Libpll sequential benchmarks

February 2, 2017

- node : node index (post order traversal)
- psize: number of unique (not repeating) sites on the current node
- lsize: number of unique (not repeating) sites on the left child node
- rsize: number of unique (not repeating) sites on the right child node
- ullet repeats: runtime for 500 update partials on the node
- $\bullet\,$ TCLV opt : runtime for 500 update partials on the node with left and right TCLV
- SR opt : bclv si repeats qqpart, gros if dans la boucle
- SR opt2 : bclv si repeats qqpart, boucle qui gere aussi les non repeats
- $\bullet\,$ SR opt3 : tip pattern, b
clv si repeats q
qpart, boucle qui gere aussi les non repeats
- SR opt4; bclv si repeats qqpart, gros if dans la boucle, prebuffer, unroll

1 dataset 404 hits avx

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node0	64	15	15	101ms	62ms
node1	130	15	64	$335 \mathrm{ms}$	123ms
node2	33	15	15	96ms	36ms
node3	193	130	33	782ms	202ms
node4	35	15	15	$93 \mathrm{ms}$	$35 \mathrm{ms}$
node5	247	193	35	773ms	249ms
node6	305	247	15	328ms	277ms
node7	90	15	15	97ms	73ms
node8	200	15	90	321ms	181ms
node9	95	15	15	97ms	85ms
node10	200	15	95	$325 \mathrm{ms}$	185ms
node11	33	15	15	92ms	43ms
node12	69	15	33	321ms	67ms
node13	281	200	69	761ms	304ms
node14	90	15	15	$95 \mathrm{ms}$	81ms
node15	166	15	90	329ms	157ms
node16	271	15	166	$323 \mathrm{ms}$	236ms
node17	395	281	271	918ms	549ms
node18	423	200	395	906ms	530ms
node19	76	15	15	$95 \mathrm{ms}$	68ms

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node20	139	15	76	$327 \mathrm{ms}$	126ms
node21	238	15	139	$359 \mathrm{ms}$	212ms
node22	51	15	15	116ms	46ms
node23	53	15	15	110ms	$46 \mathrm{ms}$
node24	82	53	15	$332 \mathrm{ms}$	$76 \mathrm{ms}$
node25	54	15	15	$95 \mathrm{ms}$	$47 \mathrm{ms}$
node26	81	15	54	328ms	$76 \mathrm{ms}$
node27	141	82	81	749ms	173ms
node28	36	15	15	$90 \mathrm{ms}$	$39 \mathrm{ms}$
node29	60	15	36	$340 \mathrm{ms}$	$58 \mathrm{ms}$
node30	44	15	15	117ms	$40 \mathrm{ms}$
node31	98	60	44	756ms	111ms
node32	189	141	98	754ms	$232 \mathrm{ms}$
node33	214	15	189	$325 \mathrm{ms}$	186ms
node34	230	51	214	$755 \mathrm{ms}$	231ms
node35	58	15	15	98ms	$48 \mathrm{ms}$
node36	110	58	15	$325 \mathrm{ms}$	91ms
node37	51	15	15	97ms	$46 \mathrm{ms}$
node38	36	15	15	92ms	$39 \mathrm{ms}$
node39	96	51	36	751ms	100ms

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node40	128	15	96	$326 \mathrm{ms}$	115ms
node41	213	110	128	$756 \mathrm{ms}$	249ms
node42	234	15	213	$326 \mathrm{ms}$	206ms
node43	30	15	15	$93 \mathrm{ms}$	$36 \mathrm{ms}$
node44	67	15	30	$325 \mathrm{ms}$	62ms
node45	84	15	15	$96 \mathrm{ms}$	$80 \mathrm{ms}$
node46	186	67	84	$757 \mathrm{ms}$	209ms
node47	293	234	186	$759 \mathrm{ms}$	392ms
node48	346	230	293	793ms	473ms
node49	410	238	346	$759 \mathrm{ms}$	548ms
node50	479	423	410	817ms	747ms
node51	84	15	15	110ms	74ms
node52	85	15	15	102ms	82ms
node53	250	84	85	$770 \mathrm{ms}$	$263 \mathrm{ms}$
node54	57	15	15	92ms	54ms
node55	93	15	57	328ms	$85 \mathrm{ms}$
node56	122	93	15	$323 \mathrm{ms}$	109ms
node57	184	122	15	328ms	$157 \mathrm{ms}$
node58	227	15	184	$327 \mathrm{ms}$	193ms
node59	113	15	15	100ms	109ms

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node60	354	227	113	$758 \mathrm{ms}$	$379 \mathrm{ms}$
node61	405	250	354	$759 \mathrm{ms}$	527ms
node62	503	479	405	$764 \mathrm{ms}$	748ms
node63	116	15	15	$103 \mathrm{ms}$	117ms
node64	259	15	116	$323 \mathrm{ms}$	242ms
node65	509	503	259	761ms	$649 \mathrm{ms}$
node66	125	15	15	101ms	114ms
node67	284	125	15	$325 \mathrm{ms}$	258ms
node68	51	15	15	$95 \mathrm{ms}$	$50 \mathrm{ms}$
node69	55	15	15	96ms	$55 \mathrm{ms}$
node70	124	51	55	$755 \mathrm{ms}$	142ms
node71	52	15	15	94ms	$43 \mathrm{ms}$
node72	92	15	52	322ms	$73 \mathrm{ms}$
node73	51	15	15	92ms	$53 \mathrm{ms}$
node74	98	15	51	$325 \mathrm{ms}$	88ms
node75	172	92	98	$753 \mathrm{ms}$	200ms
node76	219	124	172	761ms	283ms
node77	46	15	15	$95 \mathrm{ms}$	$47 \mathrm{ms}$
node78	95	46	15	$326 \mathrm{ms}$	87ms
node79	46	15	15	$95 \mathrm{ms}$	$47 \mathrm{ms}$

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node80	46	15	15	$93 \mathrm{ms}$	46ms
node81	38	15	15	$95 \mathrm{ms}$	34ms
node82	82	46	38	$756 \mathrm{ms}$	$95 \mathrm{ms}$
node83	122	46	82	$742 \mathrm{ms}$	142ms
node84	35	15	15	91ms	$37 \mathrm{ms}$
node85	60	15	35	$324 \mathrm{ms}$	$53 \mathrm{ms}$
node86	199	122	60	748ms	204ms
node87	266	95	199	764ms	291ms
node88	332	219	266	745ms	448ms
node89	57	15	15	$96 \mathrm{ms}$	$49 \mathrm{ms}$
node90	48	15	15	$92 \mathrm{ms}$	42ms
node91	51	15	15	$97 \mathrm{ms}$	46ms
node92	44	15	15	$95 \mathrm{ms}$	42ms
node93	74	44	15	$327 \mathrm{ms}$	$65 \mathrm{ms}$
node94	126	51	74	748ms	138ms
node95	164	48	126	763ms	$165 \mathrm{ms}$
node96	40	15	15	94ms	43ms
node97	56	15	15	94ms	51ms
node98	131	40	56	746ms	138ms
node99	264	164	131	$759 \mathrm{ms}$	318ms

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node100	297	57	264	764ms	293ms
node101	318	15	297	$326 \mathrm{ms}$	286ms
node102	52	15	15	91ms	$52 \mathrm{ms}$
node103	50	15	15	$97 \mathrm{ms}$	$46 \mathrm{ms}$
node104	140	52	50	749ms	$155 \mathrm{ms}$
node105	47	15	15	$92 \mathrm{ms}$	$46 \mathrm{ms}$
node106	59	15	15	94ms	$53 \mathrm{ms}$
node107	122	47	59	768ms	$135 \mathrm{ms}$
node108	246	140	122	752ms	316ms
node109	63	15	15	$95 \mathrm{ms}$	$58 \mathrm{ms}$
node110	101	15	63	322ms	90ms
node111	55	15	15	93ms	51ms
node112	89	15	55	322ms	$79 \mathrm{ms}$
node113	152	89	15	331ms	133ms
node114	184	152	15	329ms	$163 \mathrm{ms}$
node115	241	101	184	755ms	273ms
node116	327	246	241	$745 \mathrm{ms}$	$466 \mathrm{ms}$
node117	22	15	15	$91 \mathrm{ms}$	24ms
node118	17	15	15	88ms	21ms
node119	19	17	15	323ms	21ms

node	psrsize	lsrsize	rsrsize	tippat	SR bclv
node120	28	22	19	747ms	$33 \mathrm{ms}$
node121	80	15	15	$96 \mathrm{ms}$	71ms
node122	136	28	80	750ms	126ms
node123	53	15	15	$95 \mathrm{ms}$	$52 \mathrm{ms}$
node124	108	15	53	$327 \mathrm{ms}$	$96 \mathrm{ms}$
node125	154	108	15	324ms	132ms
node126	249	136	154	758ms	$310 \mathrm{ms}$
node127	57	15	15	$95 \mathrm{ms}$	$49 \mathrm{ms}$
node128	140	57	15	$325 \mathrm{ms}$	119ms
node129	311	249	140	788ms	$358 \mathrm{ms}$
node130	392	327	311	761ms	$572 \mathrm{ms}$
node131	418	318	392	755ms	$611 \mathrm{ms}$
node132	445	332	418	$765 \mathrm{ms}$	$642 \mathrm{ms}$
node133	481	284	445	760ms	$665 \mathrm{ms}$
node134	529	509	481	813ms	$853 \mathrm{ms}$
node135	529	15	529	$328 \mathrm{ms}$	$456 \mathrm{ms}$
node136	531	305	529	$758 \mathrm{ms}$	707ms
node137	134	15	15	$95 \mathrm{ms}$	116ms