Report TP ALSDD

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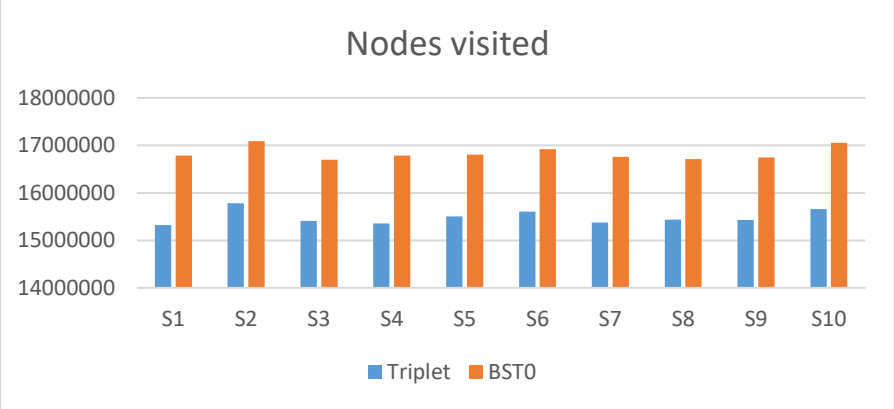
Simulation Statistics:

1. Range search simulation:

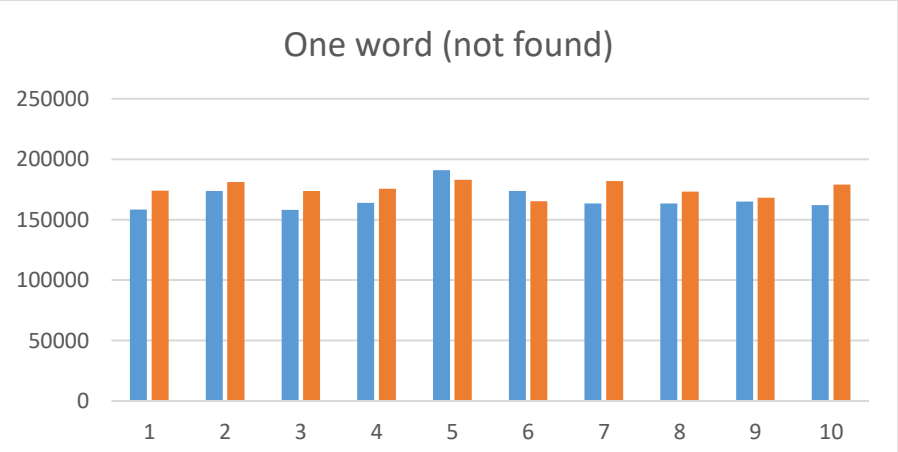
The number of nodes visited:

Simulations	Triplet	BST0
S1	15325441	16782835
S2	15781748	17088081
S3	15412382	16698826
S4	15355705	16788852
S5	15502761	16805647
S6	15605705	16923394
S7	15377283	16758886
S8	15439219	16714449
S9	15430675	16746894
S10	15659948	17054188



2. One word search simulation:

Simulations		Triplet	BST0
S1	28	408	453
	9972	158360	174148
	10000	158768	174601
S2	32	460	558
	99968	173643	181168
	10000	174103	181726
S3	33	488	585
	99967	158086	173806
	10000	158574	174391
S4	31	468	539
	99969	164046	175723
	10000	164514	176262
S5	24	427	422
	99976	190920	183059
	10000	191347	183481
S6	28	491	461
	99972	173802	165210
	10000	174293	165671
S7	30	498	513
	99970	163477	181906
	10000	163975	182419
S8	22	341	358
	99978	163429	173261
	10000	163770	173619
S9	34	538	553
	99966	164932	168332
	10000	165470	168885
S10	30	462	521
	99970	162074	179137
	10000	162536	179658



- In bst2 every word that starts with X,Y,Z is moved to the middle of the search path as required and also the words that starts with letters that are bigger than X,Y,Z are moved to the root for better optimization.
- The option chosen for traversing back up the tree is using a recursive algorithm with no stack and parent.
- The Triplet BST is more optimized than BST0, with 8% fewer operations during construction and 4.86% fewer node visits during search, showing better overall efficiency.