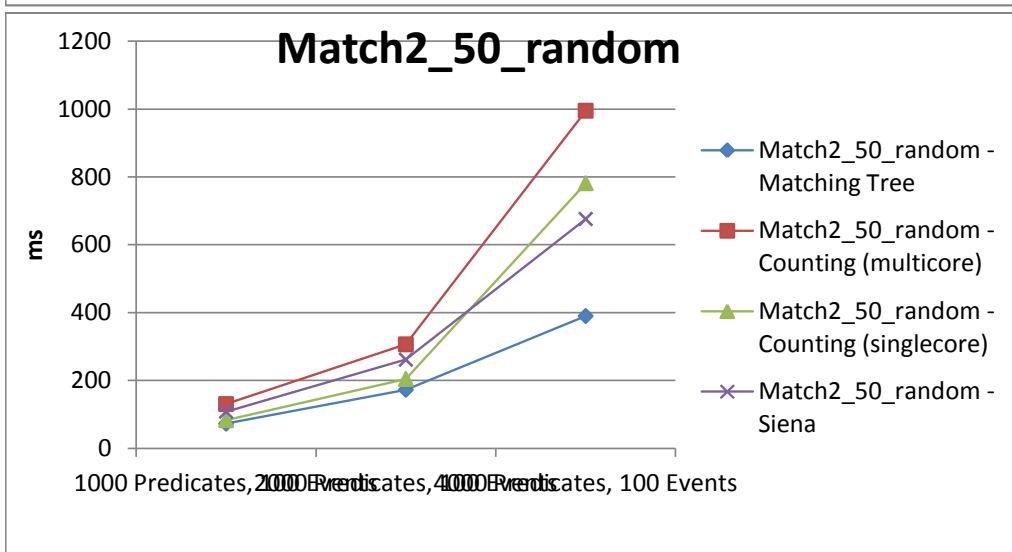
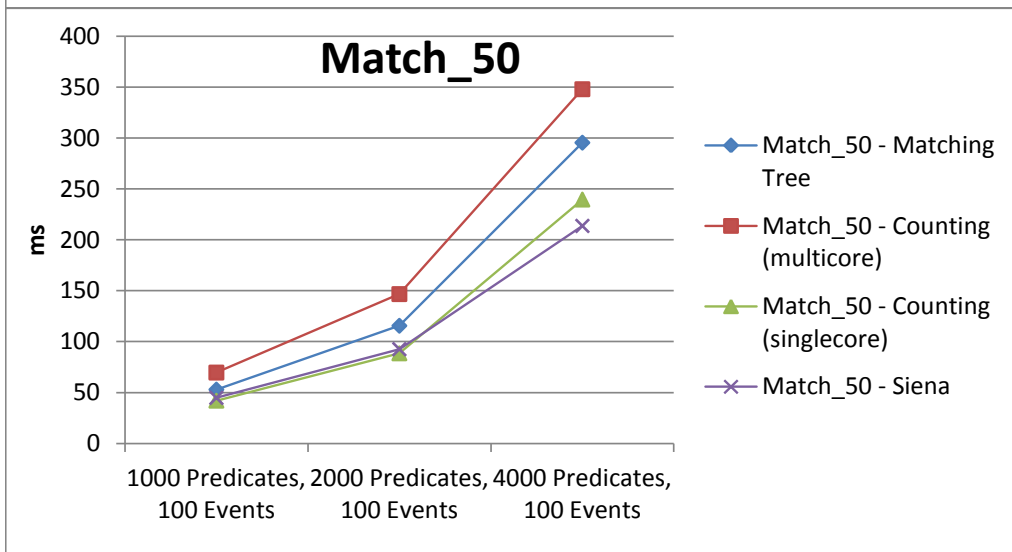
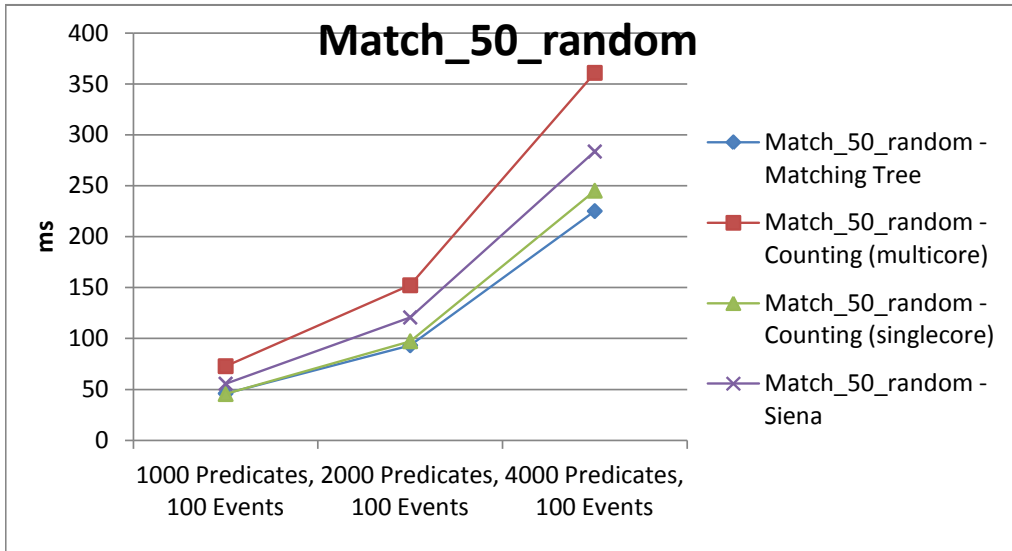


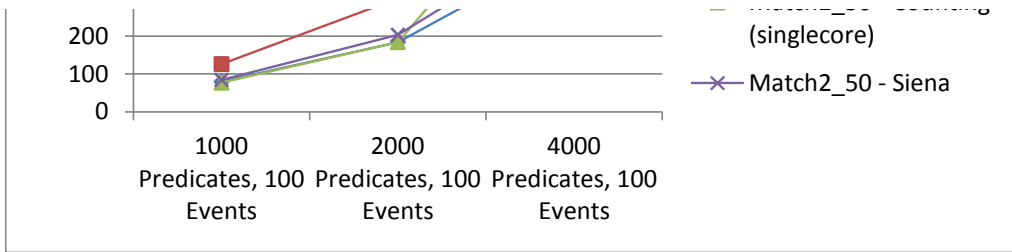
match2, 2000 Predicates, 100 Events, random

	25 %	50 %	75 %
Matching Tree	151.3	172.4	193.5
Counting (multicore)	283.6	306.4	332.1
Counting (singlecore)	183.5	204.3	209.9
Siena	256.7	261.3	267.8



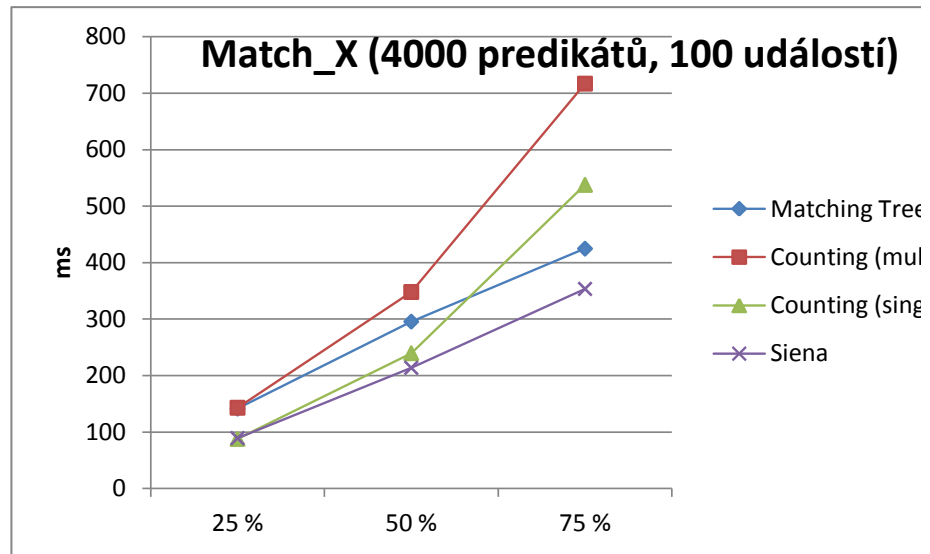






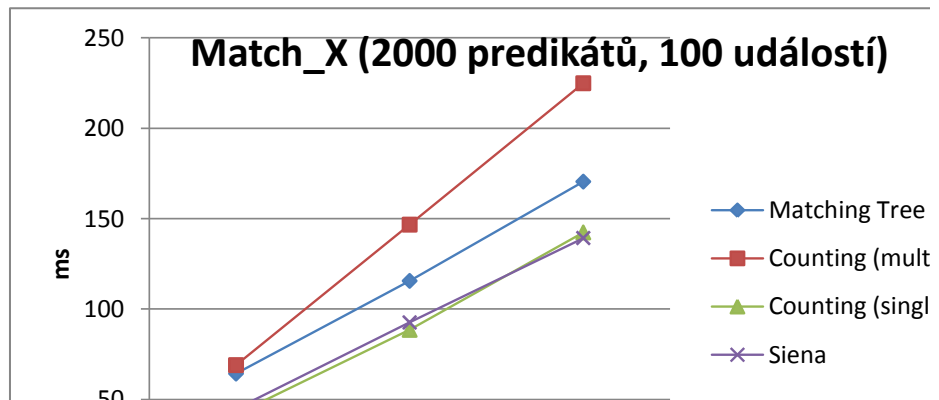
4000 Predicates, 100 Events, non-random

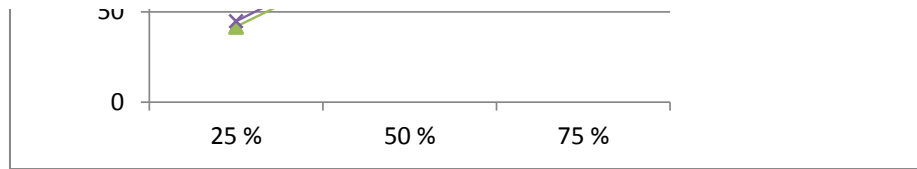
	25 %	50 %	75 %
	141.4	295.5	424.7
	143	348	717
	87.8	239.6	537.7
	89.1	213.7	353.5



2000 Predicates, 100 Events, non-random

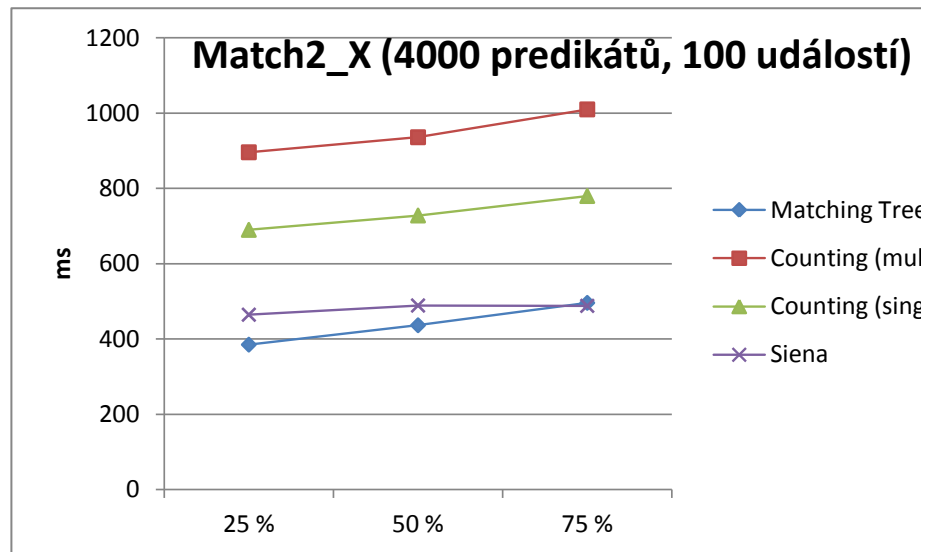
	25 %	50 %	75 %
	64.3	115.6	170.5
	69	146.7	224.9
	41.7	88.5	142.4
	44.8	92.6	139.3





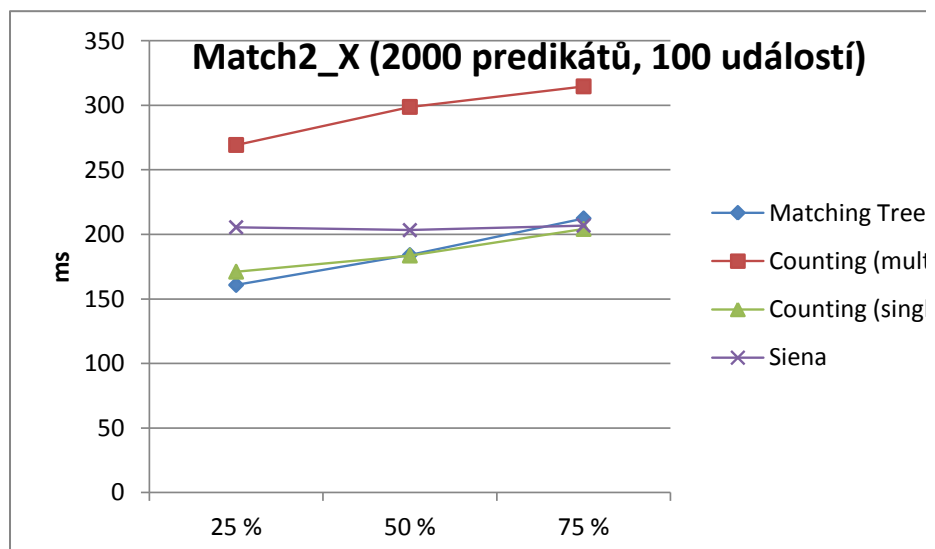
match2, 4000 Predicates, 100 Events, non-random

	25 %	50 %	75 %
	385	436.5	496
	896	936	1010
	689.9	728.1	779.8
	464.6	489	488.1



match2, 2000 Predicates, 100 Events, non-random

	25 %	50 %	75 %
	160.8	184	212.4
	269.3	298.8	314.7
	171.1	183.6	204.2
	205.5	203.3	206.9





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