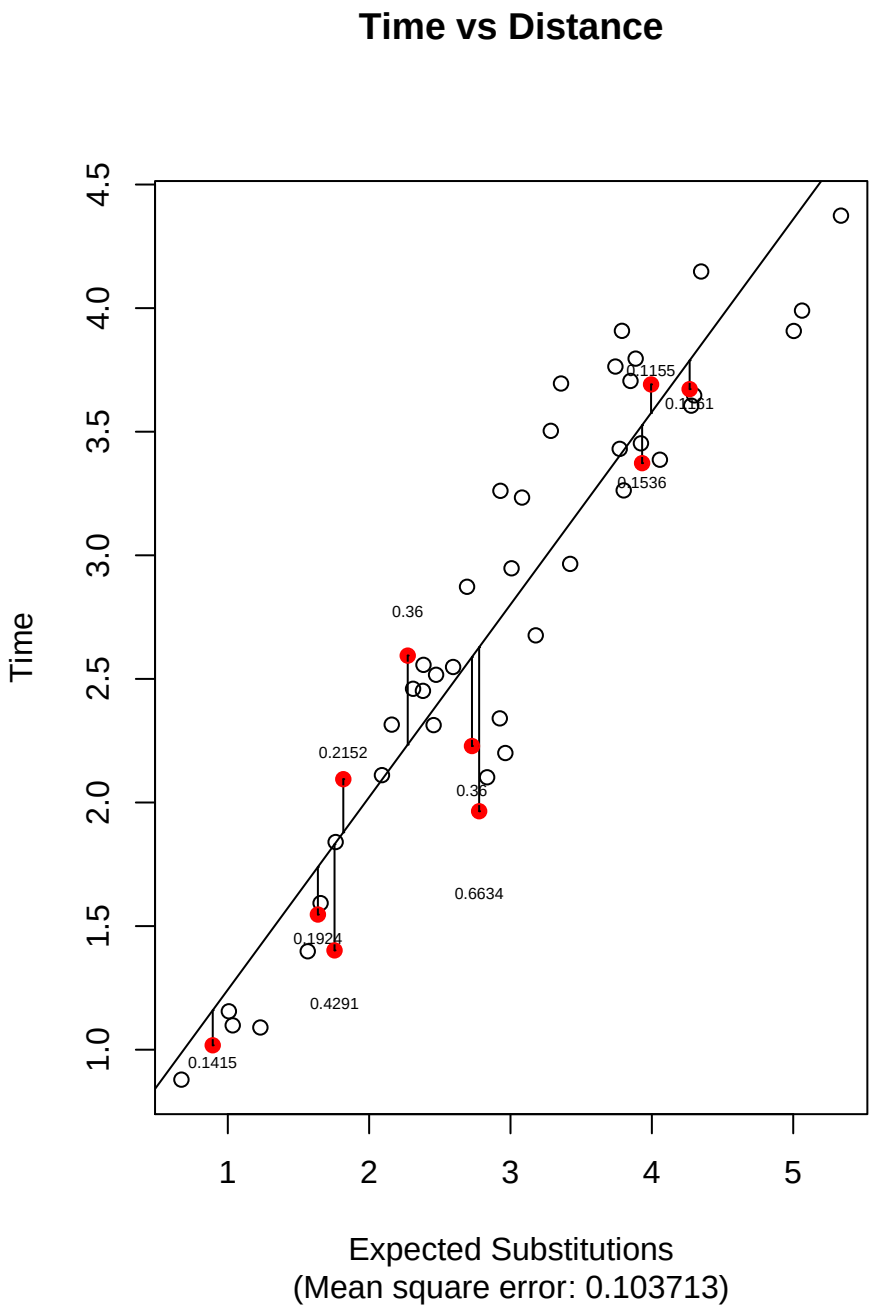
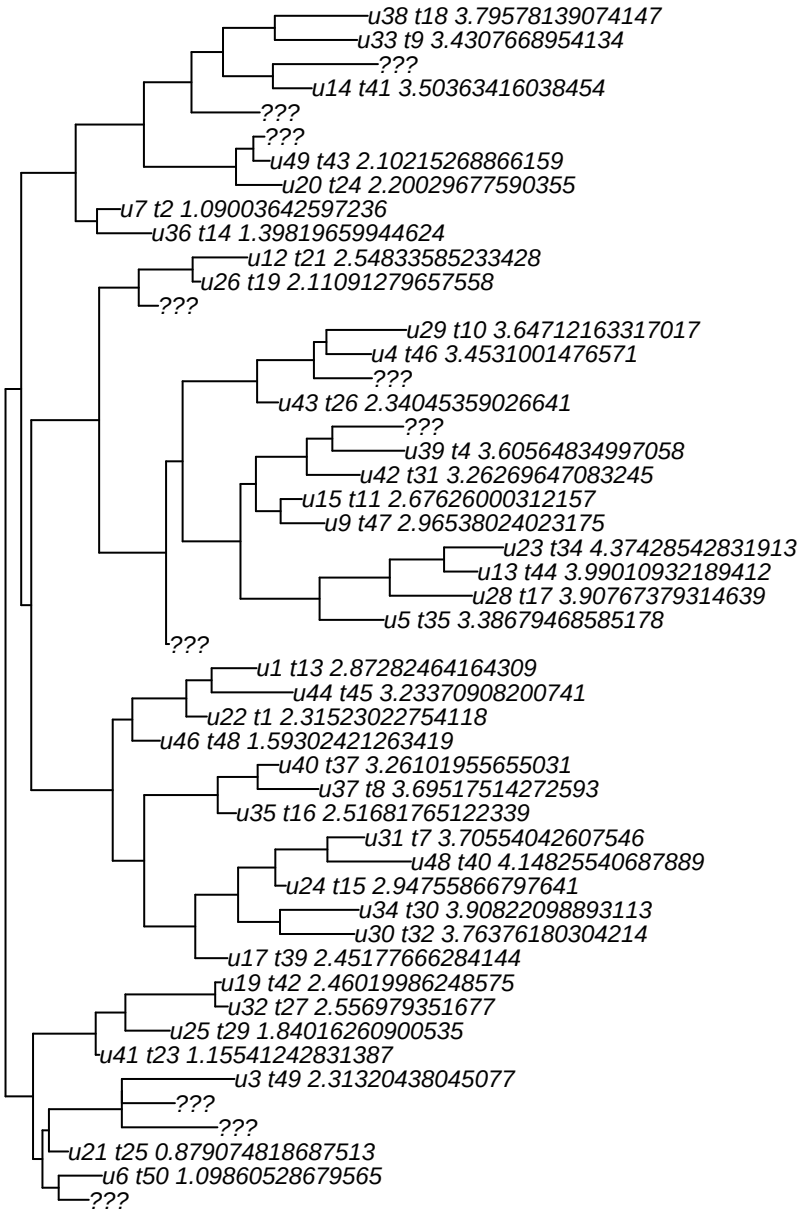
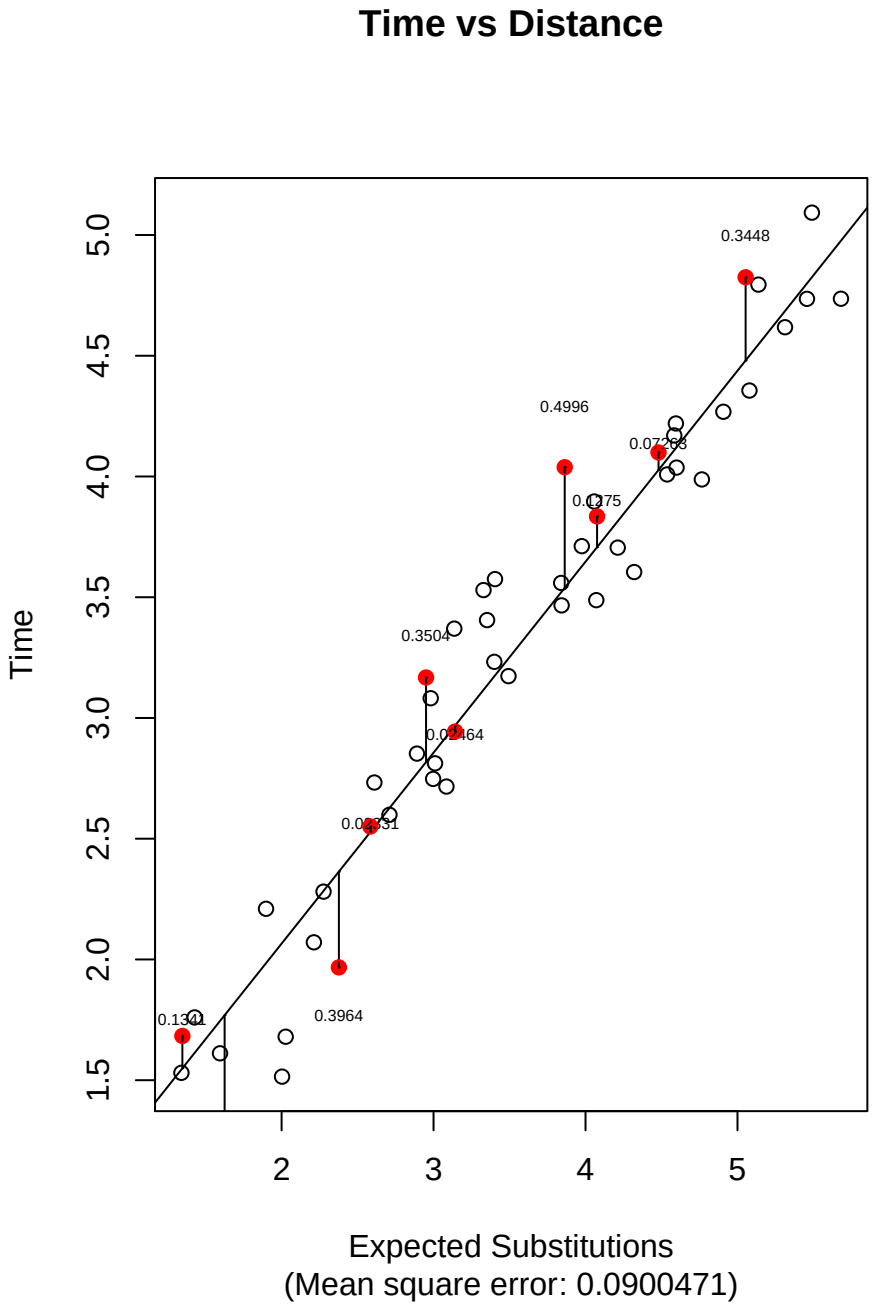
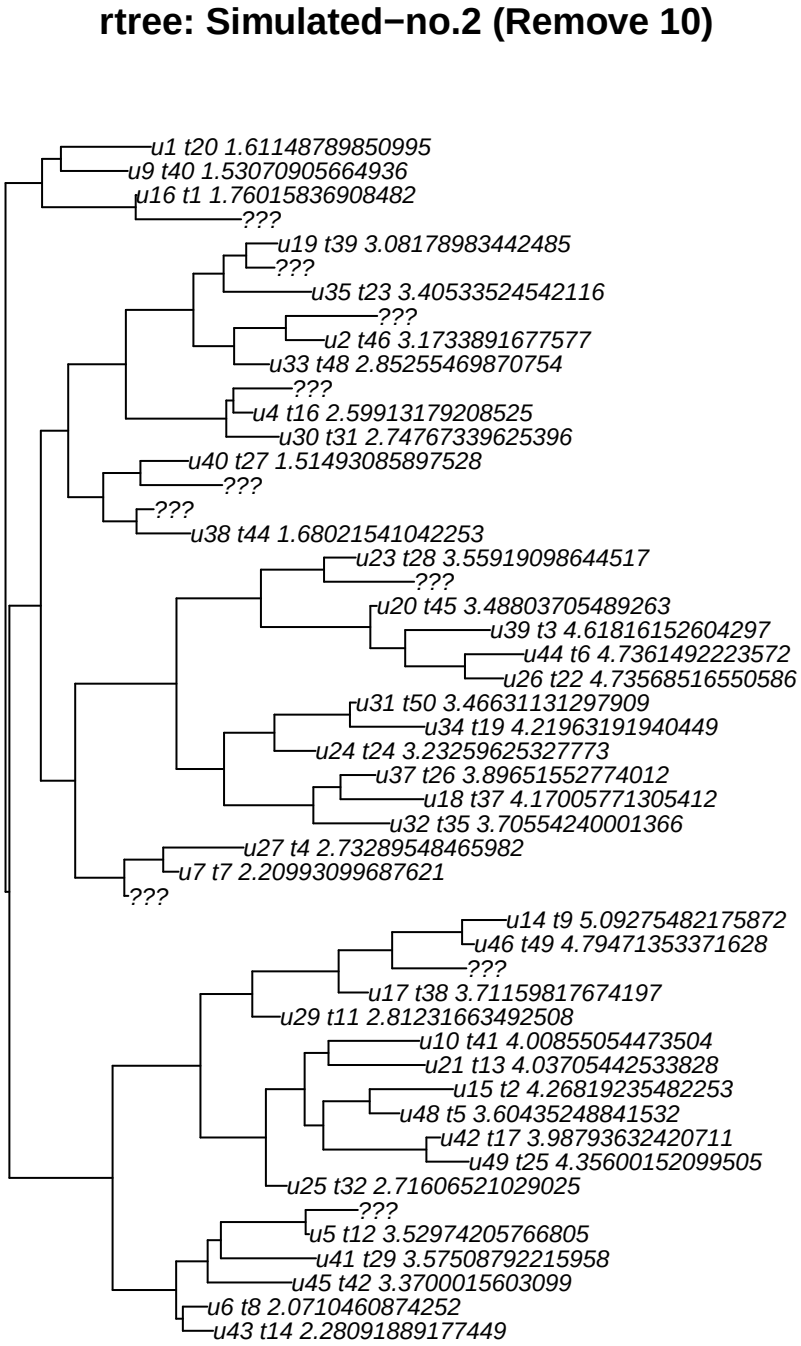
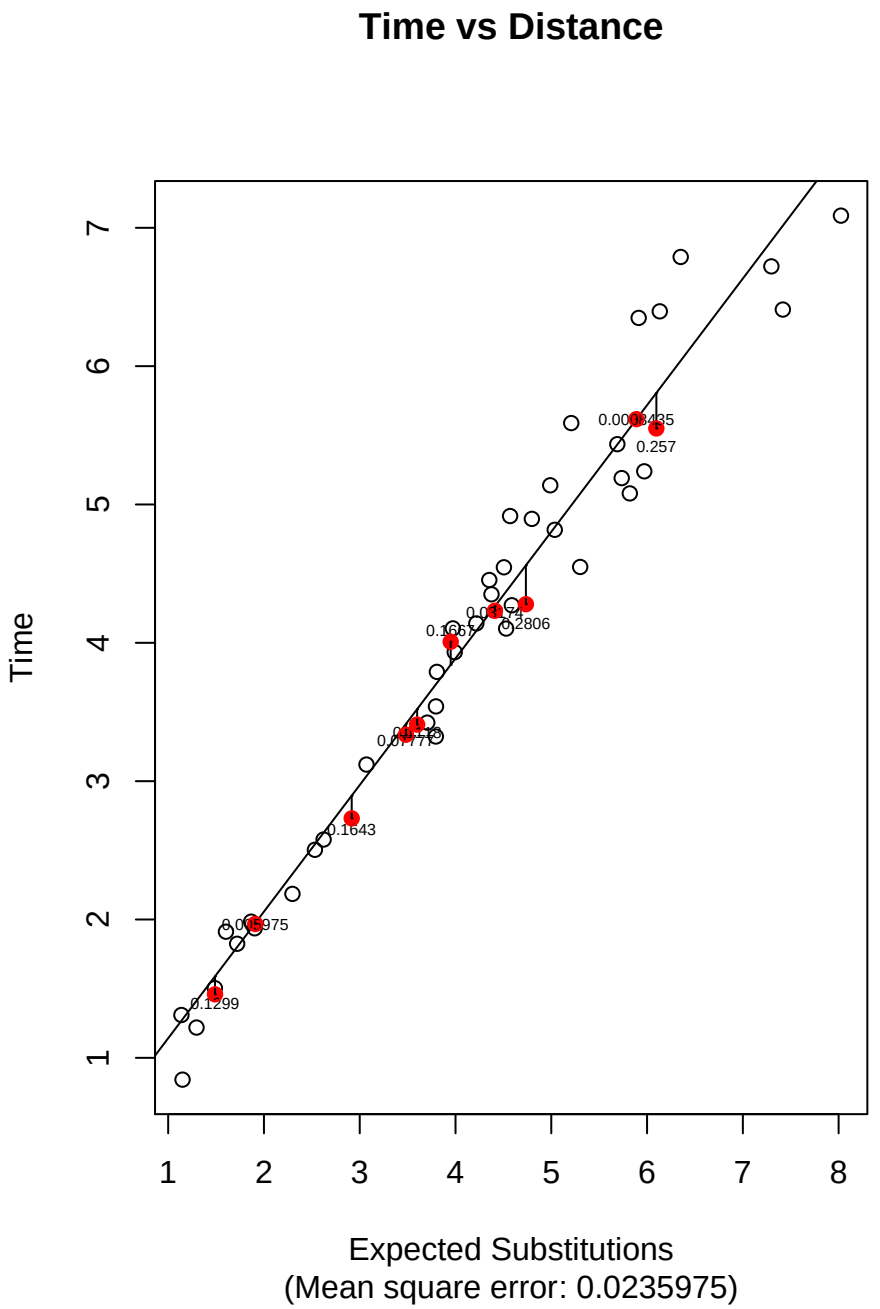
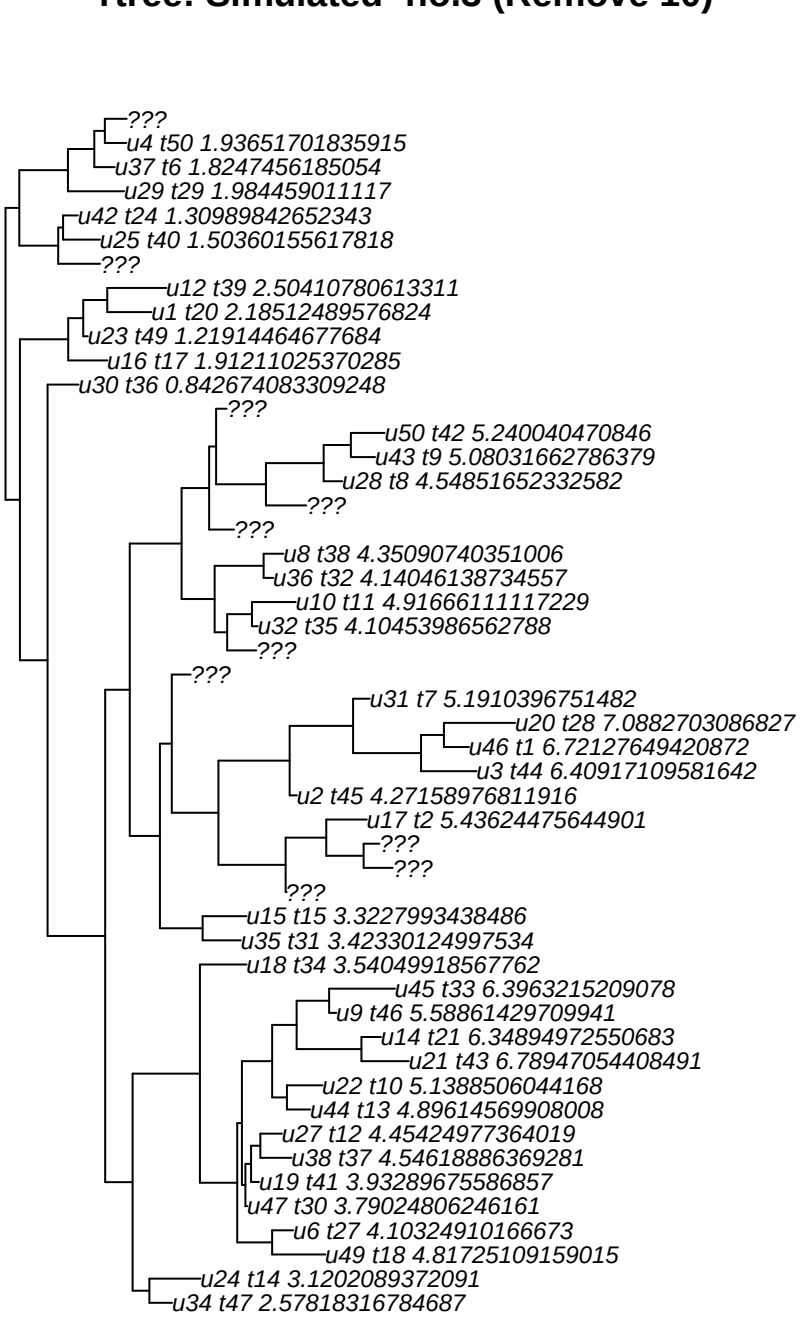

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.103713)
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
1
2
3
4
5
0.1155
0.1536
0.36
0.2152
0.36
0.6634
0.1924
0.4291
0.1415

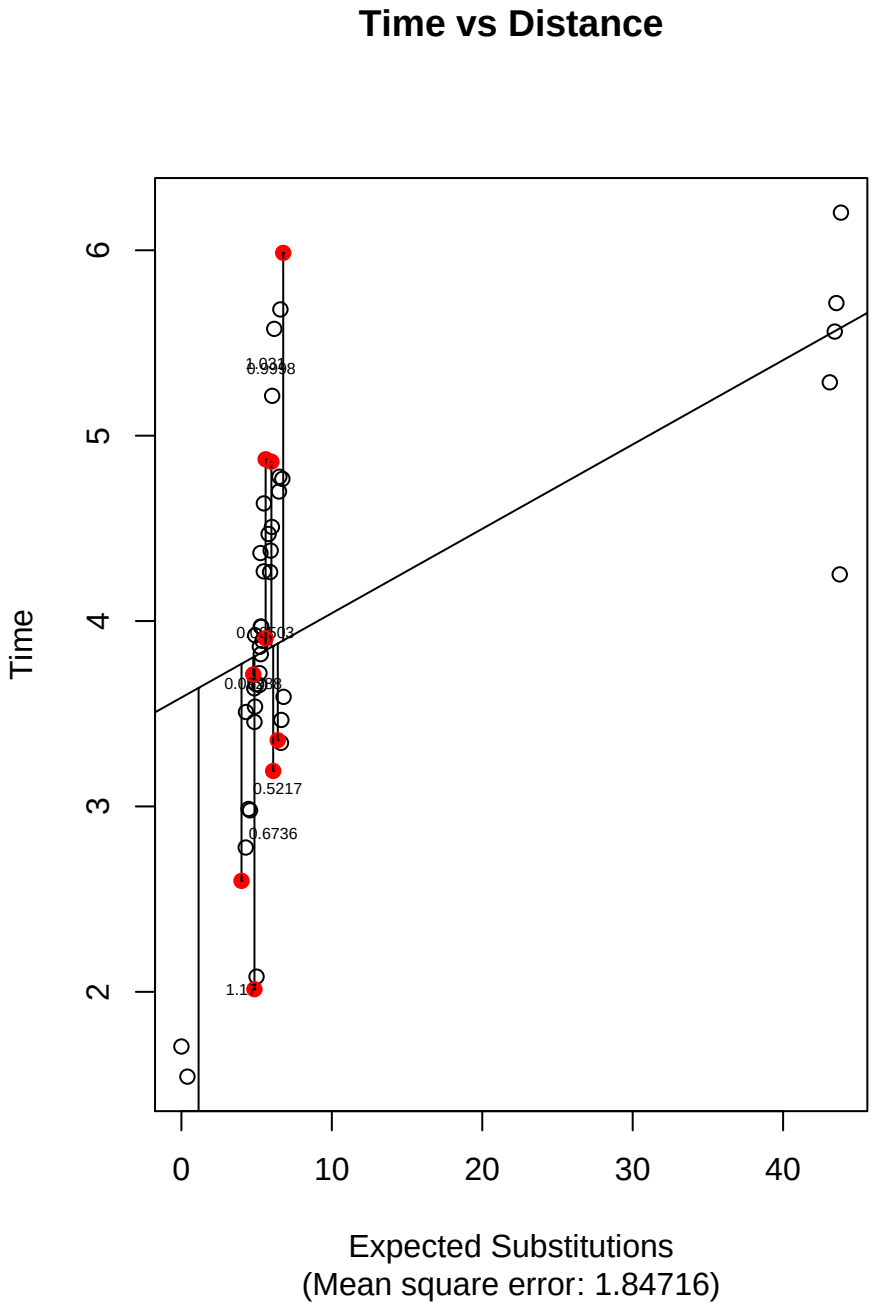

rtree: Simulated−no.1 (Remove 10)
u38 t18 3.79578139074147
u33 t9 3.4307668954134
???
u14 t41 3.50363416038454
???
???
u49 t43 2.10215268866159
u20 t24 2.20029677590355
u7 t2 1.09003642597236
u36 t14 1.39819659944624
u12 t21 2.54833585233428
u26 t19 2.11091279657558
???
u29 t10 3.64712163317017
u4 t46 3.4531001476571
???
u43 t26 2.34045359026641
???
u39 t4 3.60564834997058
u42 t31 3.26269647083245
u15 t11 2.67626000312157
u9 t47 2.96538024023175
u23 t34 4.37428542831913
u13 t44 3.99010932189412
u28 t17 3.90767379314639
u5 t35 3.38679468585178
???
u1 t13 2.87282464164309
u44 t45 3.23370908200741
u22 t1 2.31523022754118
u46 t48 1.59302421263419
u40 t37 3.26101955655031
u37 t8 3.69517514272593
u35 t16 2.51681765122339
u31 t7 3.70554042607546
u48 t40 4.14825540687889
u24 t15 2.94755866797641
u34 t30 3.90822098893113
u30 t32 3.76376180304214
u17 t39 2.45177666284144
u19 t42 2.46019986248575
u32 t27 2.556979351677
u25 t29 1.84016260900535
u41 t23 1.15541242831387
u3 t49 2.31320438045077
???
???
u21 t25 0.879074818687513
u6 t50 1.09860528679565
???

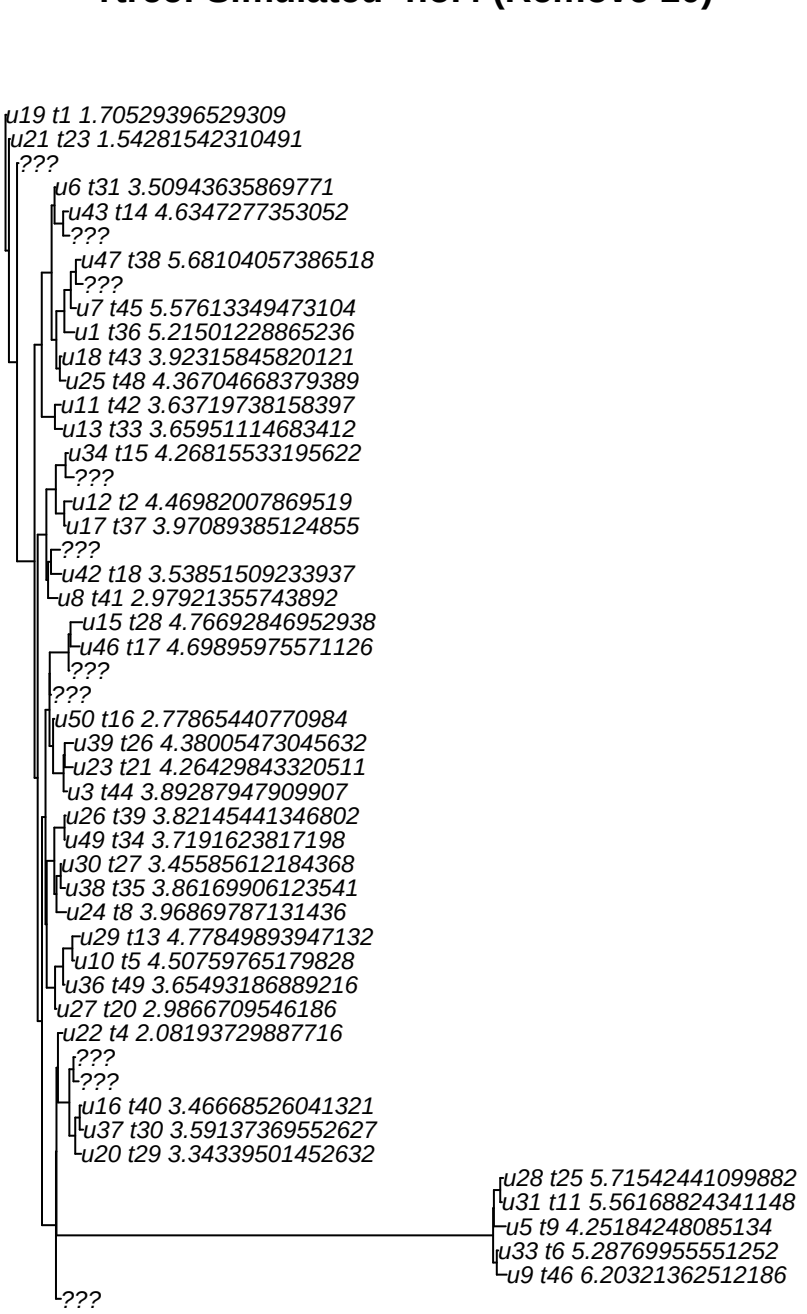

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0900471)
0.3448
0.4996
0.3504
0.3964

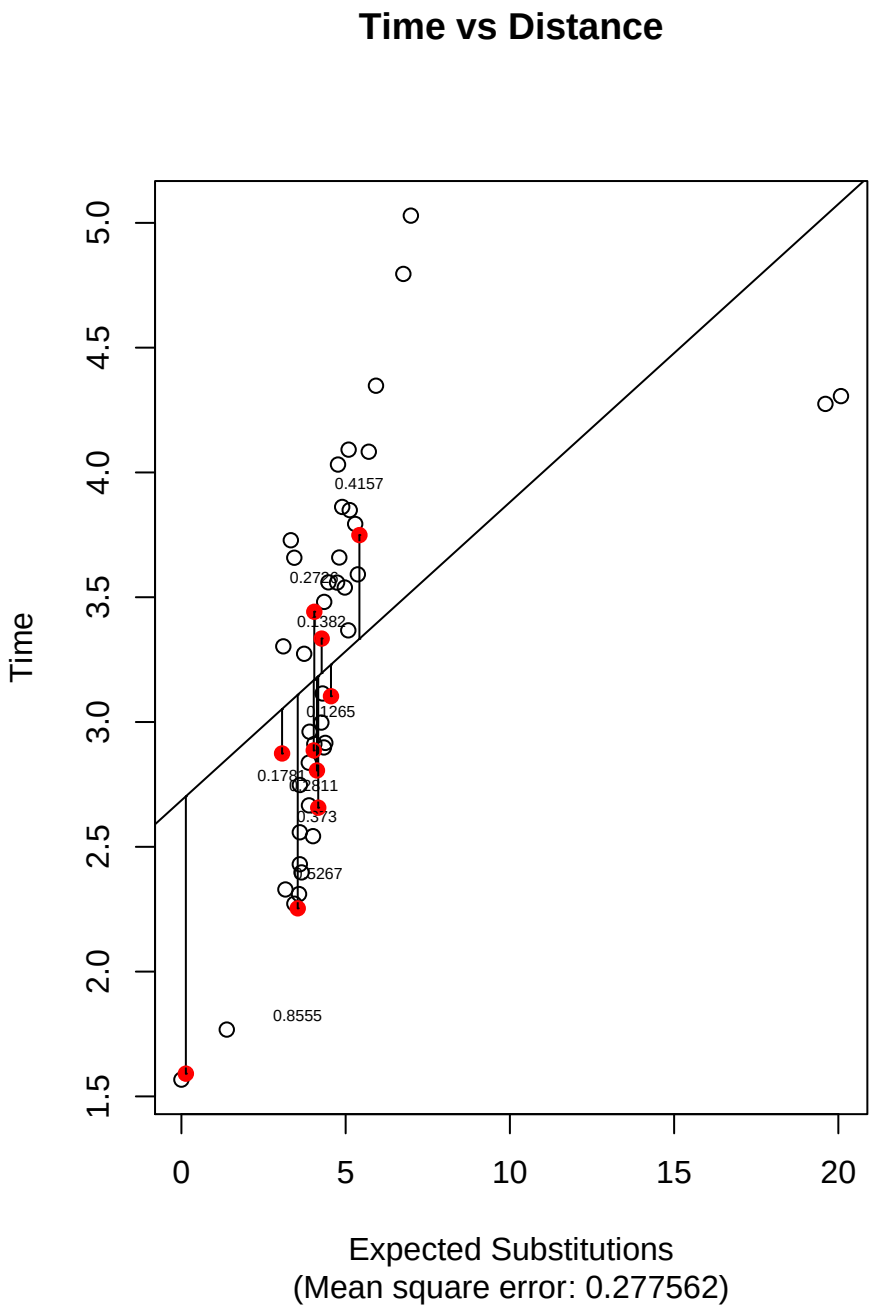

rtree: Simulated−no.2 (Remove 10)
u1 t20 1.61148789850995
u9 t40 1.53070905664936
u16 t1 1.76015836908482
???
u19 t39 3.08178983442485
???
u35 t23 3.40533524542116
???
u2 t46 3.1733891677577
u33 t48 2.85255469870754
???
u4 t16 2.59913179208525
u30 t31 2.74767339625396
u40 t27 1.51493085897528
???
???
u38 t44 1.68021541042253
u23 t28 3.55919098644517
???
u20 t45 3.48803705489263
u39 t3 4.61816152604297
u44 t6 4.7361492223572
u26 t22 4.73568516550586
u31 t50 3.46631131297909
u34 t19 4.21963191940449
u24 t24 3.23259625327773
u37 t26 3.89651552774012
u18 t37 4.17005771305412
u32 t35 3.70554240001366
u27 t4 2.73289548465982
u7 t7 2.20993099687621
???
u14 t9 5.09275482175872
u46 t49 4.79471353371628
???
u17 t38 3.71159817674197
u29 t11 2.81231663492508
u10 t41 4.00855054473504
u21 t13 4.03705442533828
u15 t2 4.26819235482253
u48 t5 3.60435248841532
u42 t17 3.98793632420711
u49 t25 4.35600152099505
u25 t32 2.71606521029025
???
u5 t12 3.52974205766805
u41 t29 3.57508792215958
u45 t42 3.3700015603099
u6 t8 2.0710460874252
u43 t14 2.28091889177449

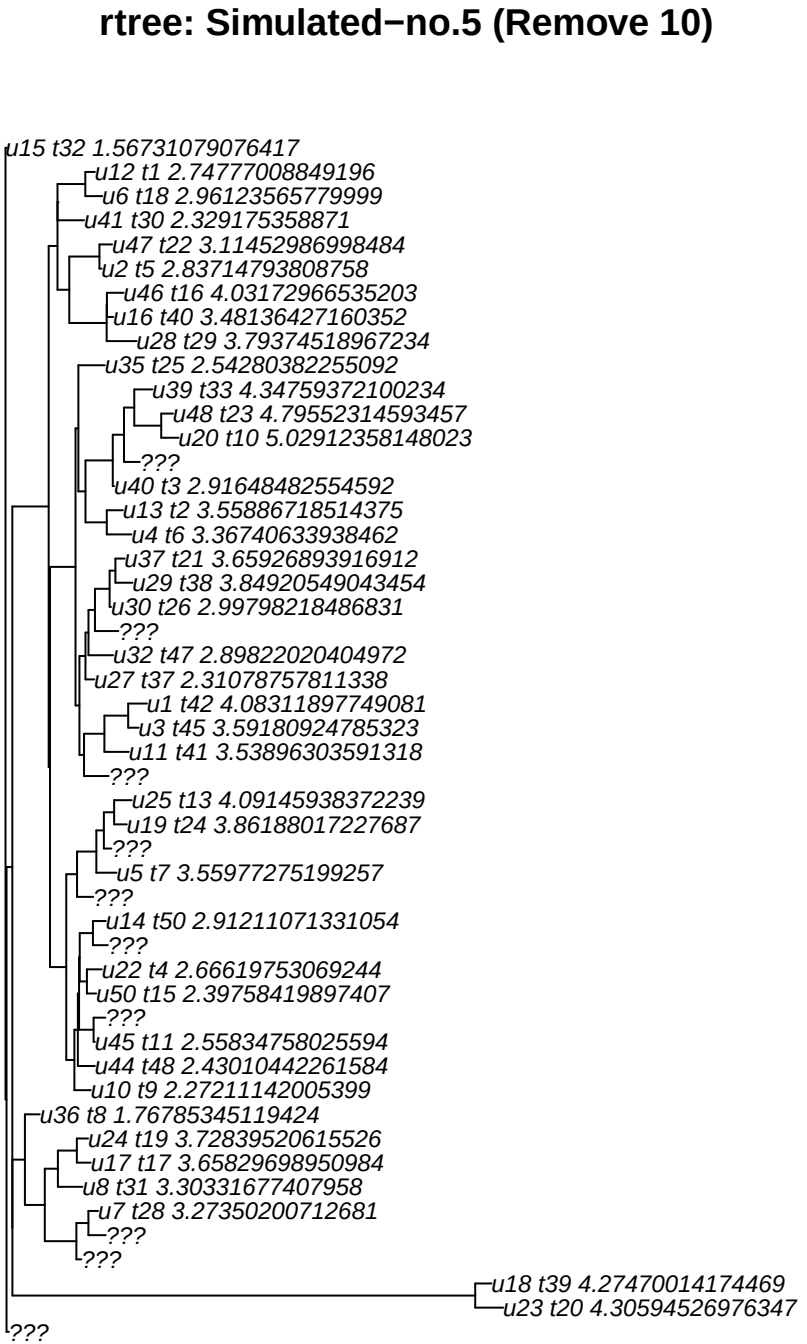

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0235975)
1
2
3
4
5
6
7
8
0.257
0.2806
0.1643
0.1299

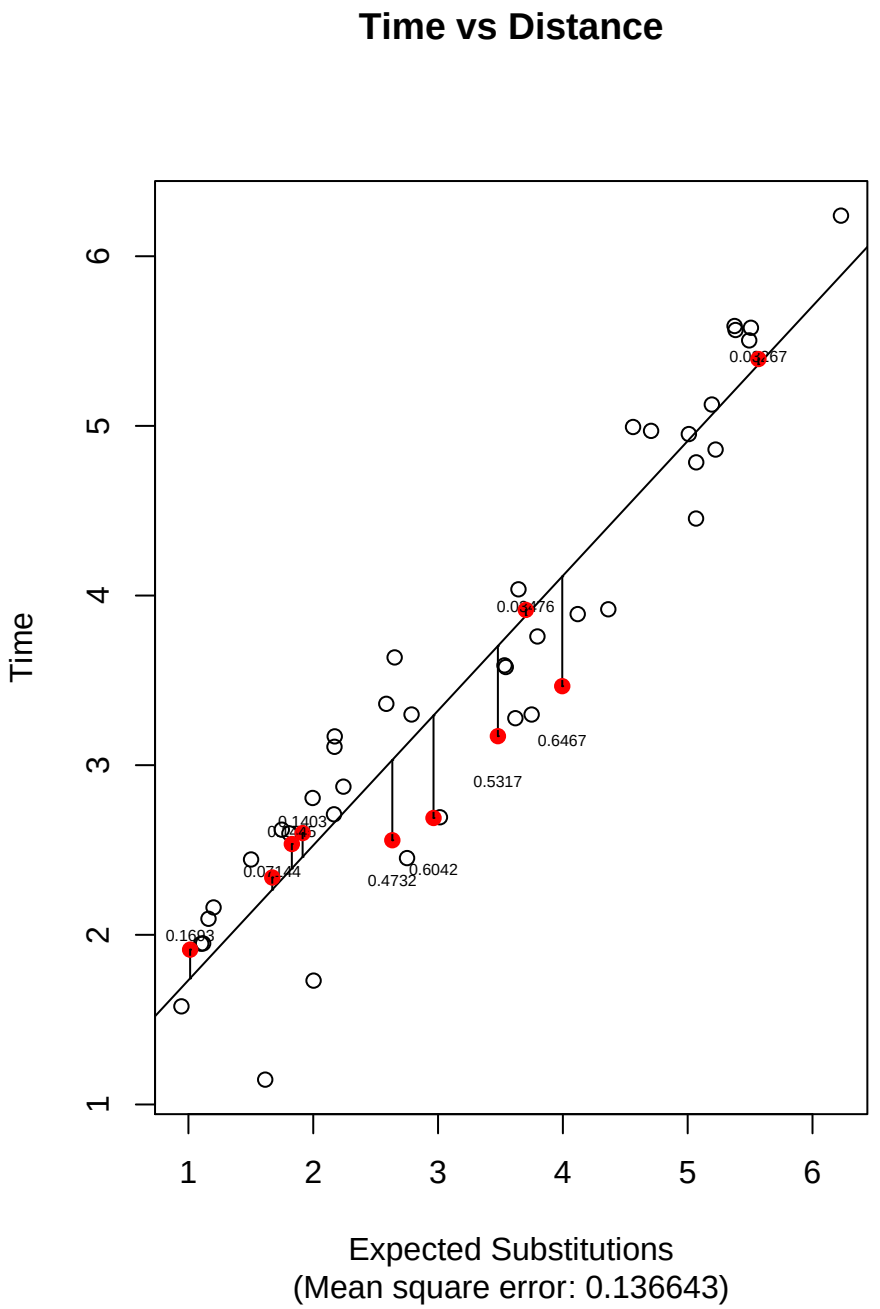

rtree: Simulated−no.3 (Remove 10)
???
u4 t50 1.93651701835915
u37 t6 1.8247456185054
u29 t29 1.984459011117
u42 t24 1.30989842652343
u25 t40 1.50360155617818
???
u12 t39 2.50410780613311
u1 t20 2.18512489576824
u23 t49 1.21914464677684
u16 t17 1.91211025370285
u30 t36 0.842674083309248
???
u50 t42 5.240040470846
u43 t9 5.08031662786379
u28 t8 4.54851652332582
???
???
u8 t38 4.35090740351006
u36 t32 4.14046138734557
u10 t11 4.91666111117229
u32 t35 4.10453986562788
???
???
u31 t7 5.1910396751482
u20 t28 7.0882703086827
u46 t1 6.72127649420872
u3 t44 6.40917109581642
u2 t45 4.27158976811916
u17 t2 5.43624475644901
???
???
???
u15 t15 3.3227993438486
u35 t31 3.42330124997534
u18 t34 3.54049918567762
u45 t33 6.3963215209078
u9 t46 5.58861429709941
u14 t21 6.34894972550683
u21 t43 6.78947054408491
u22 t10 5.1388506044168
u44 t13 4.89614569908008
u27 t12 4.45424977364019
u38 t37 4.54618886369281
u19 t41 3.93289675586857
u47 t30 3.79024806246161
u6 t27 4.10324910166673
u49 t18 4.81725109159015
u24 t14 3.1202089372091
u34 t47 2.57818316784687

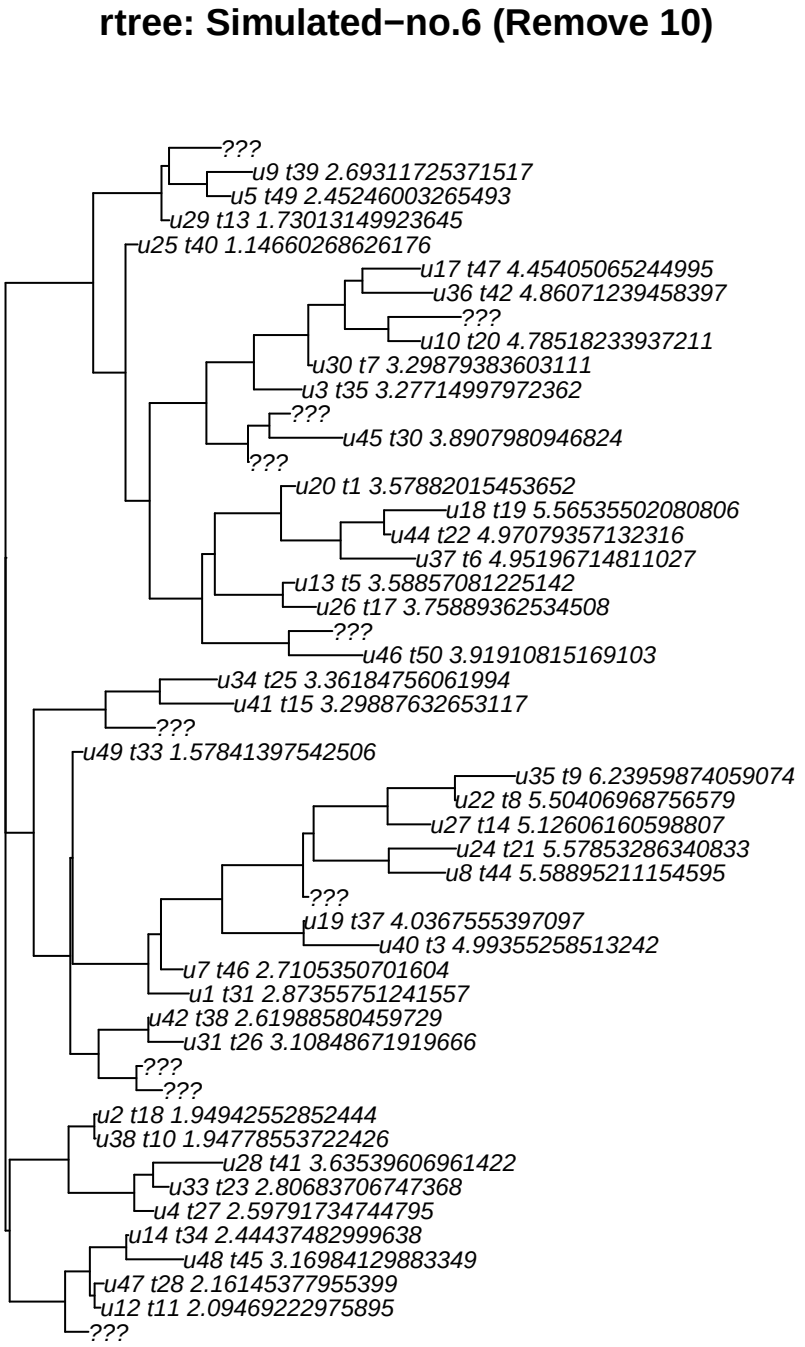

Time vs Distance
Time
2
3
4
5
6
0
10
20
30
40
Expected Substitutions
(Mean square error: 1.84716)
0.9998
0.5217
0.6736
1.17

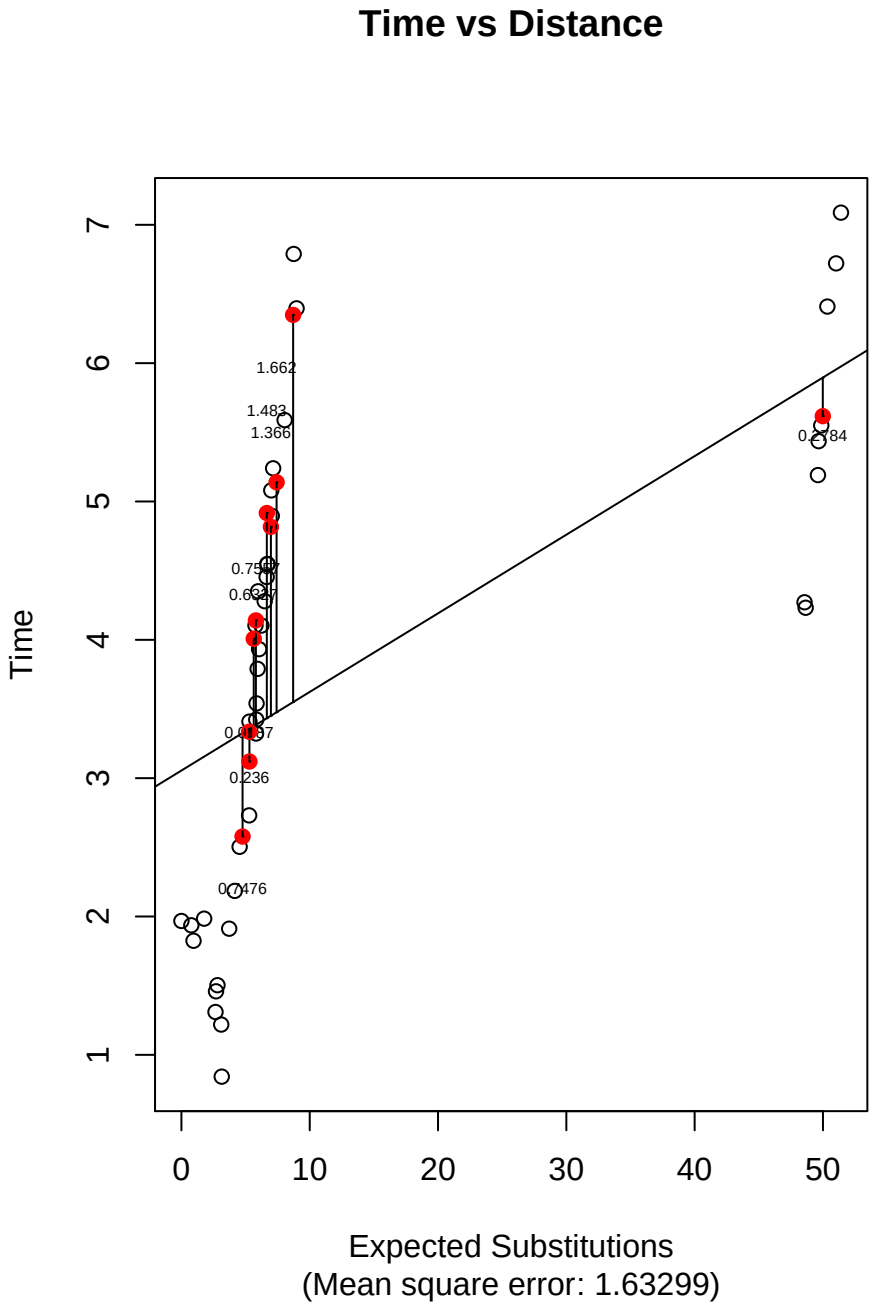

rtree: Simulated−no.4 (Remove 10)
u19 t1 1.70529396529309
u21 t23 1.54281542310491
???
u6 t31 3.50943635869771
u43 t14 4.6347277353052
???
u47 t38 5.68104057386518
???
u7 t45 5.57613349473104
u1 t36 5.21501228865236
u18 t43 3.92315845820121
u25 t48 4.36704668379389
u11 t42 3.63719738158397
u13 t33 3.65951114683412
u34 t15 4.26815533195622
???
u12 t2 4.46982007869519
u17 t37 3.97089385124855
???
u42 t18 3.53851509233937
u8 t41 2.97921355743892
u15 t28 4.76692846952938
u46 t17 4.69895975571126
???
???
u50 t16 2.77865440770984
u39 t26 4.38005473045632
u23 t21 4.26429843320511
u3 t44 3.89287947909907
u26 t39 3.82145441346802
u49 t34 3.7191623817198
u30 t27 3.45585612184368
u38 t35 3.86169906123541
u24 t8 3.96869787131436
u29 t13 4.77849893947132
u10 t5 4.50759765179828
u36 t49 3.65493186889216
u27 t20 2.9866709546186
u22 t4 2.08193729887716
???
???
u16 t40 3.46668526041321
u37 t30 3.59137369552627
u20 t29 3.34339501452632
u28 t25 5.71542441099882
u31 t11 5.56168824341148
u5 t9 4.25184248085134
u33 t6 5.28769955551252
u9 t46 6.20321362512186
???

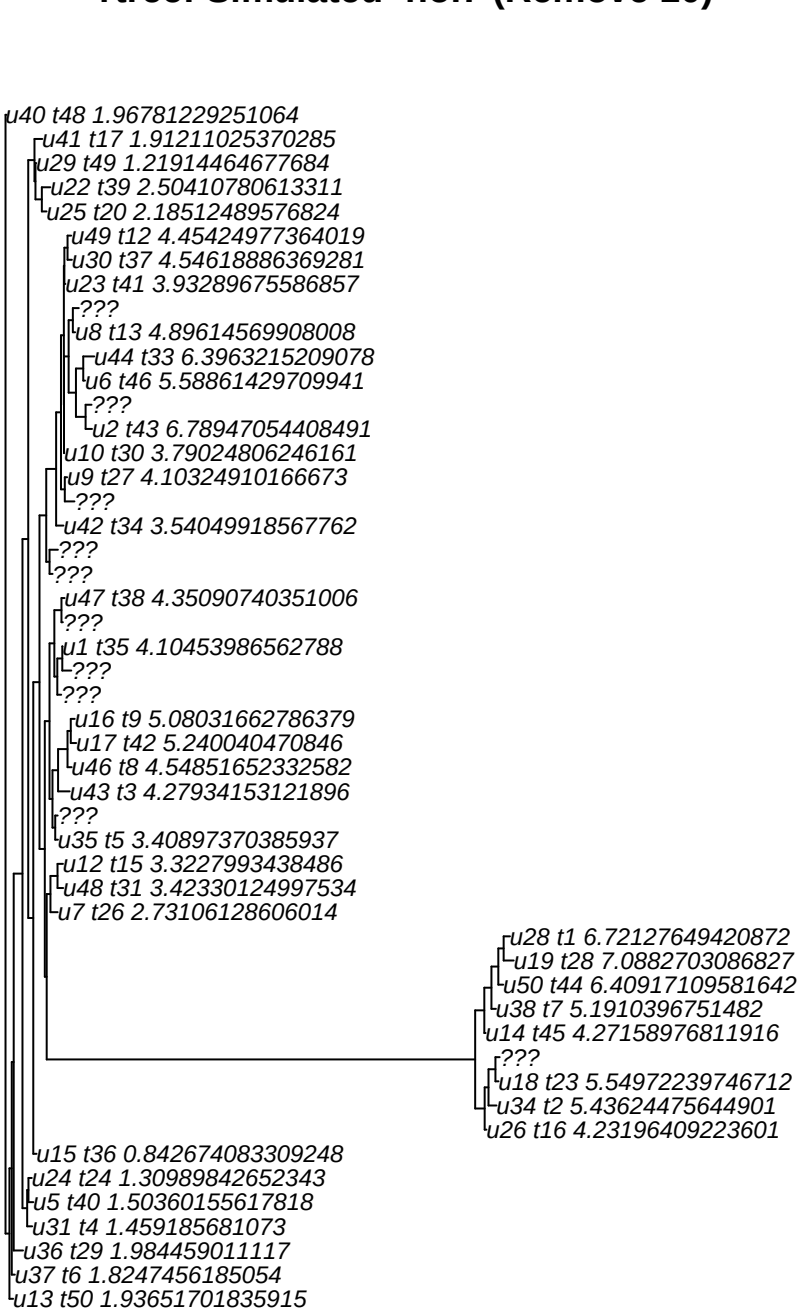

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.277562)
0.4157
0.2726
0.1382
0.1265
0.1781
0.2811
0.373
0.6267
0.8555

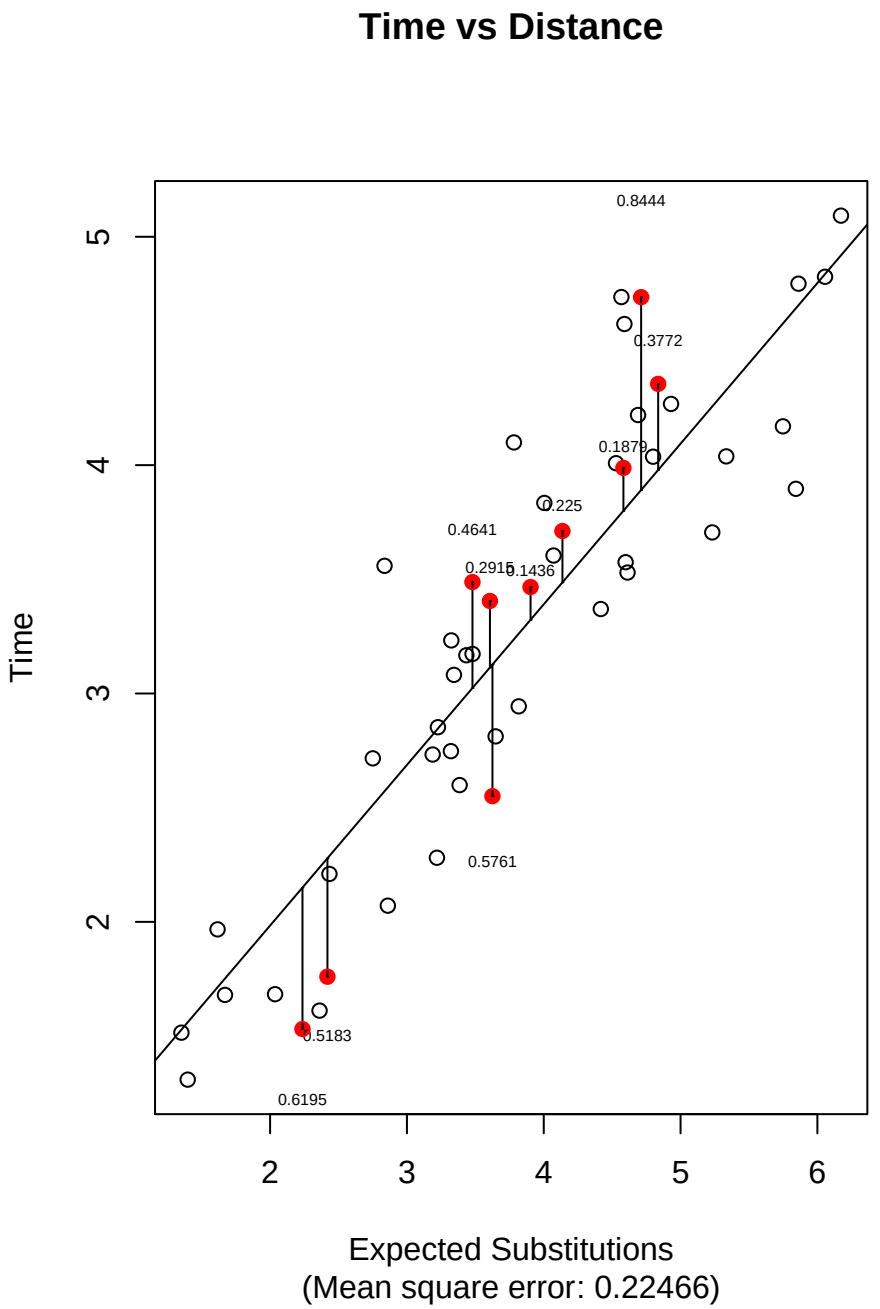

rtree: Simulated−no.5 (Remove 10)
u15 t32 1.56731079076417
u12 t1 2.74777008849196
u6 t18 2.96123565779999
u41 t30 2.329175358871
u47 t22 3.11452986998484
u2 t5 2.83714793808758
u46 t16 4.03172966535203
u16 t40 3.48136427160352
u28 t29 3.79374518967234
u35 t25 2.54280382255092
u39 t33 4.34759372100234
u48 t23 4.79552314593457
u20 t10 5.02912358148023
???
u40 t3 2.91648482554592
u13 t2 3.55886718514375
u4 t6 3.36740633938462
u37 t21 3.65926893916912
u29 t38 3.84920549043454
u30 t26 2.99798218486831
???
u32 t47 2.89822020404972
u27 t37 2.31078757811338
u1 t42 4.08311897749081
u3 t45 3.59180924785323
u11 t41 3.53896303591318
???
u25 t13 4.09145938372239
u19 t24 3.86188017227687
???
u5 t7 3.55977275199257
???
u14 t50 2.91211071331054
???
u22 t4 2.66619753069244
u50 t15 2.39758419897407
???
u45 t11 2.55834758025594
u44 t48 2.43010442261584
u10 t9 2.27211142005399
u36 t8 1.76785345119424
u24 t19 3.72839520615526
u17 t17 3.65829698950984
u8 t31 3.30331677407958
u7 t28 3.27350200712681
???
???
u18 t39 4.27470014174469
u23 t20 4.30594526976347
???

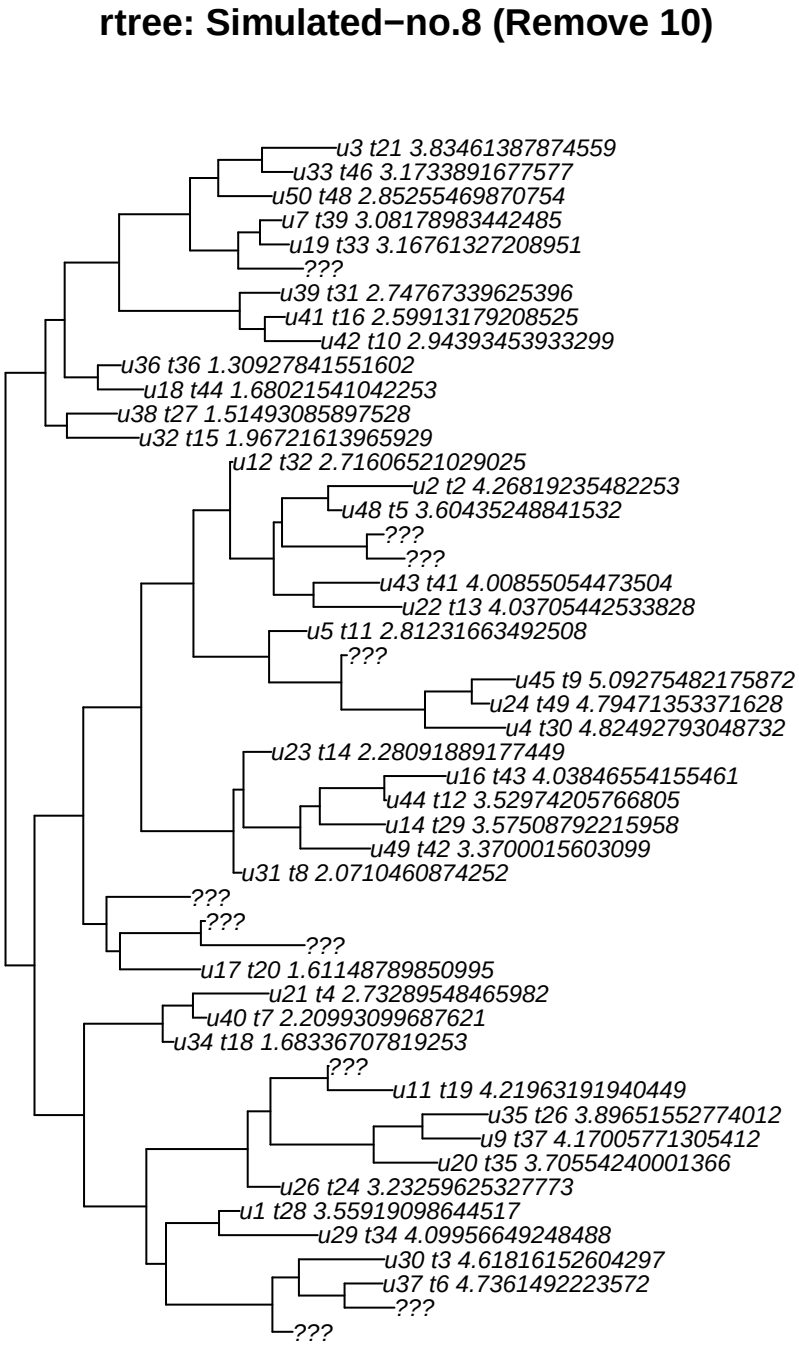

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.136643)
1
2
3
4
5
6
0.1603
0.1403
0.07144
0.4732
0.6042
0.5317
0.6467

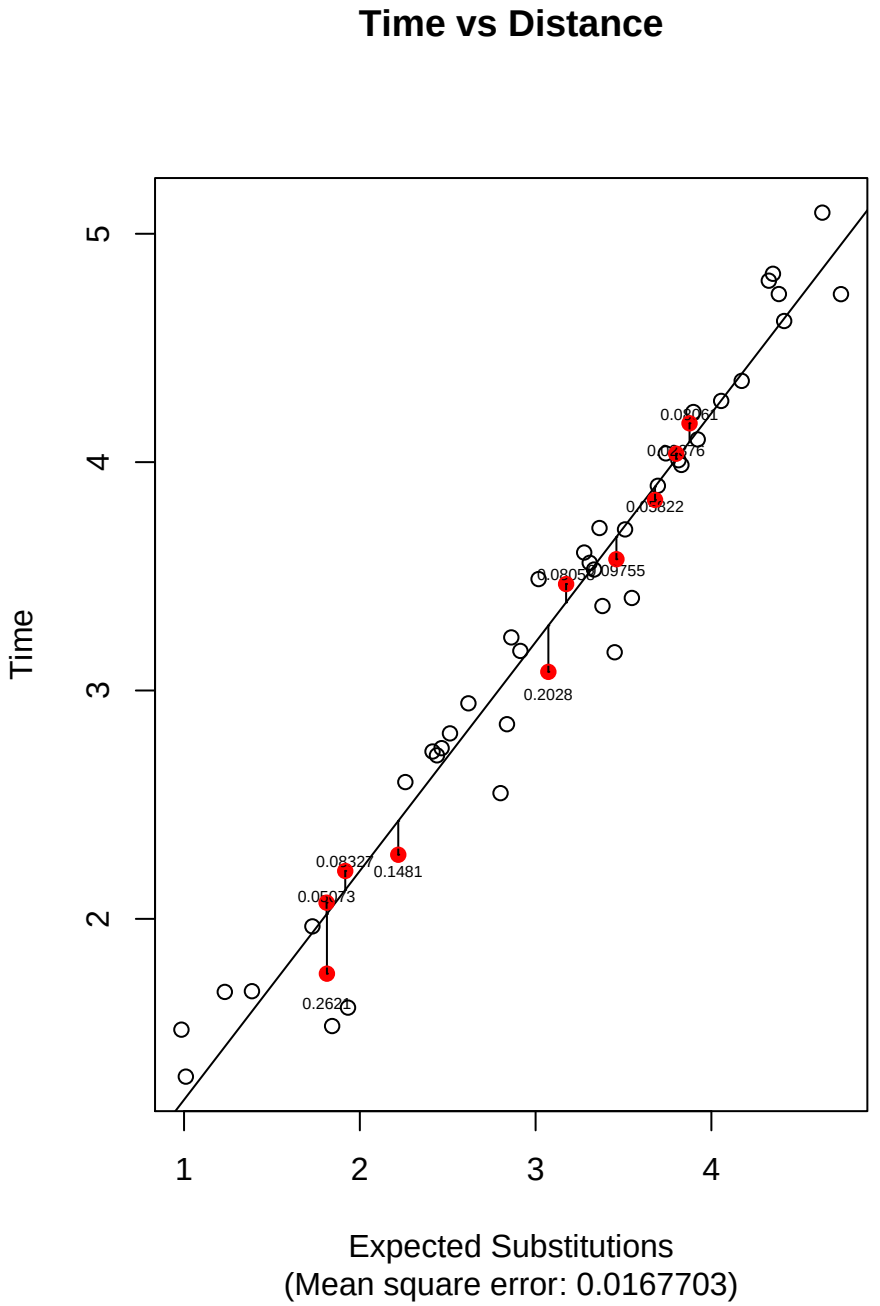

rtree: Simulated−no.6 (Remove 10)
???
u9 t39 2.69311725371517
u5 t49 2.45246003265493
u29 t13 1.73013149923645
u25 t40 1.14660268626176
u17 t47 4.45405065244995
u36 t42 4.86071239458397
???
u10 t20 4.78518233937211
u30 t7 3.29879383603111
u3 t35 3.27714997972362
???
u45 t30 3.8907980946824
???
u20 t1 3.57882015453652
u18 t19 5.56535502080806
u44 t22 4.97079357132316
u37 t6 4.95196714811027
u13 t5 3.58857081225142
u26 t17 3.75889362534508
???
u46 t50 3.91910815169103
u34 t25 3.36184756061994
u41 t15 3.29887632653117
???
u49 t33 1.57841397542506
u35 t9 6.23959874059074
u22 t8 5.50406968756579
u27 t14 5.12606160598807
u24 t21 5.57853286340833
u8 t44 5.58895211154595
???
u19 t37 4.0367555397097
u40 t3 4.99355258513242
u7 t46 2.7105350701604
u1 t31 2.87355751241557
u42 t38 2.61988580459729
u31 t26 3.10848671919666
???
???
u2 t18 1.94942552852444
u38 t10 1.94778553722426
u28 t41 3.63539606961422
u33 t23 2.80683706747368
u4 t27 2.59791734744795
u14 t34 2.44437482999638
u48 t45 3.16984129883349
u47 t28 2.16145377955399
u12 t11 2.09469222975895
???

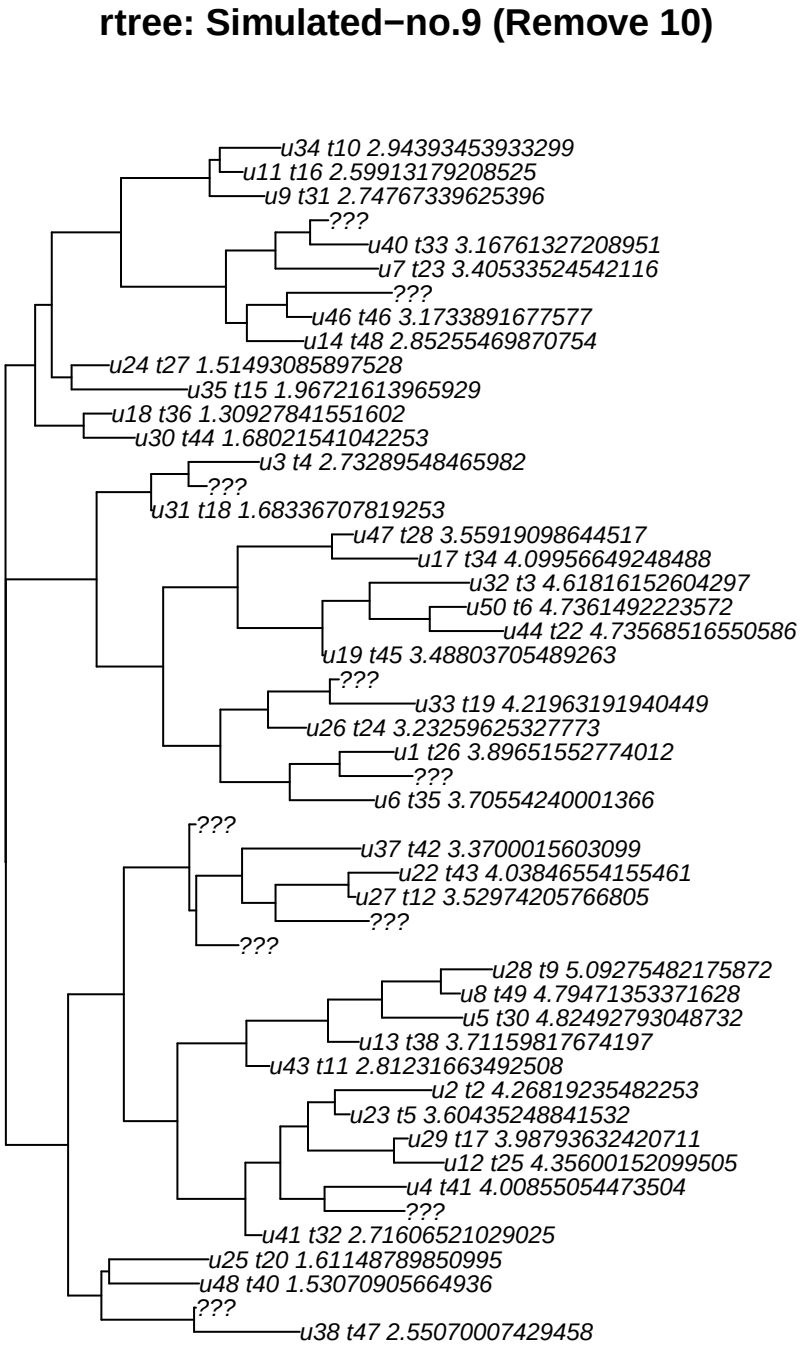

Time vs Distance
Time
Expected Substitutions
(Mean square error: 1.63299)
1.662
1.483
1.366
0.236
0.0476
0
10
20
30
40
50
1
2
3
4
5
6
7

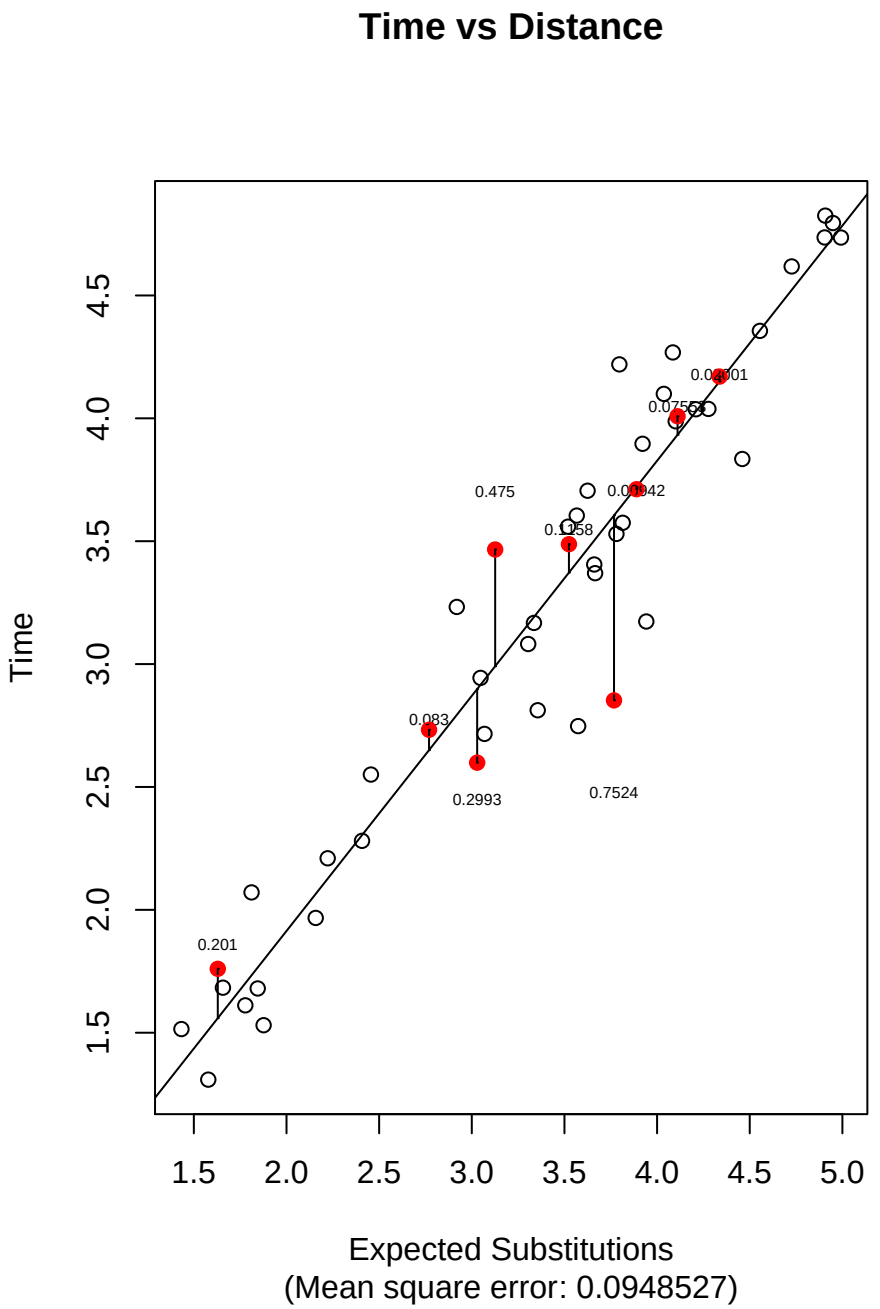

rtree: Simulated−no.7 (Remove 10)
u40 t48 1.96781229251064
u41 t17 1.91211025370285
u29 t49 1.21914464677684
u22 t39 2.50410780613311
u25 t20 2.18512489576824
u49 t12 4.45424977364019
u30 t37 4.54618886369281
u23 t41 3.93289675586857
???
u8 t13 4.89614569908008
u44 t33 6.3963215209078
u6 t46 5.58861429709941
???
u2 t43 6.78947054408491
u10 t30 3.79024806246161
u9 t27 4.10324910166673
???
u42 t34 3.54049918567762
???
???
u47 t38 4.35090740351006
???
u1 t35 4.10453986562788
???
???
u16 t9 5.08031662786379
u17 t42 5.240040470846
u46 t8 4.54851652332582
u43 t3 4.27934153121896
???
u35 t5 3.40897370385937
u12 t15 3.3227993438486
u48 t31 3.42330124997534
u7 t26 2.73106128606014
u28 t1 6.72127649420872
u19 t28 7.0882703086827
u50 t44 6.40917109581642
u38 t7 5.1910396751482
u14 t45 4.27158976811916
???
u18 t23 5.54972239746712
u34 t2 5.43624475644901
u26 t16 4.23196409223601
u15 t36 0.842674083309248
u24 t24 1.30989842652343
u5 t40 1.50360155617818
u31 t4 1.459185681073
u36 t29 1.984459011117
u37 t6 1.8247456185054
u13 t50 1.93651701835915

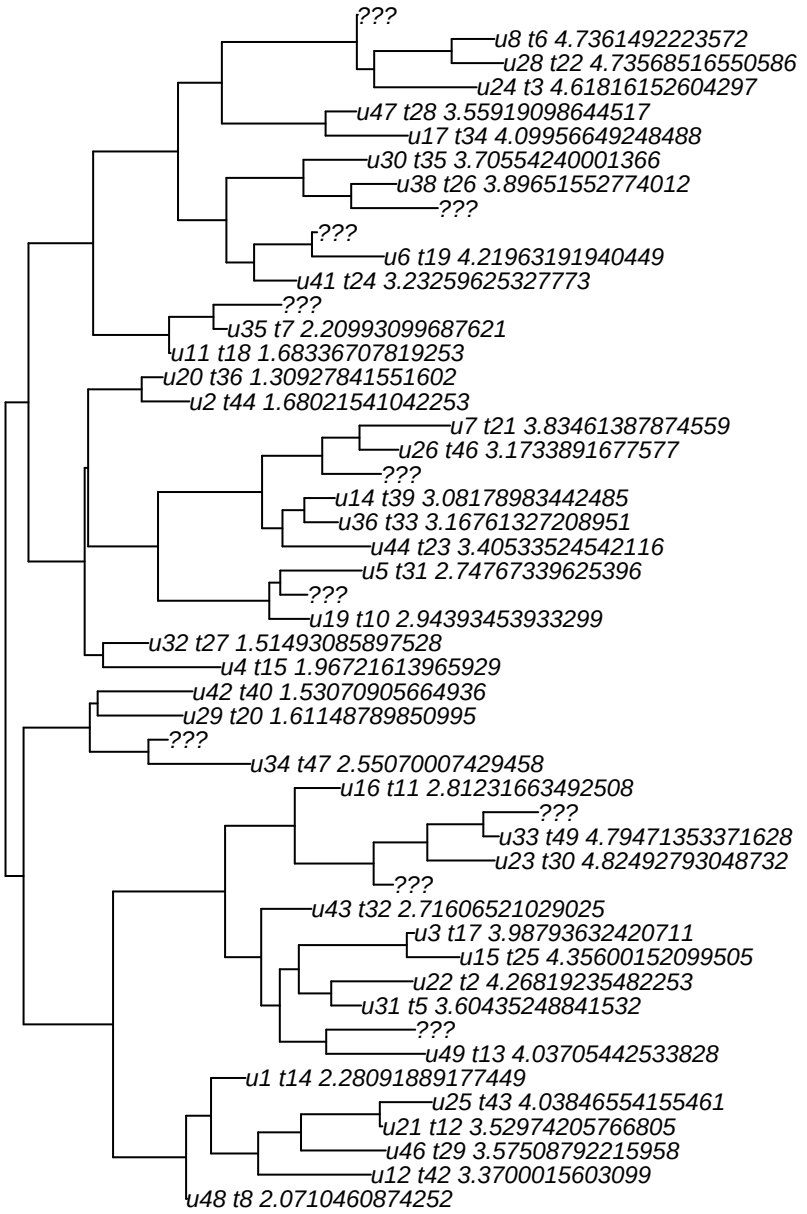

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.22466)
0.8444
0.3772
0.1879
0.225
0.4641
0.2915
0.1436
0.5761
0.5183
0.6195

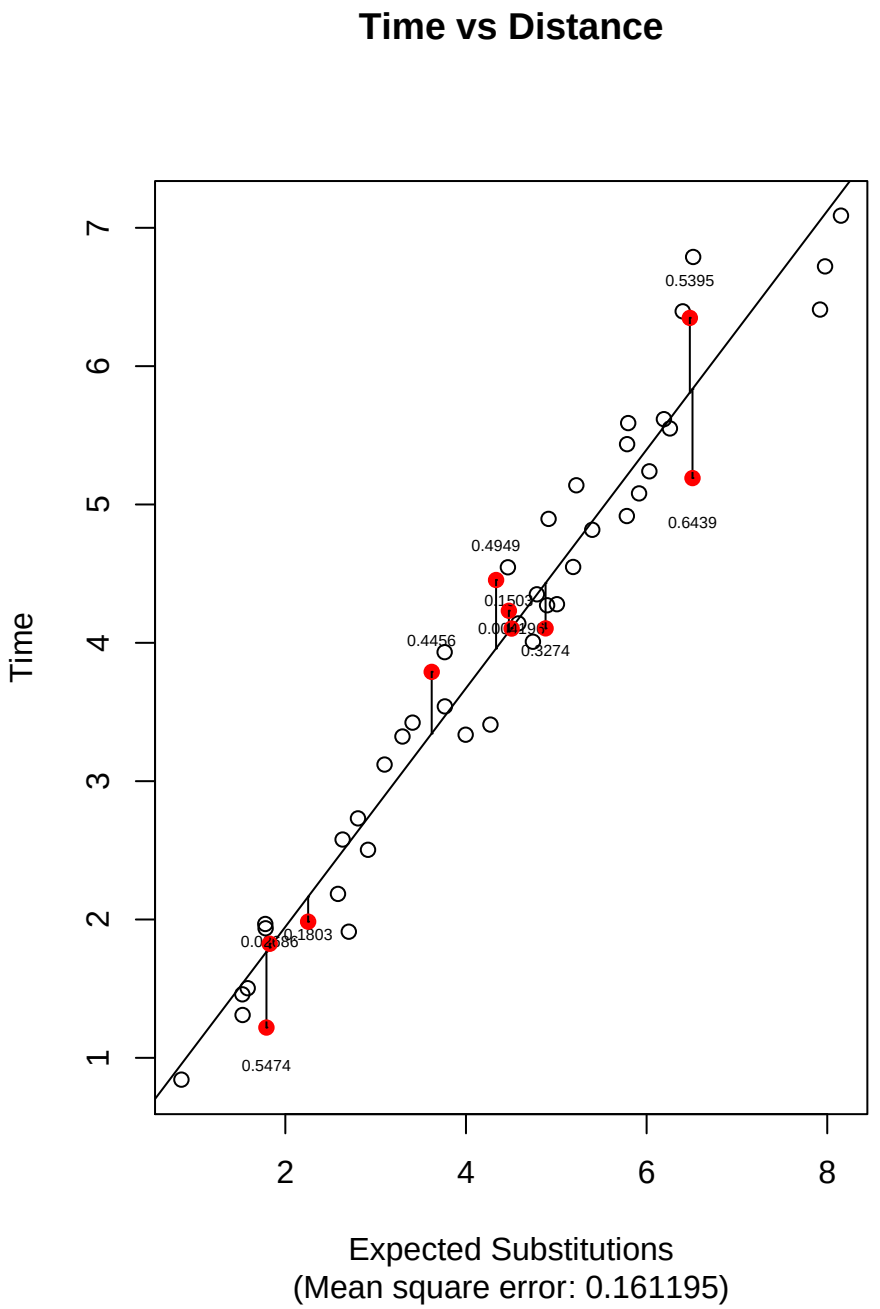

rtree: Simulated−no.8 (Remove 10)
u3 t21 3.83461387874559
u33 t46 3.1733891677577
u50 t48 2.85255469870754
u7 t39 3.08178983442485
u19 t33 3.16761327208951
???
u39 t31 2.74767339625396
u41 t16 2.59913179208525
u42 t10 2.94393453933299
u36 t36 1.30927841551602
u18 t44 1.68021541042253
u38 t27 1.51493085897528
u32 t15 1.96721613965929
u12 t32 2.71606521029025
u2 t2 4.26819235482253
u48 t5 3.60435248841532
???
???
u43 t41 4.00855054473504
u22 t13 4.03705442533828
u5 t11 2.81231663492508
???
u45 t9 5.09275482175872
u24 t49 4.79471353371628
u4 t30 4.82492793048732
u23 t14 2.28091889177449
u16 t43 4.03846554155461
u44 t12 3.52974205766805
u14 t29 3.57508792215958
u49 t42 3.3700015603099
u31 t8 2.0710460874252
???
???
???
u17 t20 1.61148789850995
u21 t4 2.73289548465982
u40 t7 2.20993099687621
u34 t18 1.68336707819253
???
u11 t19 4.21963191940449
u35 t26 3.89651552774012
u9 t37 4.17005771305412
u20 t35 3.70554240001366
u26 t24 3.23259625327773
u1 t28 3.55919098644517
u29 t34 4.09956649248488
u30 t3 4.61816152604297
u37 t6 4.7361492223572
???
???

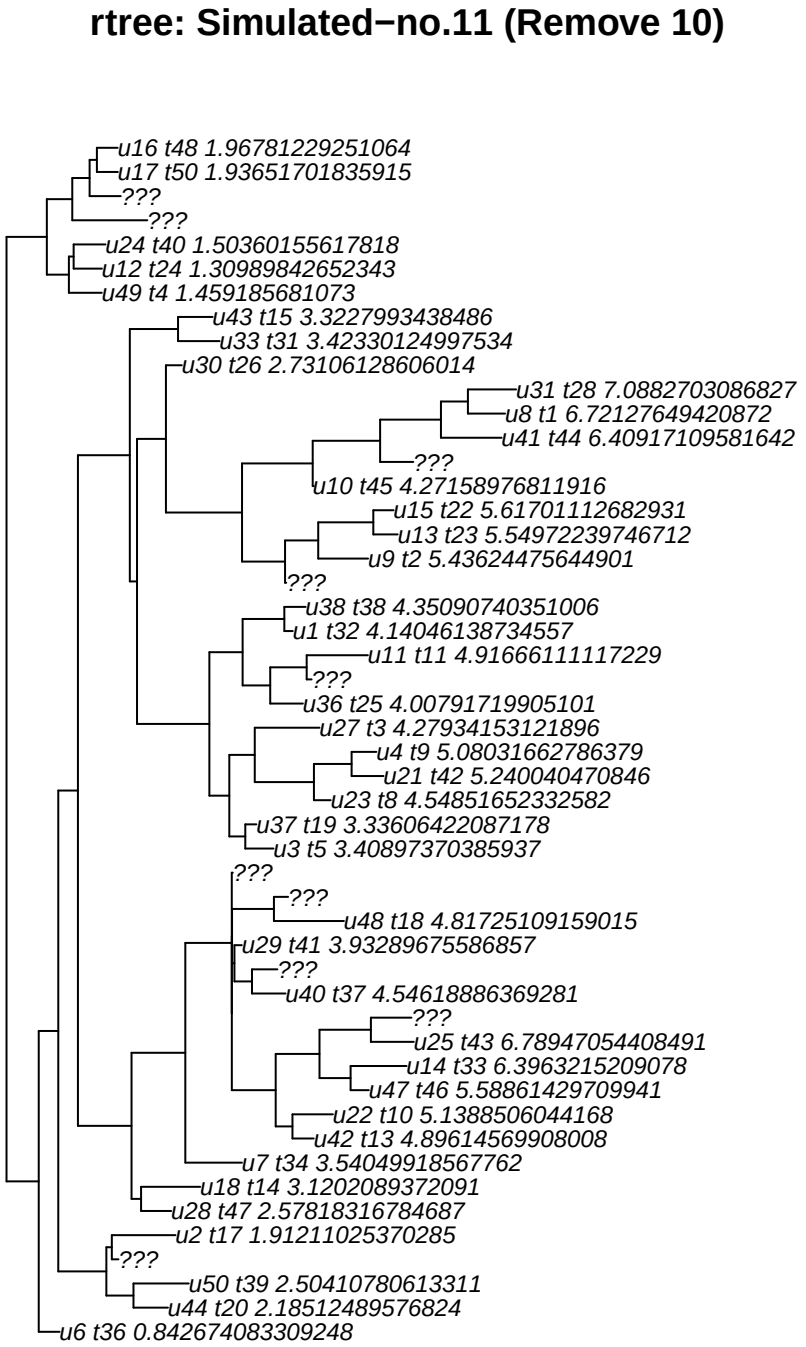

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0167703)
1
2
3
4
5
0.2028
0.1481
0.2621

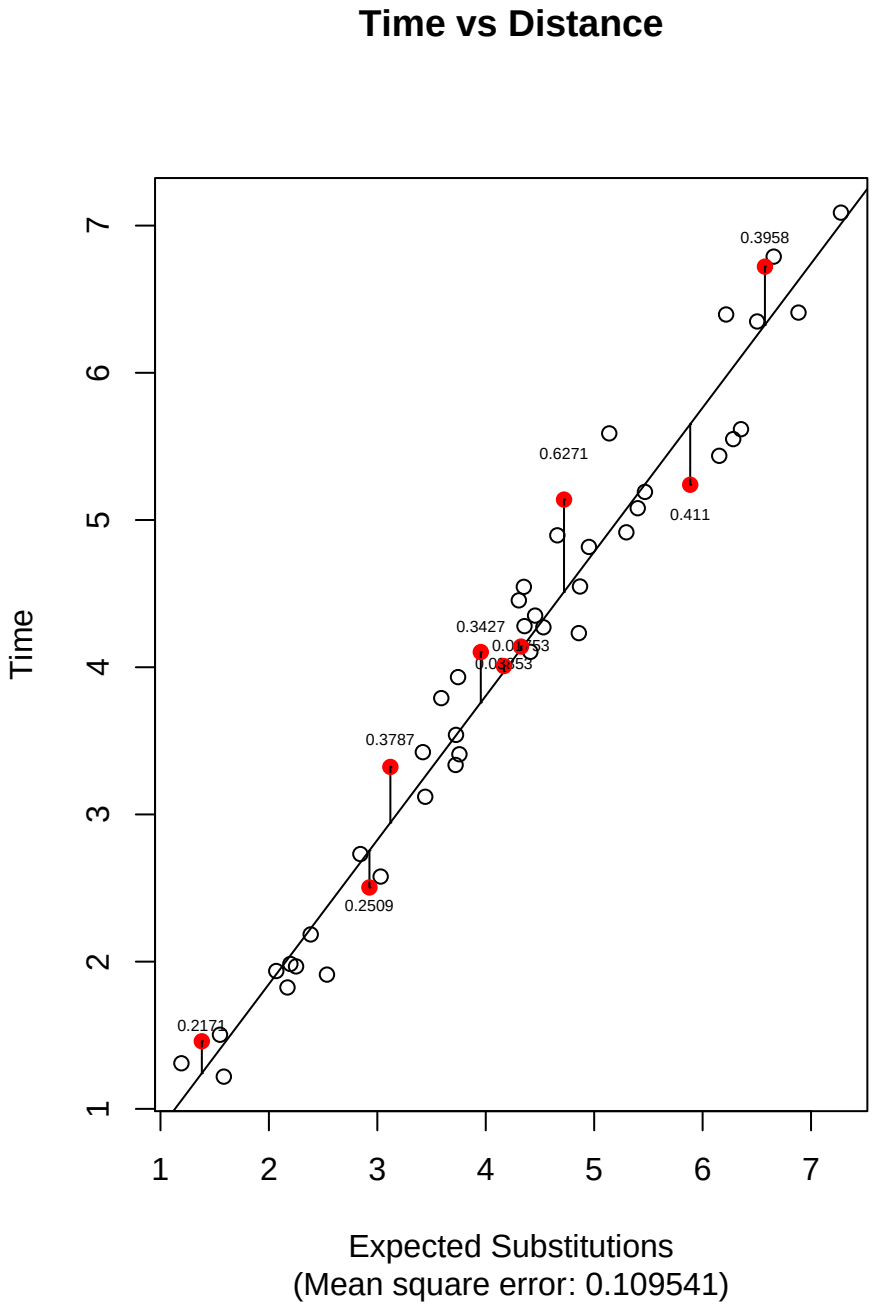

rtree: Simulated−no.9 (Remove 10)
u34 t10 2.94393453933299
u11 t16 2.59913179208525
u9 t31 2.74767339625396
???
u40 t33 3.16761327208951
u7 t23 3.40533524542116
???
u46 t46 3.1733891677577
u14 t48 2.85255469870754
u24 t27 1.51493085897528
u35 t15 1.96721613965929
u18 t36 1.30927841551602
u30 t44 1.68021541042253
u3 t4 2.73289548465982
???
u31 t18 1.68336707819253
u47 t28 3.55919098644517
u17 t34 4.09956649248488
u32 t3 4.61816152604297
u50 t6 4.7361492223572
u44 t22 4.73568516550586
u19 t45 3.48803705489263
???
u33 t19 4.21963191940449
u26 t24 3.23259625327773
u1 t26 3.89651552774012
???
u6 t35 3.70554240001366
???
u37 t42 3.3700015603099
u22 t43 4.03846554155461
u27 t12 3.52974205766805
???
???
u28 t9 5.09275482175872
u8 t49 4.79471353371628
u5 t30 4.82492793048732
u13 t38 3.71159817674197
u43 t11 2.81231663492508
u2 t2 4.26819235482253
u23 t5 3.60435248841532
u29 t17 3.98793632420711
u12 t25 4.35600152099505
u4 t41 4.00855054473504
???
u41 t32 2.71606521029025
u25 t20 1.61148789850995
u48 t40 1.53070905664936
???
u38 t47 2.55070007429458

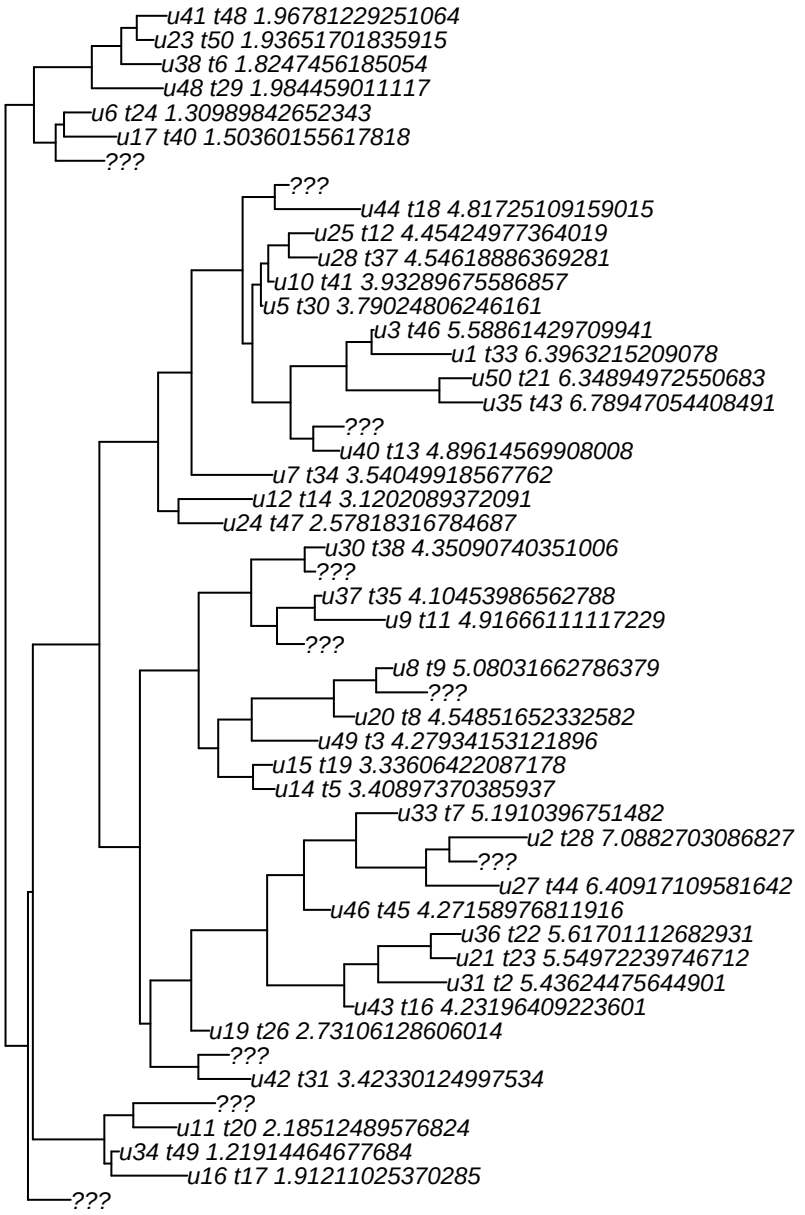

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0948527)
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
0.201
0.083
0.475
0.2993
0.7524

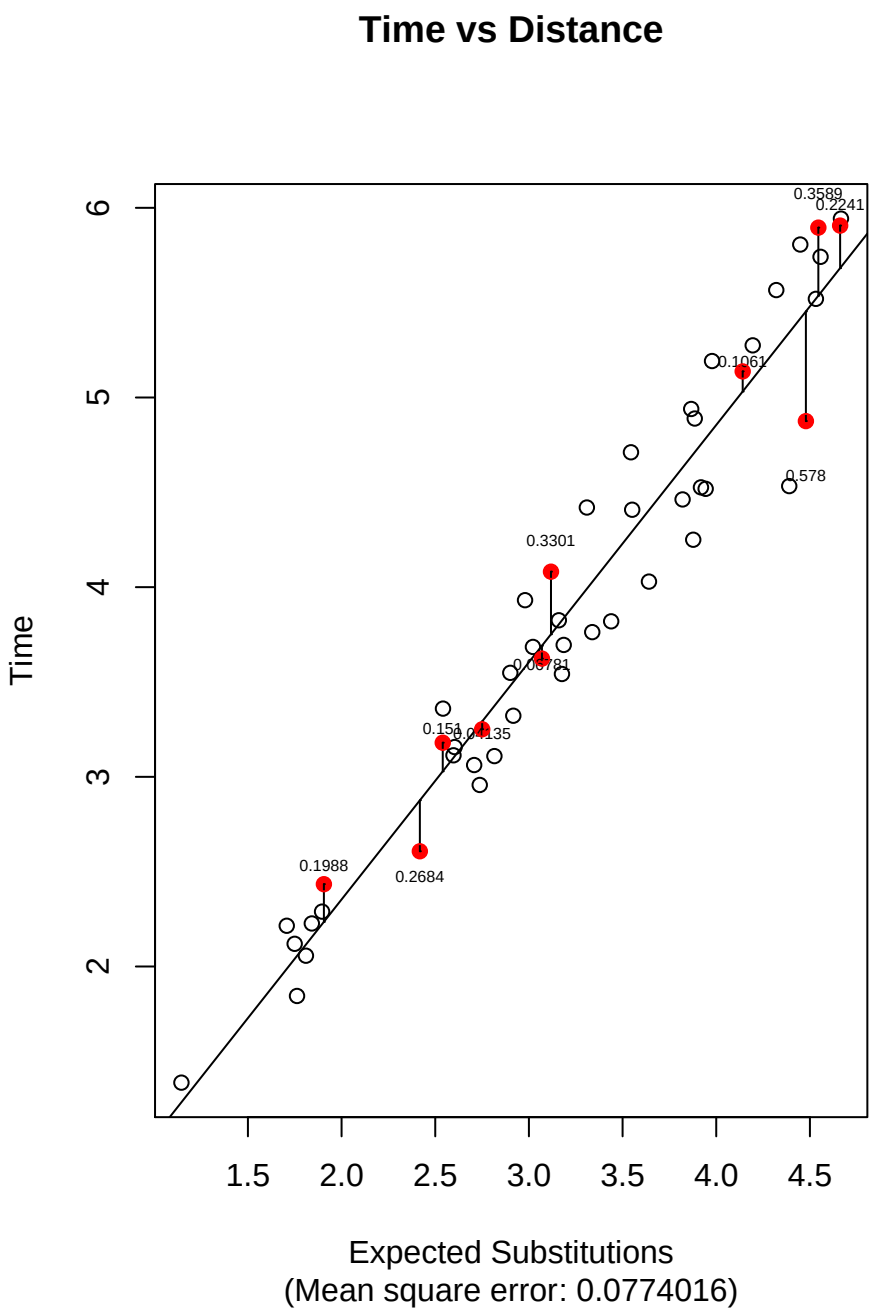

rtree: Simulated−no.10 (Remove 10)
???
u8 t6 4.7361492223572
u28 t22 4.73568516550586
u24 t3 4.61816152604297
u47 t28 3.55919098644517
u17 t34 4.09956649248488
u30 t35 3.70554240001366
u38 t26 3.89651552774012
???
???
u6 t19 4.21963191940449
u41 t24 3.23259625327773
???
u35 t7 2.20993099687621
u11 t18 1.68336707819253
u20 t36 1.30927841551602
u2 t44 1.68021541042253
u7 t21 3.83461387874559
u26 t46 3.1733891677577
???
u14 t39 3.08178983442485
u36 t33 3.16761327208951
u44 t23 3.40533524542116
u5 t31 2.74767339625396
???
u19 t10 2.94393453933299
u32 t27 1.51493085897528
u4 t15 1.96721613965929
u42 t40 1.53070905664936
u29 t20 1.61148789850995
???
u34 t47 2.55070007429458
u16 t11 2.81231663492508
???
u33 t49 4.79471353371628
u23 t30 4.82492793048732
???
u43 t32 2.71606521029025
u3 t17 3.98793632420711
u15 t25 4.35600152099505
u22 t2 4.26819235482253
u31 t5 3.60435248841532
???
u49 t13 4.03705442533828
u1 t14 2.28091889177449
u25 t43 4.03846554155461
u21 t12 3.52974205766805
u46 t29 3.57508792215958
u12 t42 3.3700015603099
u48 t8 2.0710460874252

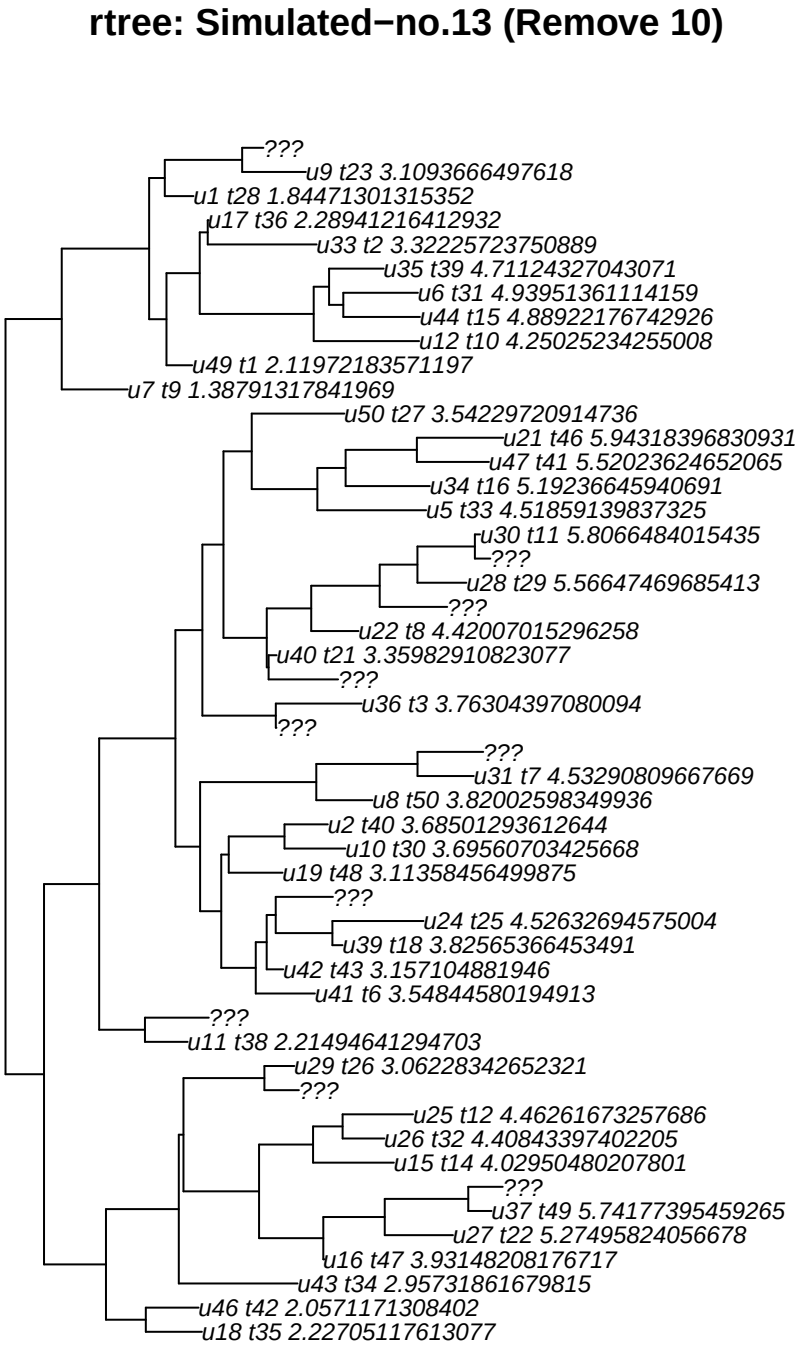

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.161195)
0.5395
0.6439
0.4949
0.4456
0.3274
0.1803
0.5474

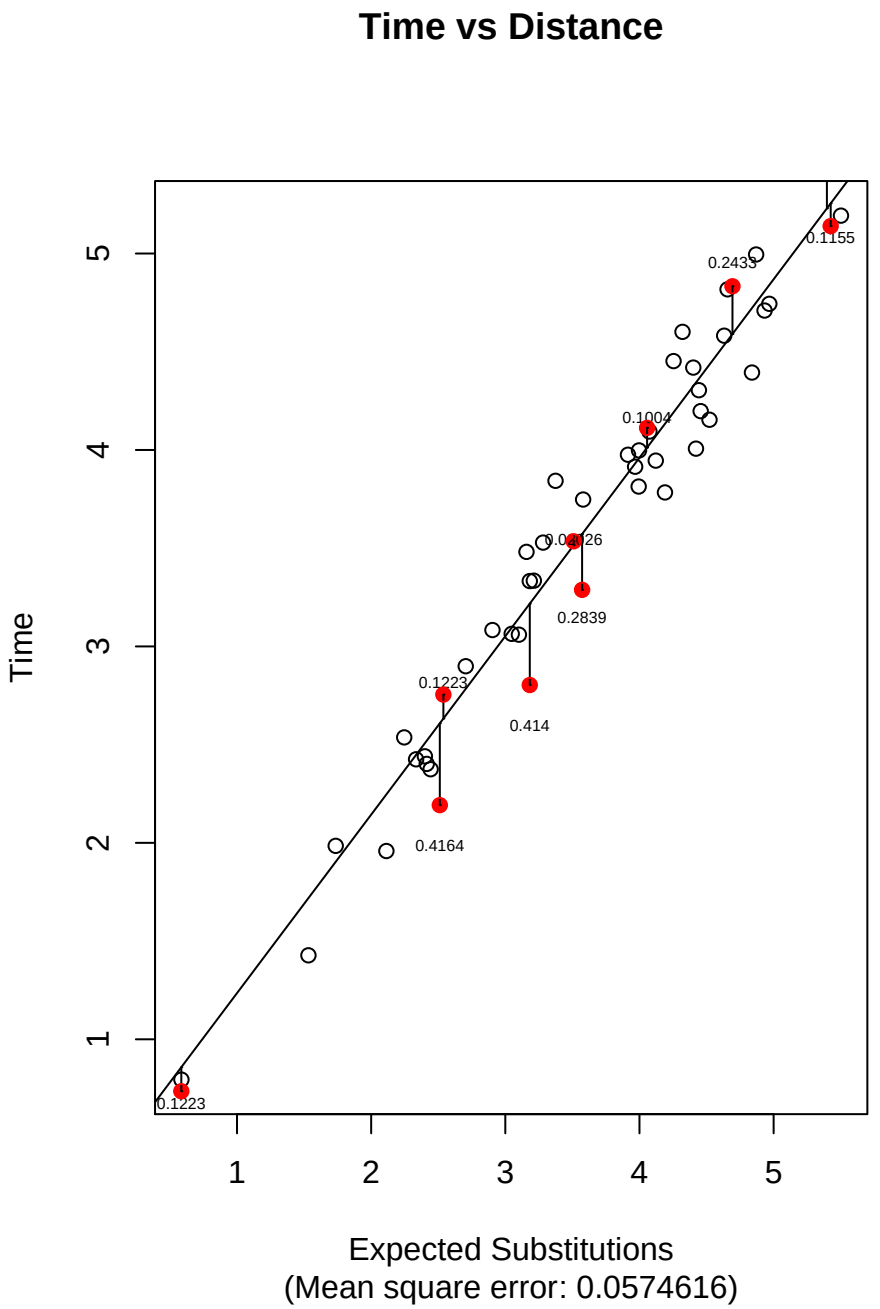

rtree: Simulated−no.11 (Remove 10)
u16 t48 1.96781229251064
u17 t50 1.93651701835915
???
???
u24 t40 1.50360155617818
u12 t24 1.30989842652343
u49 t4 1.459185681073
u43 t15 3.3227993438486
u33 t31 3.42330124997534
u30 t26 2.73106128606014
u31 t28 7.0882703086827
u8 t1 6.72127649420872
u41 t44 6.40917109581642
???
u10 t45 4.27158976811916
u15 t22 5.61701112682931
u13 t23 5.54972239746712
u9 t2 5.43624475644901
???
u38 t38 4.35090740351006
u1 t32 4.14046138734557
u11 t11 4.91666111117229
???
u36 t25 4.00791719905101
u27 t3 4.27934153121896
u4 t9 5.08031662786379
u21 t42 5.240040470846
u23 t8 4.54851652332582
u37 t19 3.33606422087178
u3 t5 3.40897370385937
???
???
u48 t18 4.81725109159015
u29 t41 3.93289675586857
???
u40 t37 4.54618886369281
???
u25 t43 6.78947054408491
u14 t33 6.3963215209078
u47 t46 5.58861429709941
u22 t10 5.1388506044168
u42 t13 4.89614569908008
u7 t34 3.54049918567762
u18 t14 3.1202089372091
u28 t47 2.57818316784687
u2 t17 1.91211025370285
???
u50 t39 2.50410780613311
u44 t20 2.18512489576824
u6 t36 0.842674083309248

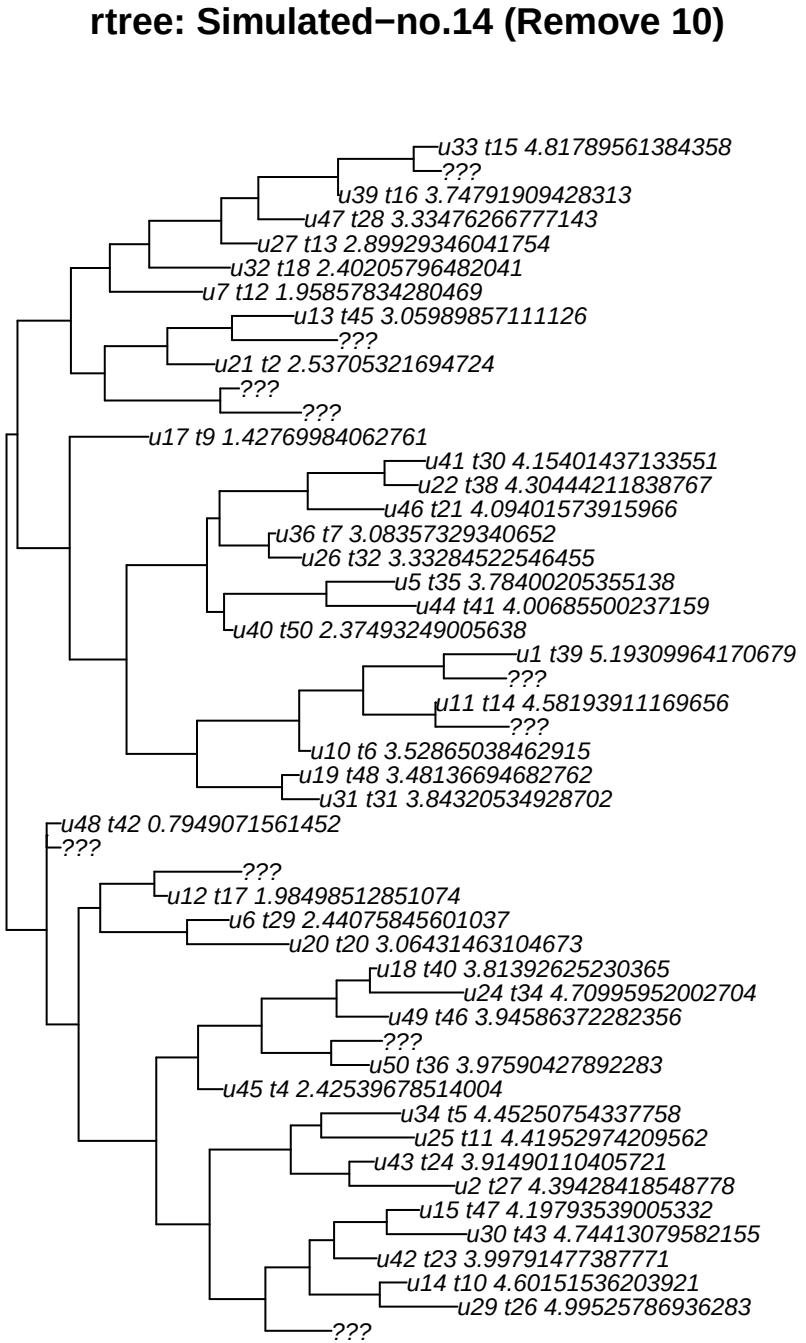

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.109541)
0.3958
0.6271
0.411
0.3427
0.3787
0.2509
0.2171

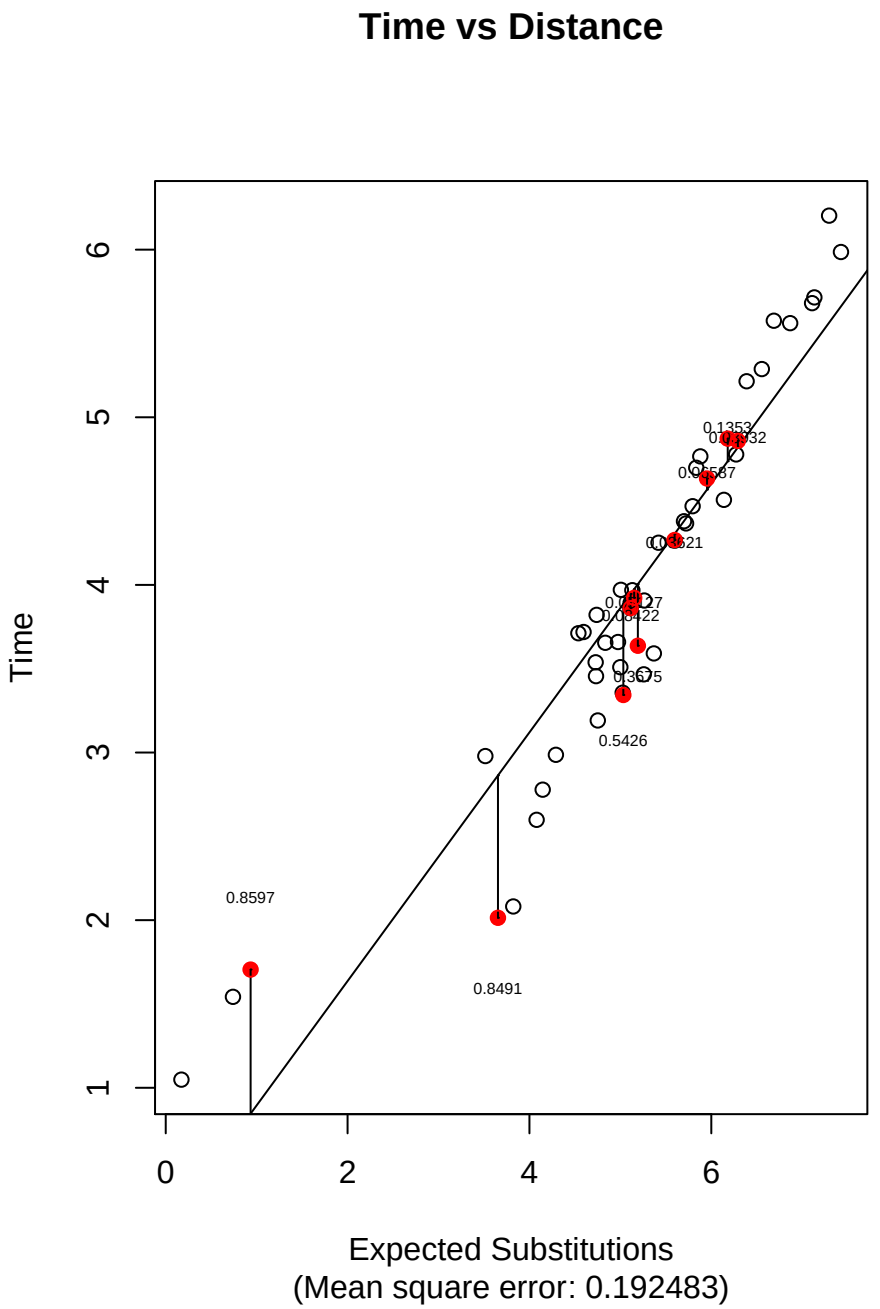

rtree: Simulated−no.12 (Remove 10)
u41 t48 1.96781229251064
u23 t50 1.93651701835915
u38 t6 1.8247456185054
u48 t29 1.984459011117
u6 t24 1.30989842652343
u17 t40 1.50360155617818
???
???
u44 t18 4.81725109159015
u25 t12 4.45424977364019
u28 t37 4.54618886369281
u10 t41 3.93289675586857
u5 t30 3.79024806246161
u3 t46 5.58861429709941
u1 t33 6.3963215209078
u50 t21 6.34894972550683
u35 t43 6.78947054408491
???
u40 t13 4.89614569908008
u7 t34 3.54049918567762
u12 t14 3.1202089372091
u24 t47 2.57818316784687
u30 t38 4.35090740351006
???
u37 t35 4.10453986562788
u9 t11 4.91666111117229
???
u8 t9 5.08031662786379
???
u20 t8 4.54851652332582
u49 t3 4.27934153121896
u15 t19 3.33606422087178
u14 t5 3.40897370385937
u33 t7 5.1910396751482
u2 t28 7.0882703086827
???
u27 t44 6.40917109581642
u46 t45 4.27158976811916
u36 t22 5.61701112682931
u21 t23 5.54972239746712
u31 t2 5.43624475644901
u43 t16 4.23196409223601
u19 t26 2.73106128606014
???
u42 t31 3.42330124997534
???
u11 t20 2.18512489576824
u34 t49 1.21914464677684
u16 t17 1.91211025370285
???

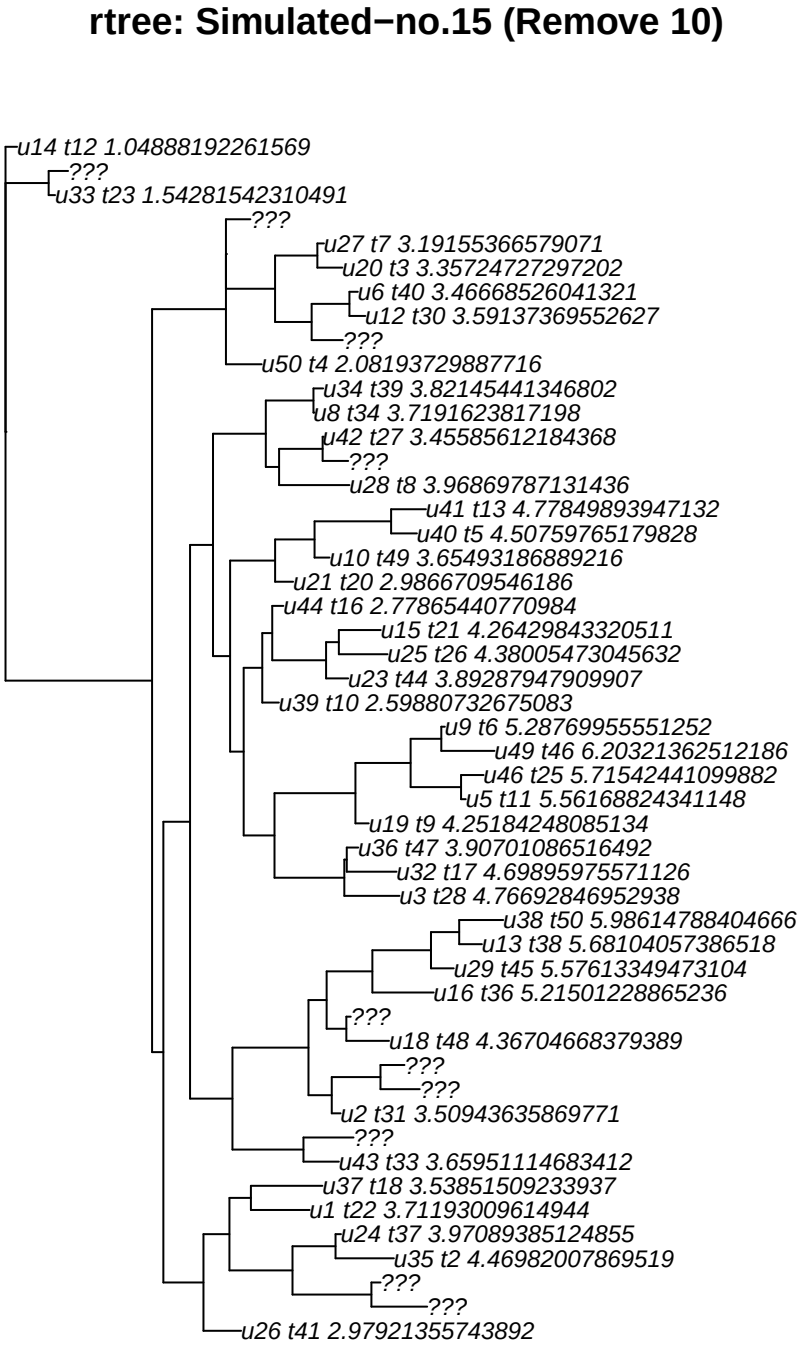

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0774016)
1.5
2.0
2.5
3.0
3.5
4.0
4.5
2
3
4
5
6
0.3589
0.2241
0.1061
0.578
0.3301
0.06781
0.151
0.04135
0.1988
0.2684

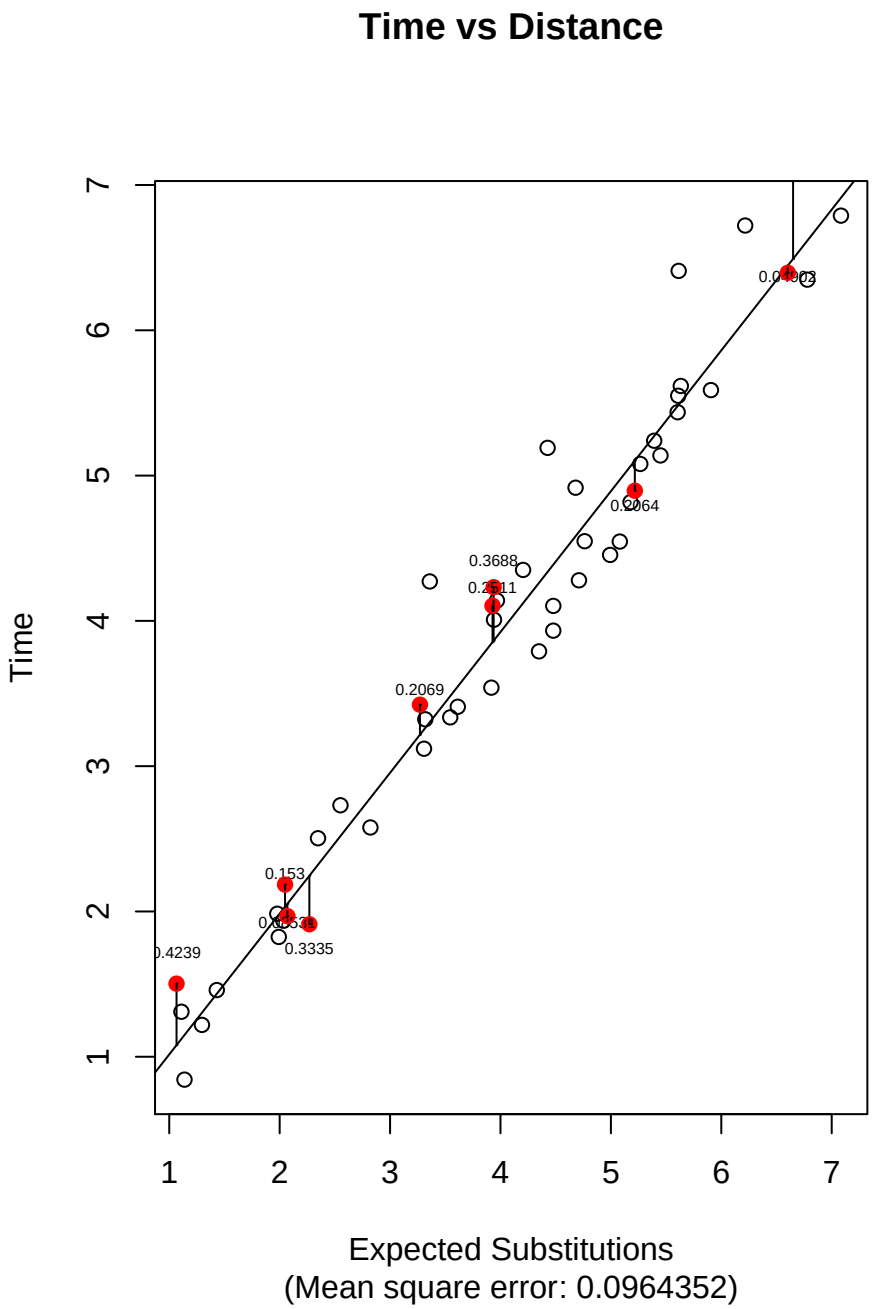

rtree: Simulated−no.13 (Remove 10)
???
u9 t23 3.1093666497618
u1 t28 1.84471301315352
u17 t36 2.28941216412932
u33 t2 3.32225723750889
u35 t39 4.71124327043071
u6 t31 4.93951361114159
u44 t15 4.88922176742926
u12 t10 4.25025234255008
u49 t1 2.11972183571197
u7 t9 1.38791317841969
u50 t27 3.54229720914736
u21 t46 5.94318396830931
u47 t41 5.52023624652065
u34 t16 5.19236645940691
u5 t33 4.51859139837325
u30 t11 5.8066484015435
???
u28 t29 5.56647469685413
???
u22 t8 4.42007015296258
u40 t21 3.35982910823077
???
u36 t3 3.76304397080094
???
???
u31 t7 4.53290809667669
u8 t50 3.82002598349936
u2 t40 3.68501293612644
u10 t30 3.69560703425668
u19 t48 3.11358456499875
???
u24 t25 4.52632694575004
u39 t18 3.82565366453491
u42 t43 3.157104881946
u41 t6 3.54844580194913
???
u11 t38 2.21494641294703
u29 t26 3.06228342652321
???
u25 t12 4.46261673257686
u26 t32 4.40843397402205
u15 t14 4.02950480207801
???
u37 t49 5.74177395459265
u27 t22 5.27495824056678
u16 t47 3.93148208176717
u43 t34 2.95731861679815
u46 t42 2.0571171308402
u18 t35 2.22705117613077

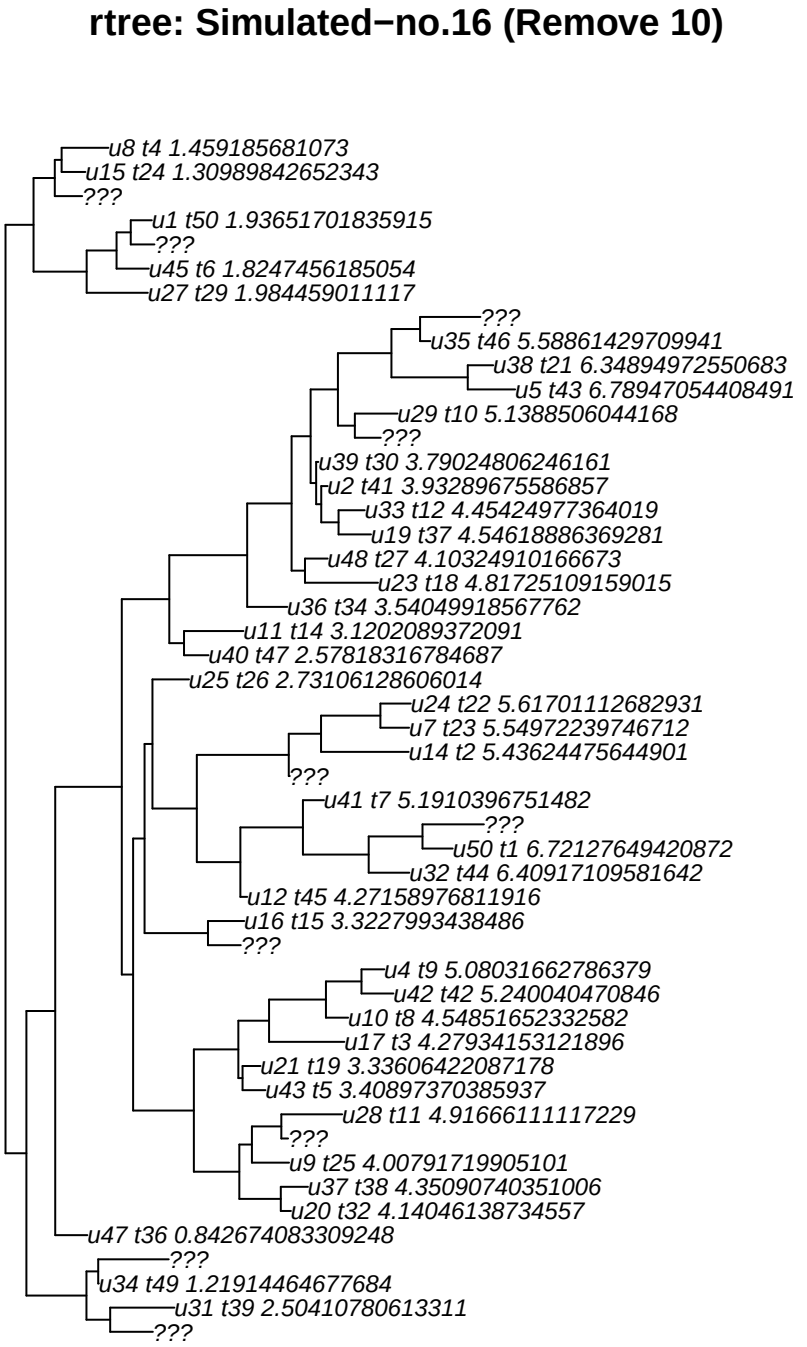

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0574616)
0.1223
0.4164
0.414
0.2839
0.1004
0.2433
0.1155
1
2
3
4
5

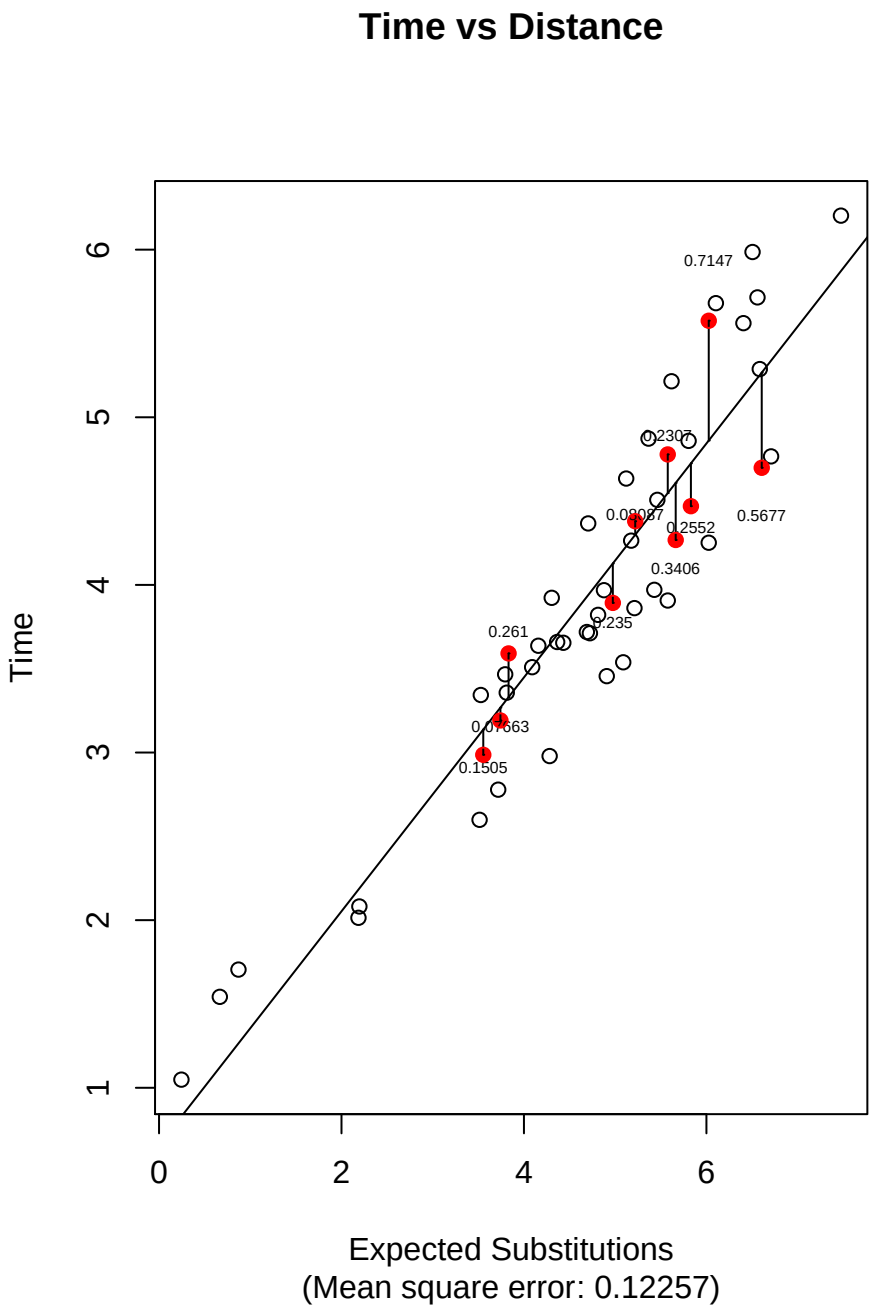

rtree: Simulated−no.14 (Remove 10)
u33 t15 4.81789561384358
???
u39 t16 3.74791909428313
u47 t28 3.33476266777143
u27 t13 2.89929346041754
u32 t18 2.40205796482041
u7 t12 1.95857834280469
u13 t45 3.05989857111126
???
u21 t2 2.53705321694724
???
???
u17 t9 1.42769984062761
u41 t30 4.15401437133551
u22 t38 4.30444211838767
u46 t21 4.09401573915966
u36 t7 3.08357329340652
u26 t32 3.33284522546455
u5 t35 3.78400205355138
u44 t41 4.00685500237159
u40 t50 2.37493249005638
u1 t39 5.19309964170679
???
u11 t14 4.58193911169656
???
u10 t6 3.52865038462915
u19 t48 3.48136694682762
u31 t31 3.84320534928702
u48 t42 0.7949071561452
???
???
u12 t17 1.98498512851074
u6 t29 2.44075845601037
u20 t20 3.06431463104673
u18 t40 3.81392625230365
u24 t34 4.70995952002704
u49 t46 3.94586372282356
???
u50 t36 3.97590427892283
u45 t4 2.42539678514004
u34 t5 4.45250754337758
u25 t11 4.41952974209562
u43 t24 3.91490110405721
u2 t27 4.39428418548778
u15 t47 4.19793539005332
u30 t43 4.74413079582155
u42 t23 3.99791477387771
u14 t10 4.60151536203921
u29 t26 4.99525786936283
???

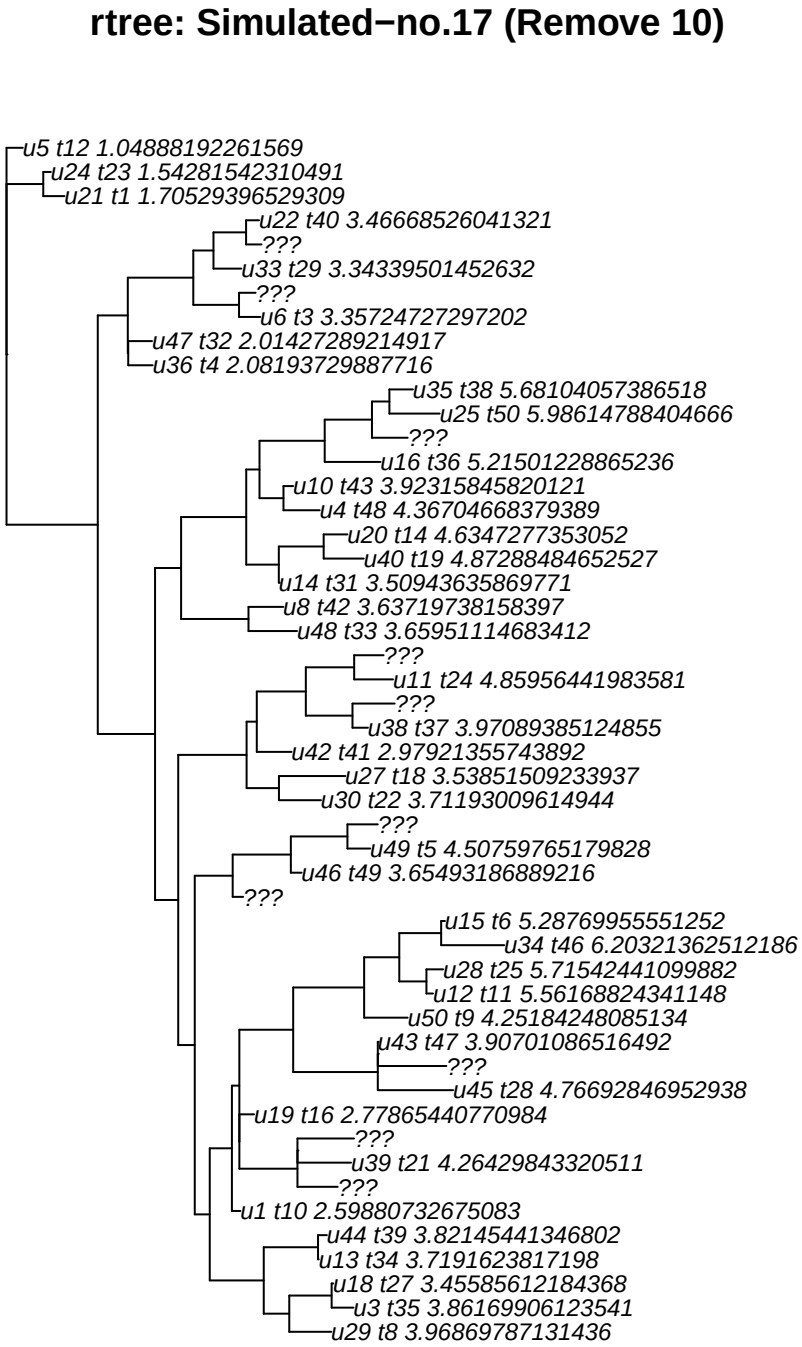

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.192483)
0.8597
0.8491
0.5426
0.1353

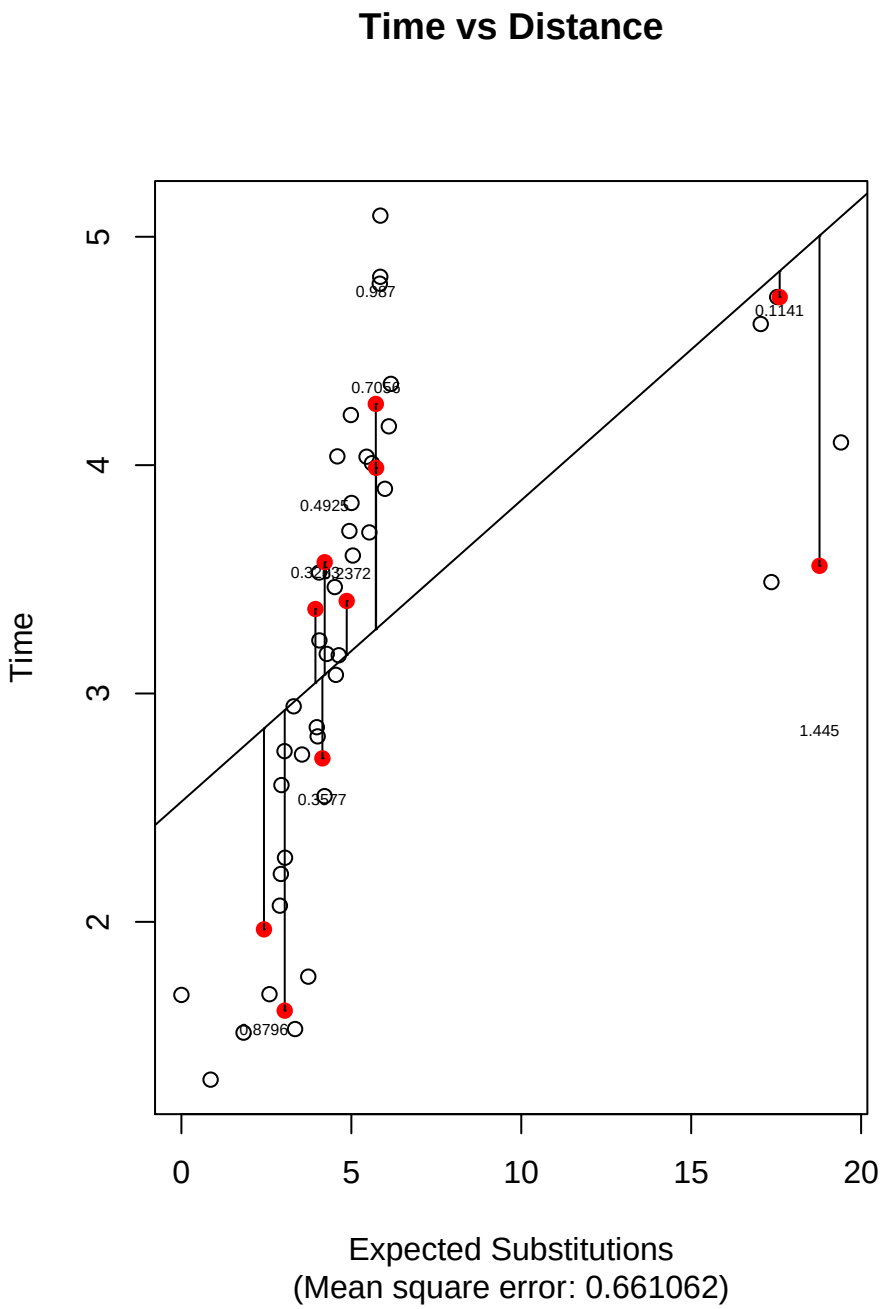

rtree: Simulated−no.15 (Remove 10)
u14 t12 1.04888192261569
???
u33 t23 1.54281542310491
???
u27 t7 3.19155366579071
u20 t3 3.35724727297202
u6 t40 3.46668526041321
u12 t30 3.59137369552627
???
u50 t4 2.08193729887716
u34 t39 3.82145441346802
u8 t34 3.7191623817198
u42 t27 3.45585612184368
???
u28 t8 3.96869787131436
u41 t13 4.77849893947132
u40 t5 4.50759765179828
u10 t49 3.65493186889216
u21 t20 2.9866709546186
u44 t16 2.77865440770984
u15 t21 4.26429843320511
u25 t26 4.38005473045632
u23 t44 3.89287947909907
u39 t10 2.59880732675083
u9 t6 5.28769955551252
u49 t46 6.20321362512186
u46 t25 5.71542441099882
u5 t11 5.56168824341148
u19 t9 4.25184248085134
u36 t47 3.90701086516492
u32 t17 4.69895975571126
u3 t28 4.76692846952938
u38 t50 5.98614788404666
u13 t38 5.68104057386518
u29 t45 5.57613349473104
u16 t36 5.21501228865236
???
u18 t48 4.36704668379389
???
???
u2 t31 3.50943635869771
???
u43 t33 3.65951114683412
u37 t18 3.53851509233937
u1 t22 3.71193009614944
u24 t37 3.97089385124855
u35 t2 4.46982007869519
???
???
u26 t41 2.97921355743892

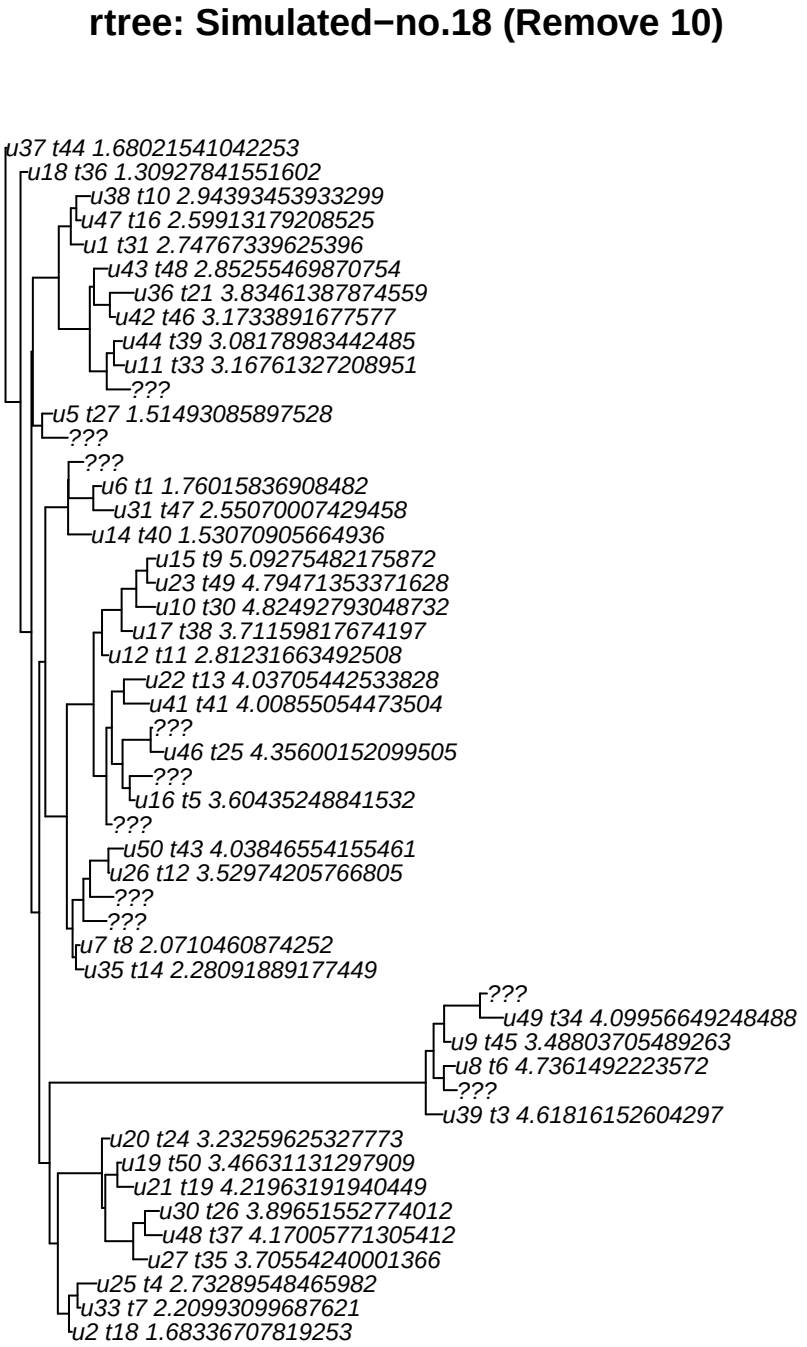

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0964352)
1
2
3
4
5
6
7
0.4239
0.153
0.3335
0.2069
0.3688
0.2064

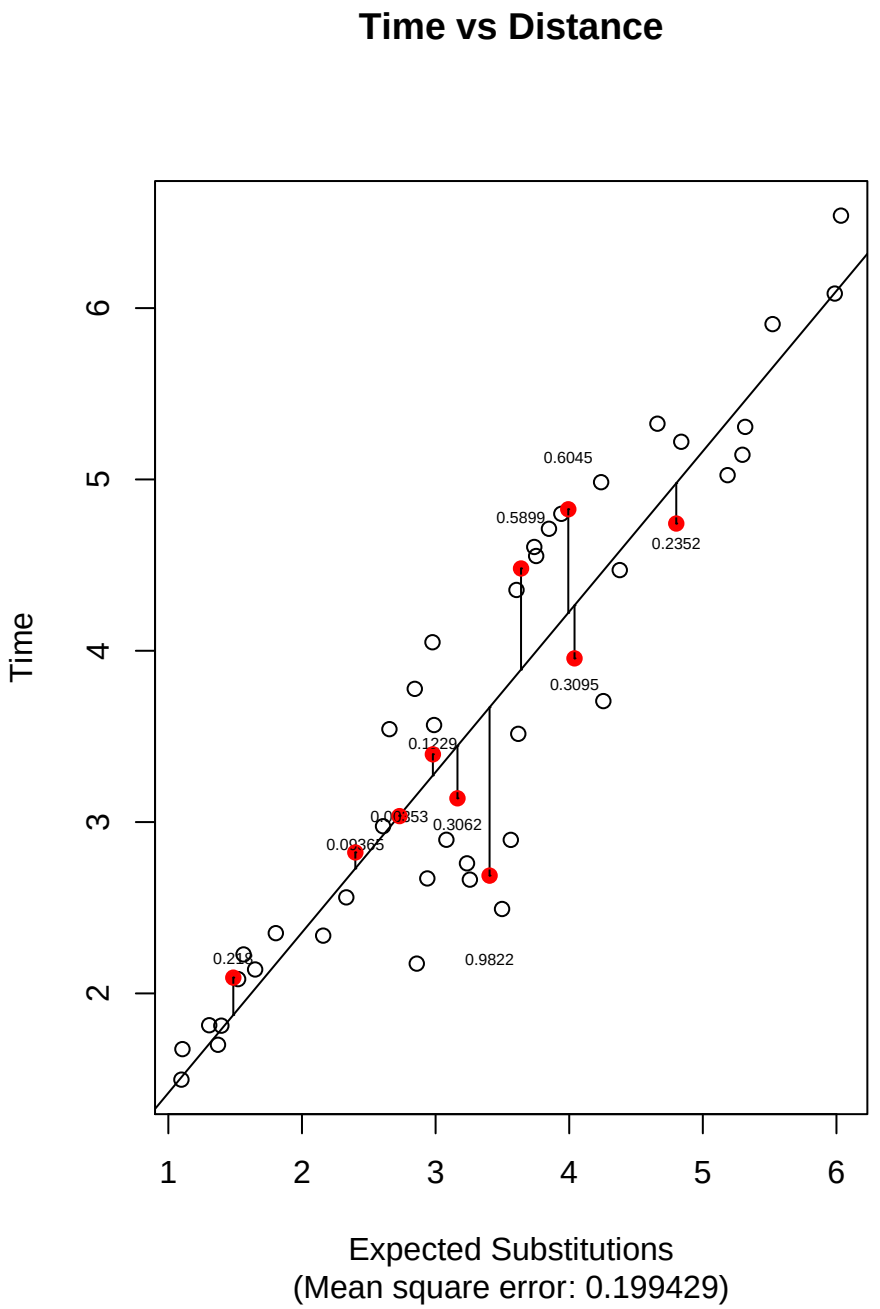

rtree: Simulated−no.16 (Remove 10)
u8 t4 1.459185681073
u15 t24 1.30989842652343
???
u1 t50 1.93651701835915
???
u45 t6 1.8247456185054
u27 t29 1.984459011117
???
u35 t46 5.58861429709941
u38 t21 6.34894972550683
u5 t43 6.78947054408491
u29 t10 5.1388506044168
???
u39 t30 3.79024806246161
u2 t41 3.93289675586857
u33 t12 4.45424977364019
u19 t37 4.54618886369281
u48 t27 4.10324910166673
u23 t18 4.81725109159015
u36 t34 3.54049918567762
u11 t14 3.1202089372091
u40 t47 2.57818316784687
u25 t26 2.73106128606014
u24 t22 5.61701112682931
u7 t23 5.54972239746712
u14 t2 5.43624475644901
???
u41 t7 5.1910396751482
???
u50 t1 6.72127649420872
u32 t44 6.40917109581642
u12 t45 4.27158976811916
u16 t15 3.3227993438486
???
u4 t9 5.08031662786379
u42 t42 5.240040470846
u10 t8 4.54851652332582
u17 t3 4.27934153121896
u21 t19 3.33606422087178
u43 t5 3.40897370385937
u28 t11 4.91666111117229
???
u9 t25 4.00791719905101
u37 t38 4.35090740351006
u20 t32 4.14046138734557
u47 t36 0.842674083309248
???
u34 t49 1.21914464677684
u31 t39 2.50410780613311
???

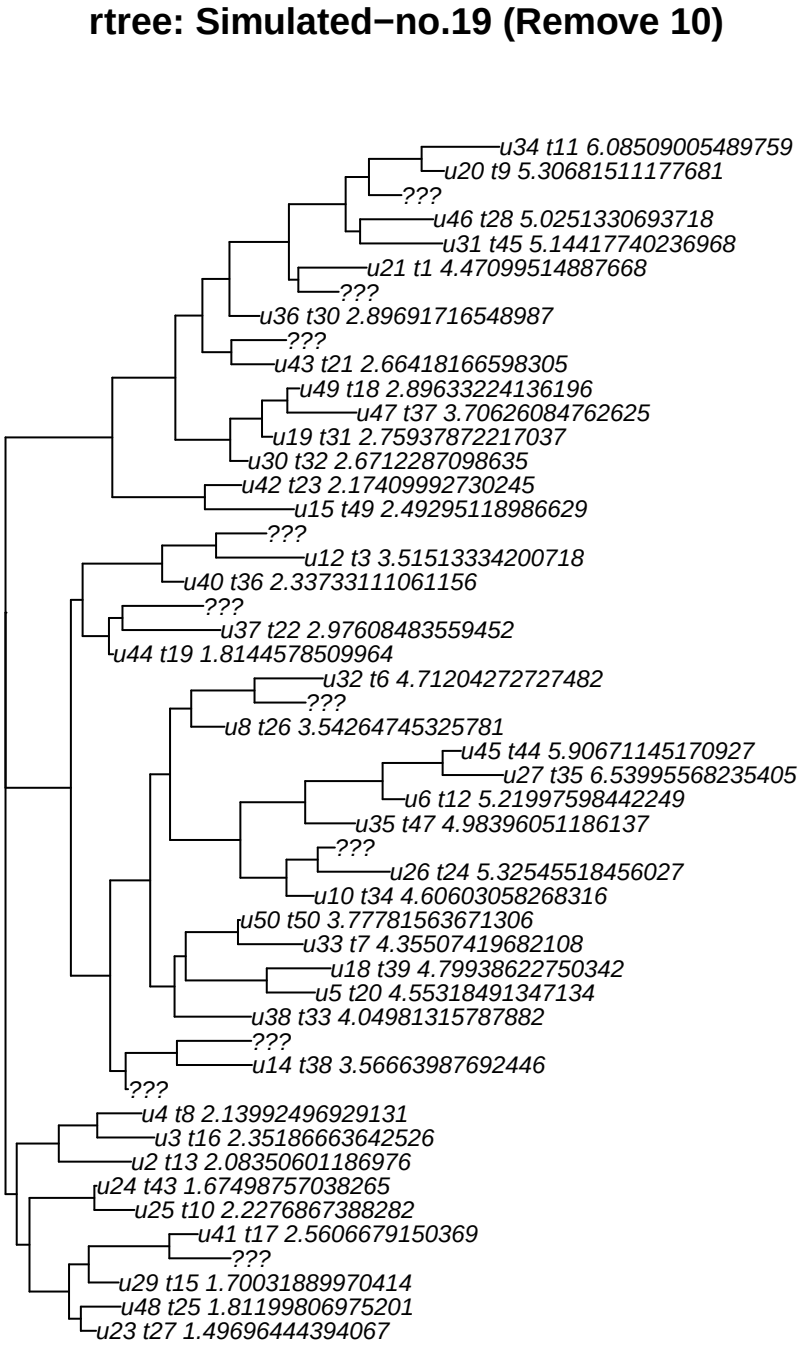

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.12257)
0.7147
0.2307
0.08087
0.2552
0.5677
0.3406
0.261
0.235
0.07663
0.1505

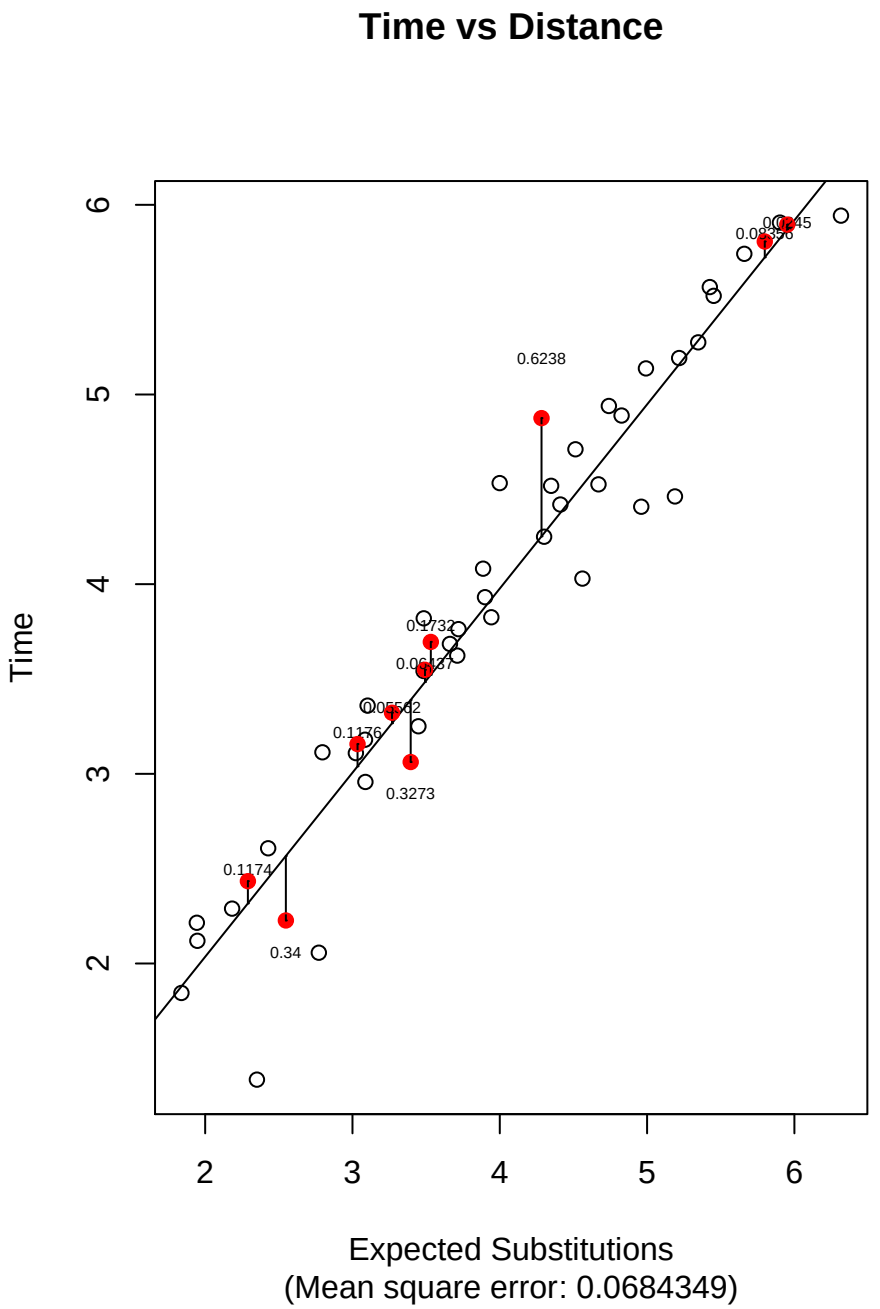

rtree: Simulated−no.17 (Remove 10)
u5 t12 1.04888192261569
u24 t23 1.54281542310491
u21 t1 1.70529396529309
u22 t40 3.46668526041321
???
u33 t29 3.34339501452632
???
u6 t3 3.35724727297202
u47 t32 2.01427289214917
u36 t4 2.08193729887716
u35 t38 5.68104057386518
u25 t50 5.98614788404666
???
u16 t36 5.21501228865236
u10 t43 3.92315845820121
u4 t48 4.36704668379389
u20 t14 4.6347277353052
u40 t19 4.87288484652527
u14 t31 3.50943635869771
u8 t42 3.63719738158397
u48 t33 3.65951114683412
???
u11 t24 4.85956441983581
???
u38 t37 3.97089385124855
u42 t41 2.97921355743892
u27 t18 3.53851509233937
u30 t22 3.71193009614944
???
u49 t5 4.50759765179828
u46 t49 3.65493186889216
???
u15 t6 5.28769955551252
u34 t46 6.20321362512186
u28 t25 5.71542441099882
u12 t11 5.56168824341148
u50 t9 4.25184248085134
u43 t47 3.90701086516492
???
u45 t28 4.76692846952938
u19 t16 2.77865440770984
???
u39 t21 4.26429843320511
???
u1 t10 2.59880732675083
u44 t39 3.82145441346802
u13 t34 3.7191623817198
u18 t27 3.45585612184368
u3 t35 3.86169906123541
u29 t8 3.96869787131436

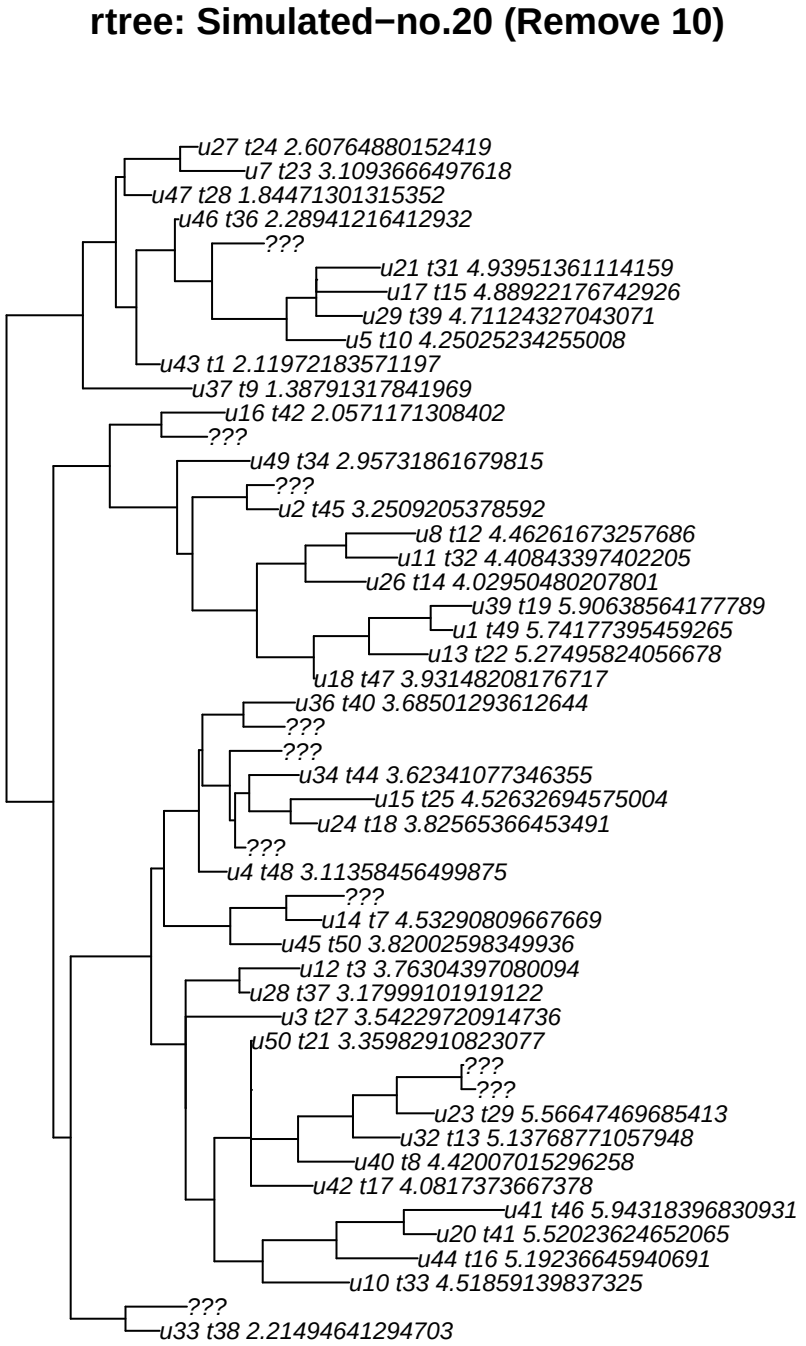

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.661062)
0
5
10
15
20
2
3
4
5
0.987
0.1141
0.4925
1.445
0.8796

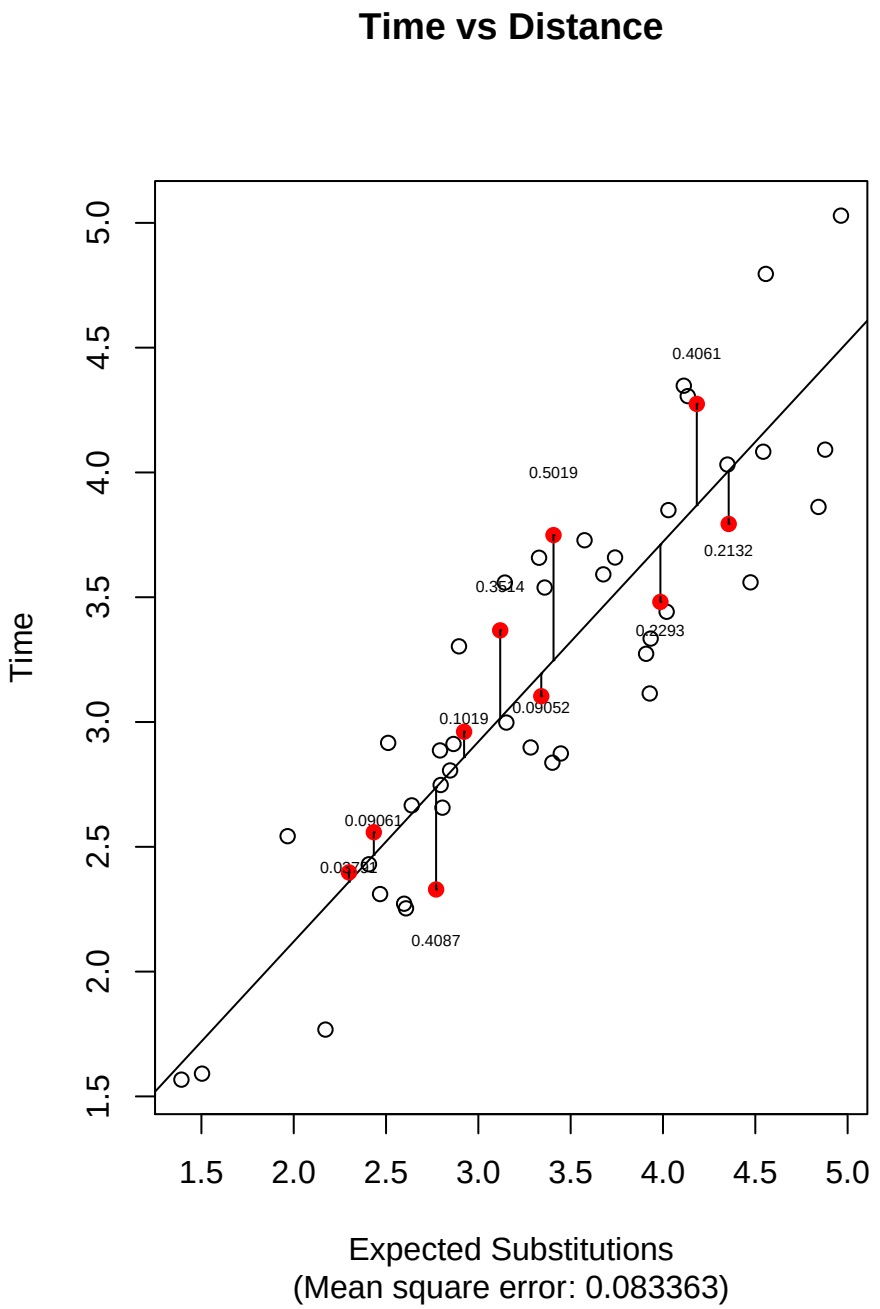

rtree: Simulated−no.18 (Remove 10)
u37 t44 1.68021541042253
u18 t36 1.30927841551602
u38 t10 2.94393453933299
u47 t16 2.59913179208525
u1 t31 2.74767339625396
u43 t48 2.85255469870754
u36 t21 3.83461387874559
u42 t46 3.1733891677577
u44 t39 3.08178983442485
u11 t33 3.16761327208951
???
u5 t27 1.51493085897528
???
???
u6 t1 1.76015836908482
u31 t47 2.55070007429458
u14 t40 1.53070905664936
u15 t9 5.09275482175872
u23 t49 4.79471353371628
u10 t30 4.82492793048732
u17 t38 3.71159817674197
u12 t11 2.81231663492508
u22 t13 4.03705442533828
u41 t41 4.00855054473504
???
u46 t25 4.35600152099505
???
u16 t5 3.60435248841532
???
u50 t43 4.03846554155461
u26 t12 3.52974205766805
???
???
u7 t8 2.0710460874252
u35 t14 2.28091889177449
???
u49 t34 4.09956649248488
u9 t45 3.48803705489263
u8 t6 4.7361492223572
???
u39 t3 4.61816152604297
u20 t24 3.23259625327773
u19 t50 3.46631131297909
u21 t19 4.21963191940449
u30 t26 3.89651552774012
u48 t37 4.17005771305412
u27 t35 3.70554240001366
u25 t4 2.73289548465982
u33 t7 2.20993099687621
u2 t18 1.68336707819253

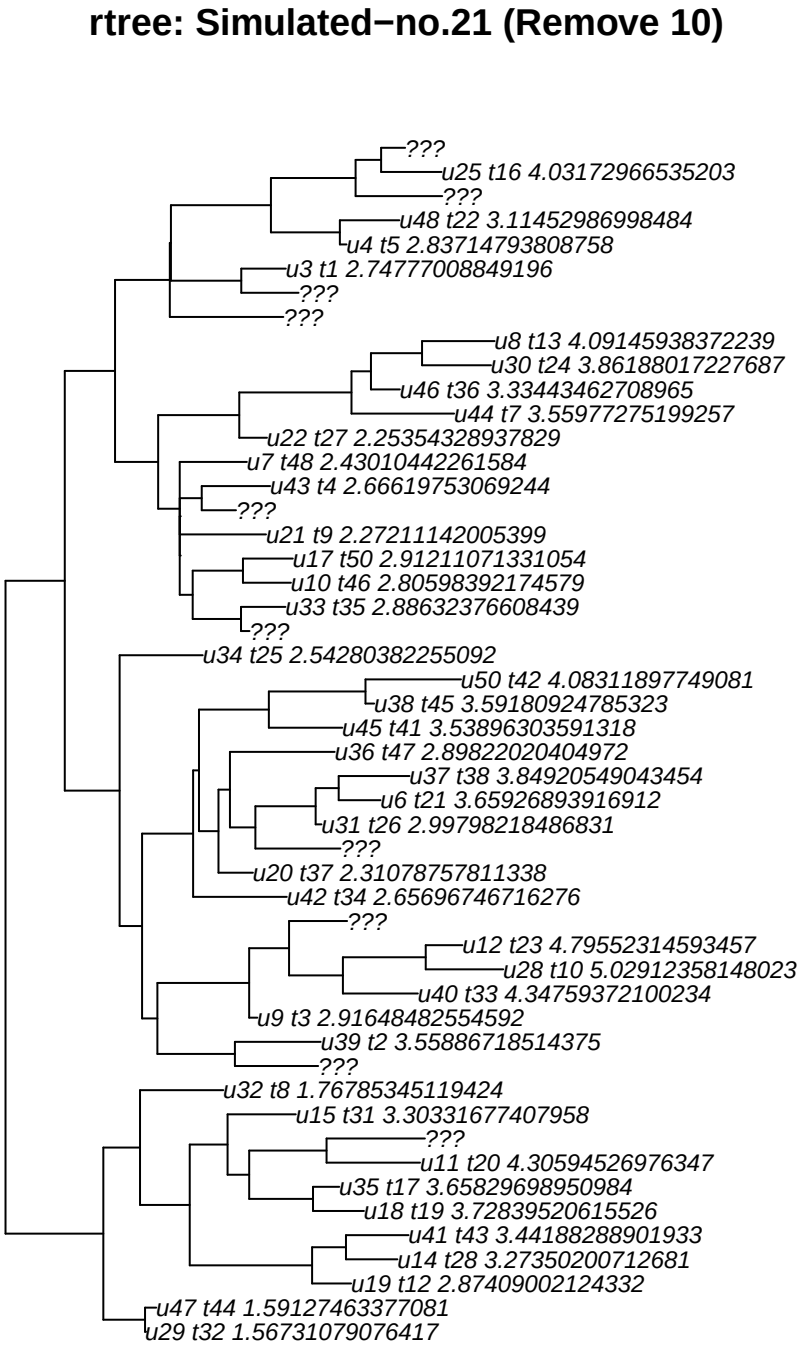

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.199429)
0.6045
0.5899
0.2352
0.3095
0.1229
0.3062
0.9822

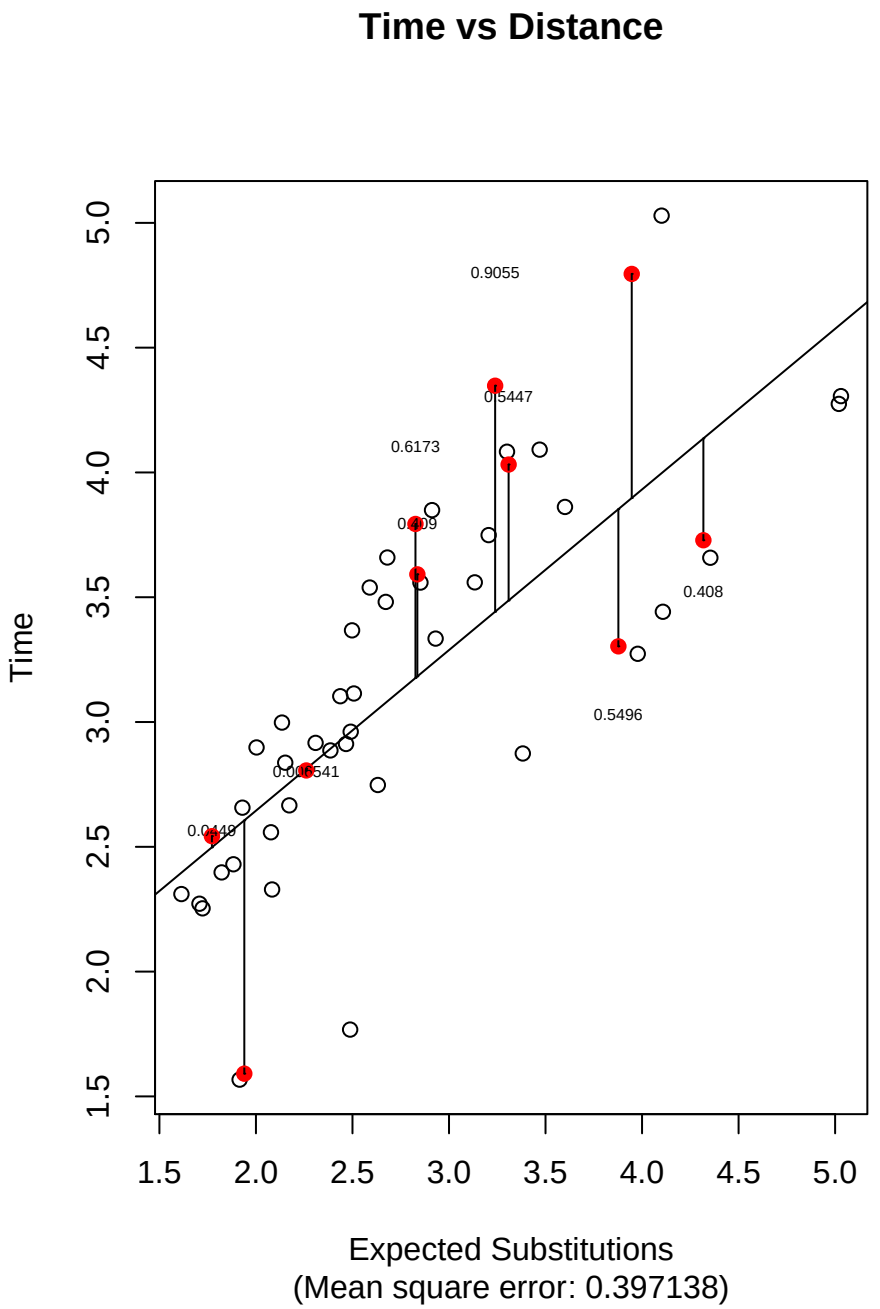

rtree: Simulated−no.19 (Remove 10)
u34 t11 6.08509005489759
u20 t9 5.30681511177681
???
u46 t28 5.0251330693718
u31 t45 5.14417740236968
u21 t1 4.47099514887668
???
u36 t30 2.89691716548987
???
u43 t21 2.66418166598305
u49 t18 2.89633224136196
u47 t37 3.70626084762625
u19 t31 2.75937872217037
u30 t32 2.6712287098635
u42 t23 2.17409992730245
u15 t49 2.49295118986629
???
u12 t3 3.51513334200718
u40 t36 2.33733111061156
???
u37 t22 2.97608483559452
u44 t19 1.8144578509964
u32 t6 4.71204272727482
???
u8 t26 3.54264745325781
u45 t44 5.90671145170927
u27 t35 6.53995568235405
u6 t12 5.21997598442249
u35 t47 4.98396051186137
???
u26 t24 5.32545518456027
u10 t34 4.60603058268316
u50 t50 3.77781563671306
u33 t7 4.35507419682108
u18 t39 4.79938622750342
u5 t20 4.55318491347134
u38 t33 4.04981315787882
???
u14 t38 3.56663987692446
???
u4 t8 2.13992496929131
u3 t16 2.35186663642526
u2 t13 2.08350601186976
u24 t43 1.67498757038265
u25 t10 2.2276867388282
u41 t17 2.5606679150369
???
u29 t15 1.70031889970414
u48 t25 1.81199806975201
u23 t27 1.49696444394067

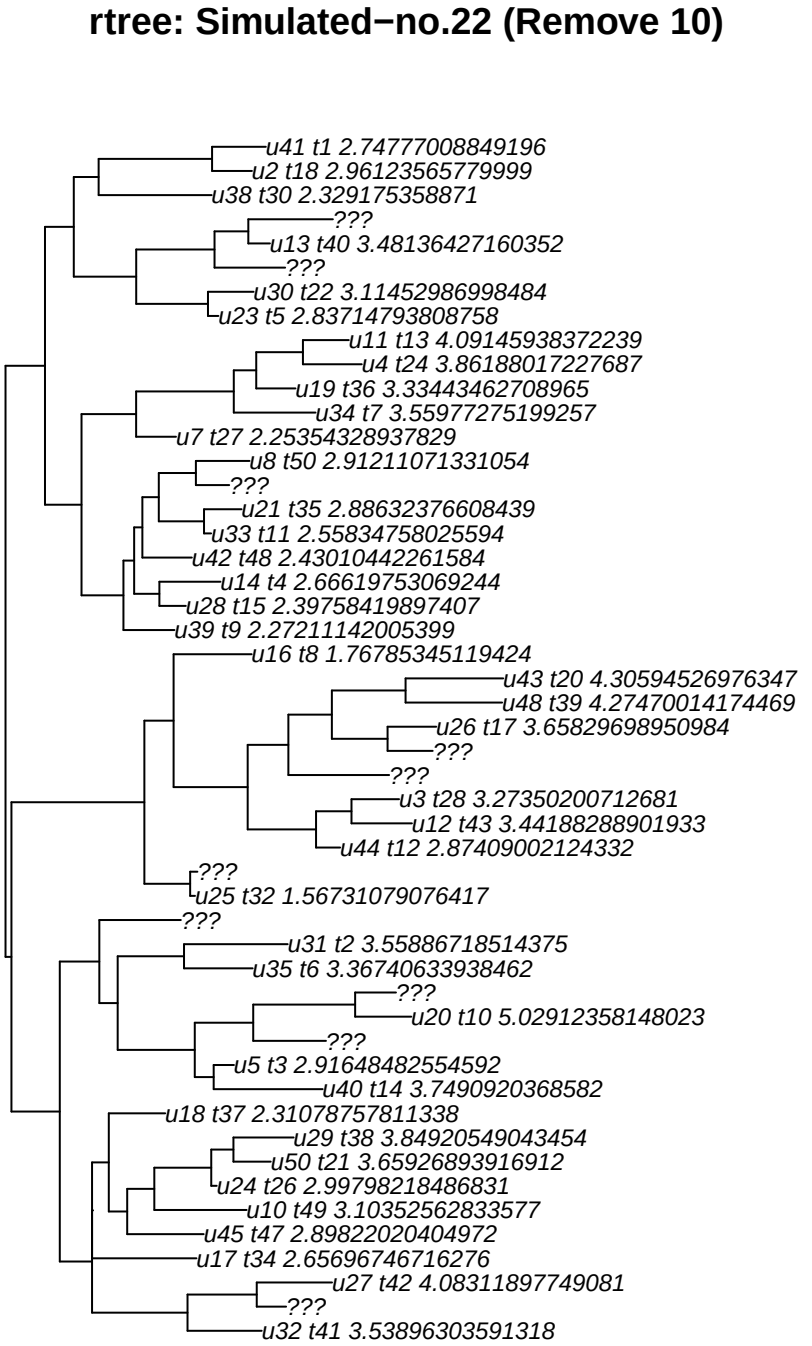

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0684349)
2
3
4
5
6
0.6238
0.1174
0.34
0.3273
0.1176

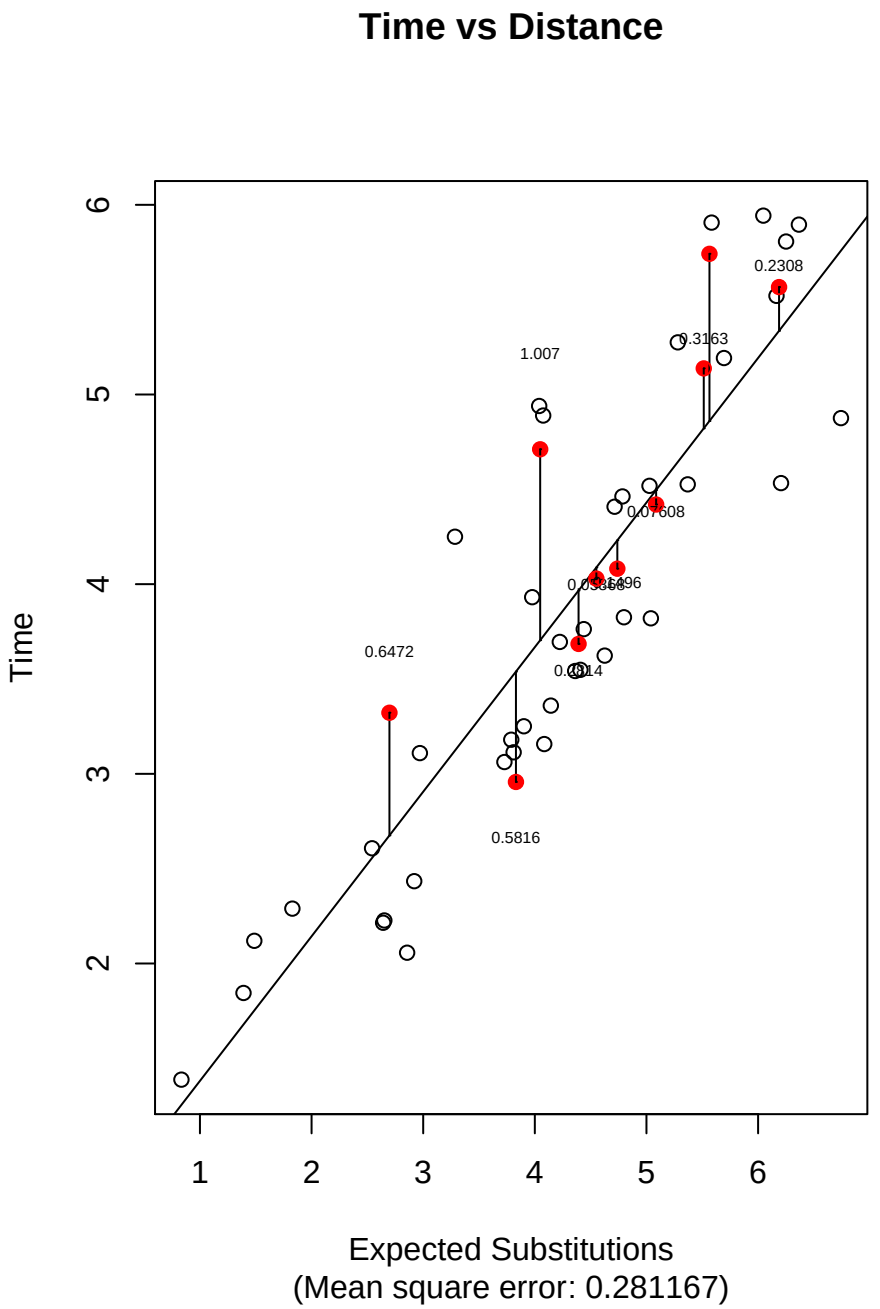

rtree: Simulated−no.20 (Remove 10)
u27 t24 2.60764880152419
u7 t23 3.1093666497618
u47 t28 1.84471301315352
u46 t36 2.28941216412932
???
u21 t31 4.93951361114159
u17 t15 4.88922176742926
u29 t39 4.71124327043071
u5 t10 4.25025234255008
u43 t1 2.11972183571197
u37 t9 1.38791317841969
u16 t42 2.0571171308402
???
u49 t34 2.95731861679815
???
u2 t45 3.2509205378592
u8 t12 4.46261673257686
u11 t32 4.40843397402205
u26 t14 4.02950480207801
u39 t19 5.90638564177789
u1 t49 5.74177395459265
u13 t22 5.27495824056678
u18 t47 3.93148208176717
u36 t40 3.68501293612644
???
???
u34 t44 3.62341077346355
u15 t25 4.52632694575004
u24 t18 3.82565366453491
???
u4 t48 3.11358456499875
???
u14 t7 4.53290809667669
u45 t50 3.82002598349936
u12 t3 3.76304397080094
u28 t37 3.17999101919122
u3 t27 3.54229720914736
u50 t21 3.35982910823077
???
???
u23 t29 5.56647469685413
u32 t13 5.13768771057948
u40 t8 4.42007015296258
u42 t17 4.0817373667378
u41 t46 5.94318396830931
u20 t41 5.52023624652065
u44 t16 5.19236645940691
u10 t33 4.51859139837325
???
u33 t38 2.21494641294703

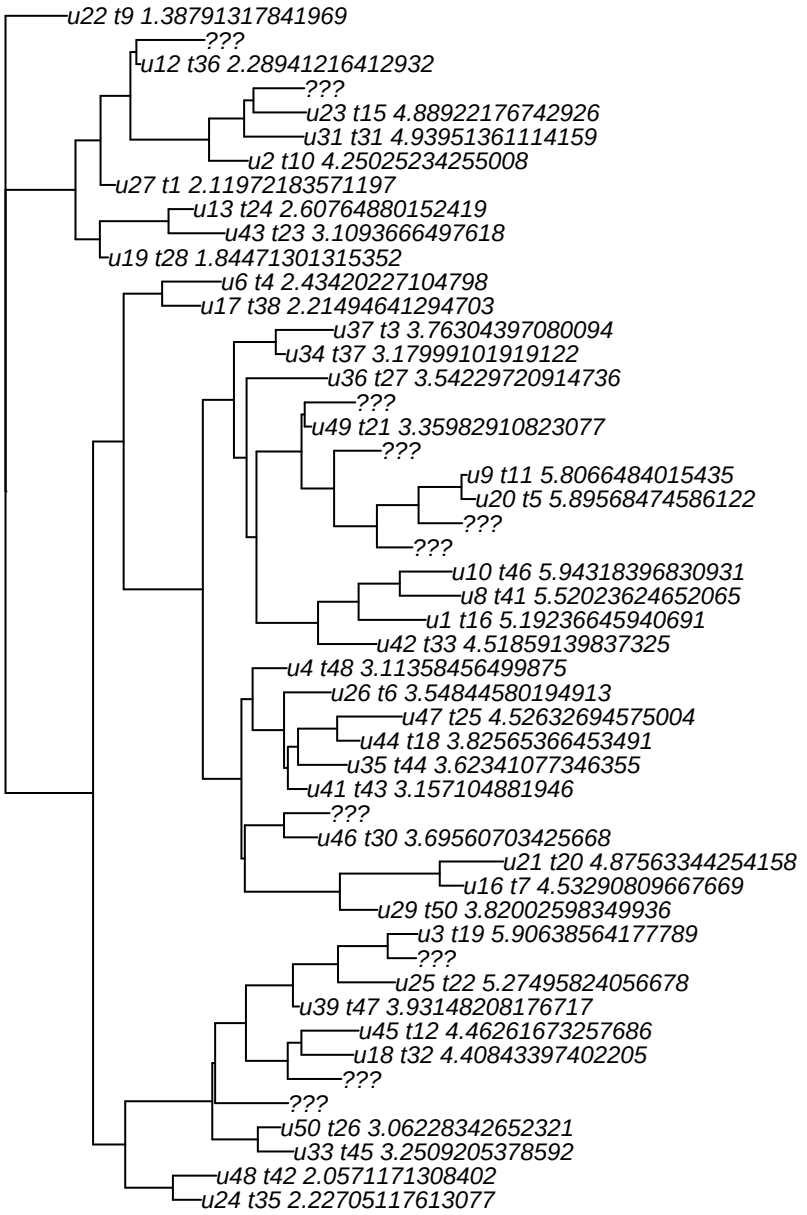

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.083363)
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
0.4061
0.5019
0.2132
0.3614
0.2293
0.1019
0.09052
0.09061
0.4087

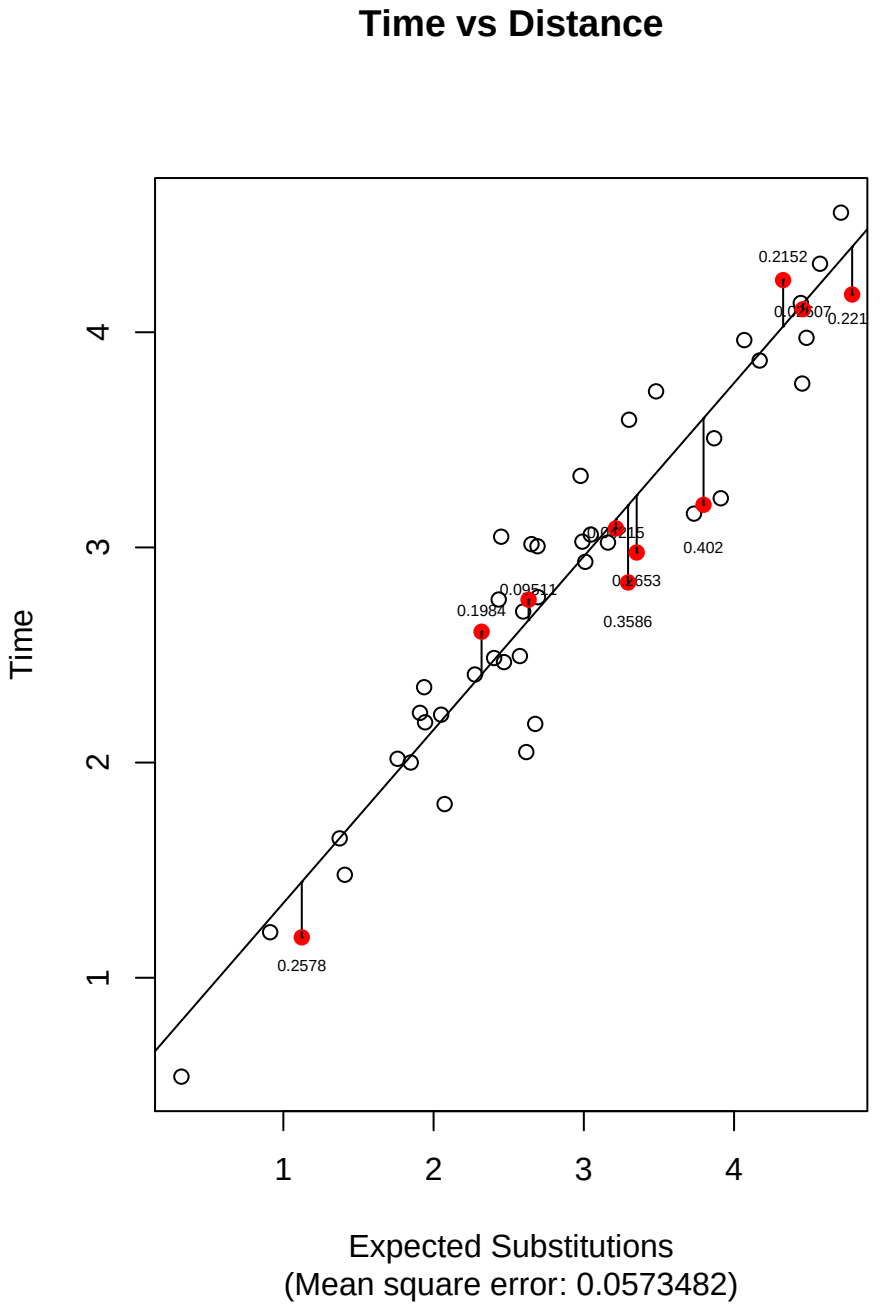

rtree: Simulated−no.21 (Remove 10)
???
u25 t16 4.03172966535203
???
u48 t22 3.11452986998484
u4 t5 2.83714793808758
u3 t1 2.74777008849196
???
???
u8 t13 4.09145938372239
u30 t24 3.86188017227687
u46 t36 3.33443462708965
u44 t7 3.55977275199257
u22 t27 2.25354328937829
u7 t48 2.43010442261584
u43 t4 2.66619753069244
???
u21 t9 2.27211142005399
u17 t50 2.91211071331054
u10 t46 2.80598392174579
u33 t35 2.88632376608439
???
u34 t25 2.54280382255092
u50 t42 4.08311897749081
u38 t45 3.59180924785323
u45 t41 3.53896303591318
u36 t47 2.89822020404972
u37 t38 3.84920549043454
u6 t21 3.65926893916912
u31 t26 2.99798218486831
???
u20 t37 2.31078757811338
u42 t34 2.65696746716276
???
u12 t23 4.79552314593457
u28 t10 5.02912358148023
u40 t33 4.34759372100234
u9 t3 2.91648482554592
u39 t2 3.55886718514375
???
u32 t8 1.76785345119424
u15 t31 3.30331677407958
???
u11 t20 4.30594526976347
u35 t17 3.65829698950984
u18 t19 3.72839520615526
u41 t43 3.44188288901933
u14 t28 3.27350200712681
u19 t12 2.87409002124332
u47 t44 1.59127463377081
u29 t32 1.56731079076417

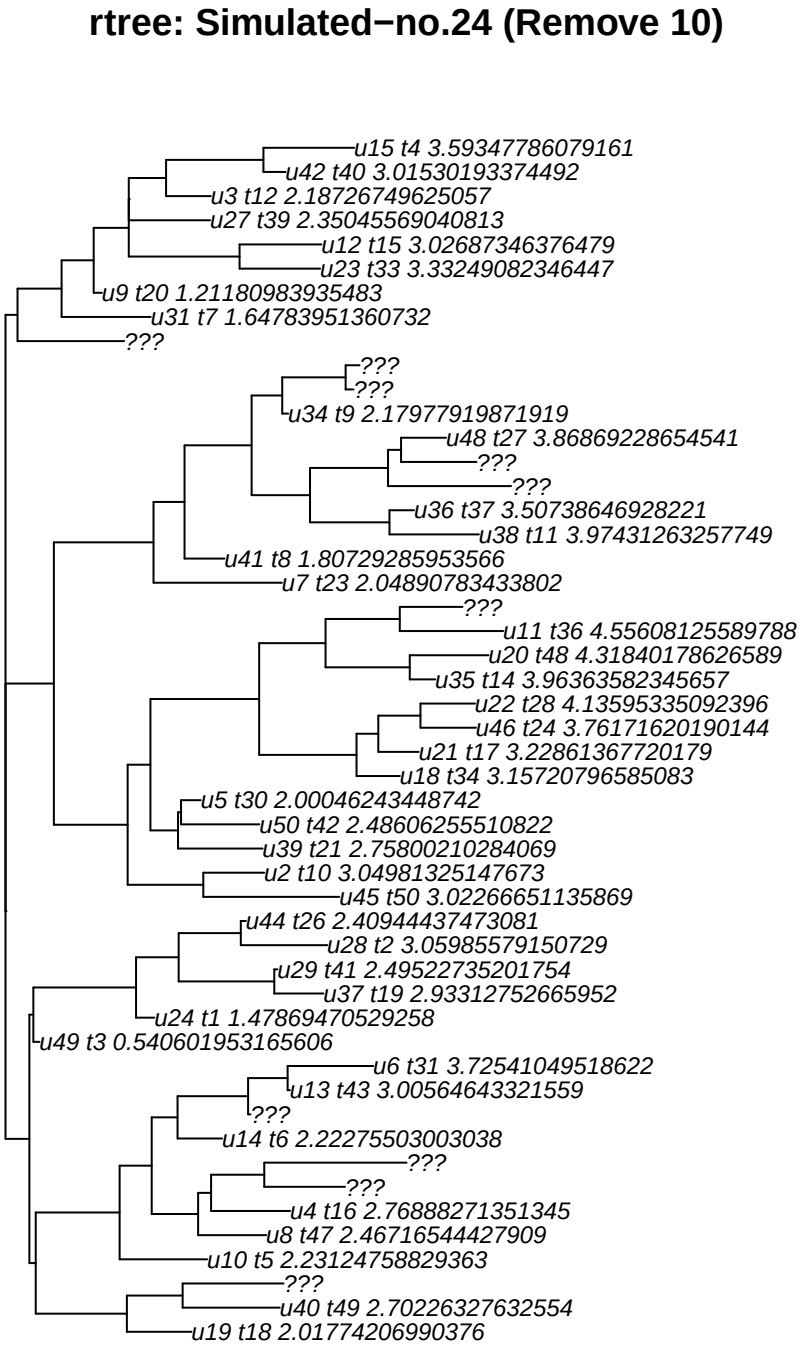

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.397138)
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
0.9055
0.5447
0.6173
0.409
0.408
0.5496
0.0449

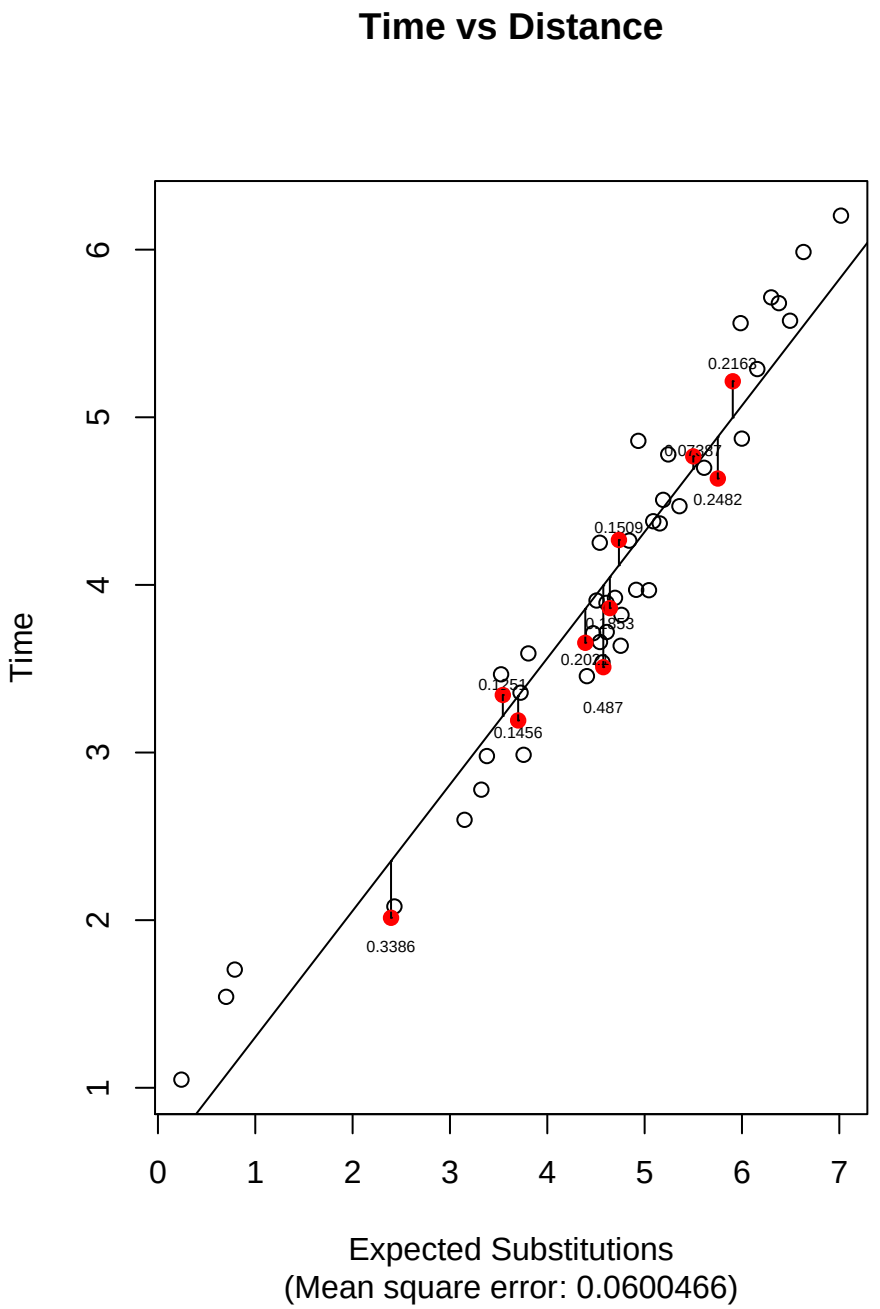

rtree: Simulated−no.22 (Remove 10)
u41 t1 2.74777008849196
u2 t18 2.96123565779999
u38 t30 2.3291753588 71
???
u13 t40 3.48136427160352
???
u30 t22 3.11452986998484
u23 t5 2.83714793808758
u11 t13 4.09145938372239
u4 t24 3.86188017227687
u19 t36 3.33443462708965
u34 t7 3.55977275199257
u7 t27 2.25354328937829
u8 t50 2.91211071331054
???
u21 t35 2.88632376608439
u33 t11 2.55834758025594
u42 t48 2.43010442261584
u14 t4 2.66619753069244
u28 t15 2.39758419897407
u39 t9 2.27211142005399
u16 t8 1.76785345119424
u43 t20 4.30594526976347
u48 t39 4.27470014174469
u26 t17 3.65829698950984
???
???
u3 t28 3.27350200712681
u12 t43 3.44188288901933
u44 t12 2.87409002124332
???
u25 t32 1.56731079076417
???
u31 t2 3.55886718514375
u35 t6 3.36740633938462
???
u20 t10 5.02912358148023
???
u5 t3 2.91648482554592
u40 t14 3.7490920368582
u18 t37 2.31078757811338
u29 t38 3.84920549043454
u50 t21 3.65926893916912
u24 t26 2.99798218486831
u10 t49 3.10352562833577
u45 t47 2.89822020404972
u17 t34 2.65696746716276
u27 t42 4.08311897749081
???
u32 t41 3.53896303591318

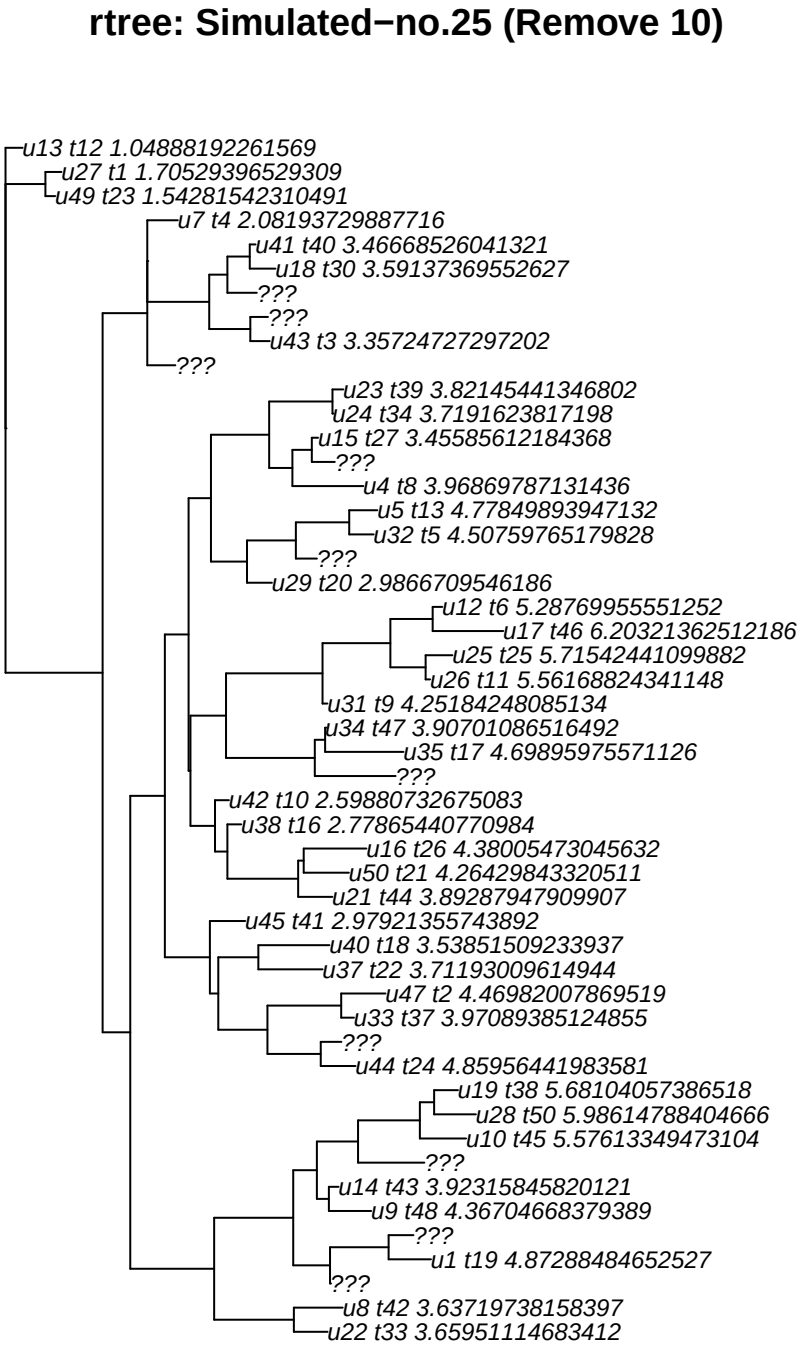

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.281167)
1
2
3
4
5
6
0.2308
0.3163
1.007
0.07608
0.6472
0.5816

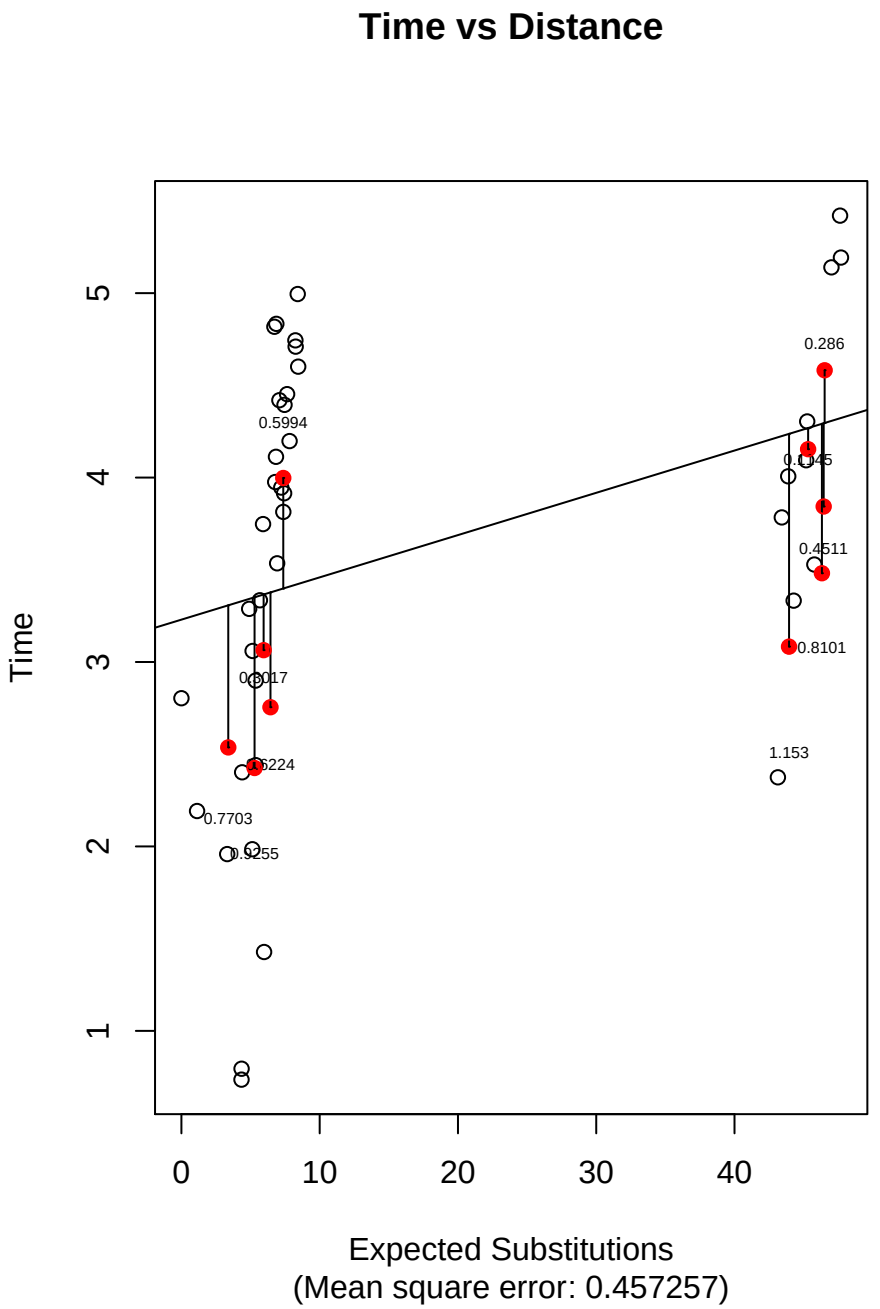

rtree: Simulated−no.23 (Remove 10)
u22 t9 1.38791317841969
???
u12 t36 2.28941216412932
???
u23 t15 4.88922176742926
u31 t31 4.93951361114159
u2 t10 4.25025234255008
u27 t1 2.11972183571197
u13 t24 2.60764880152419
u43 t23 3.1093666497618
u19 t28 1.84471301315352
u6 t4 2.43420227104798
u17 t38 2.21494641294703
u37 t3 3.76304397080094
u34 t37 3.17999101919122
u36 t27 3.54229720914736
???
u49 t21 3.35982910823077
???
u9 t11 5.8066484015435
u20 t5 5.89568474586122
???
???
u10 t46 5.94318396830931
u8 t41 5.52023624652065
u1 t16 5.19236645940691
u42 t33 4.51859139837325
u4 t48 3.11358456499875
u26 t6 3.54844580194913
u47 t25 4.52632694575004
u44 t18 3.82565366453491
u35 t44 3.62341077346355
u41 t43 3.157104881946
???
u46 t30 3.69560703425668
u21 t20 4.87563344254158
u16 t7 4.53290809667669
u29 t50 3.82002598349936
u3 t19 5.90638564177789
???
u25 t22 5.27495824056678
u39 t47 3.93148208176717
u45 t12 4.46261673257686
u18 t32 4.40843397402205
???
???
u50 t26 3.06228342652321
u33 t45 3.2509205378592
u48 t42 2.0571171308402
u24 t35 2.22705117613077

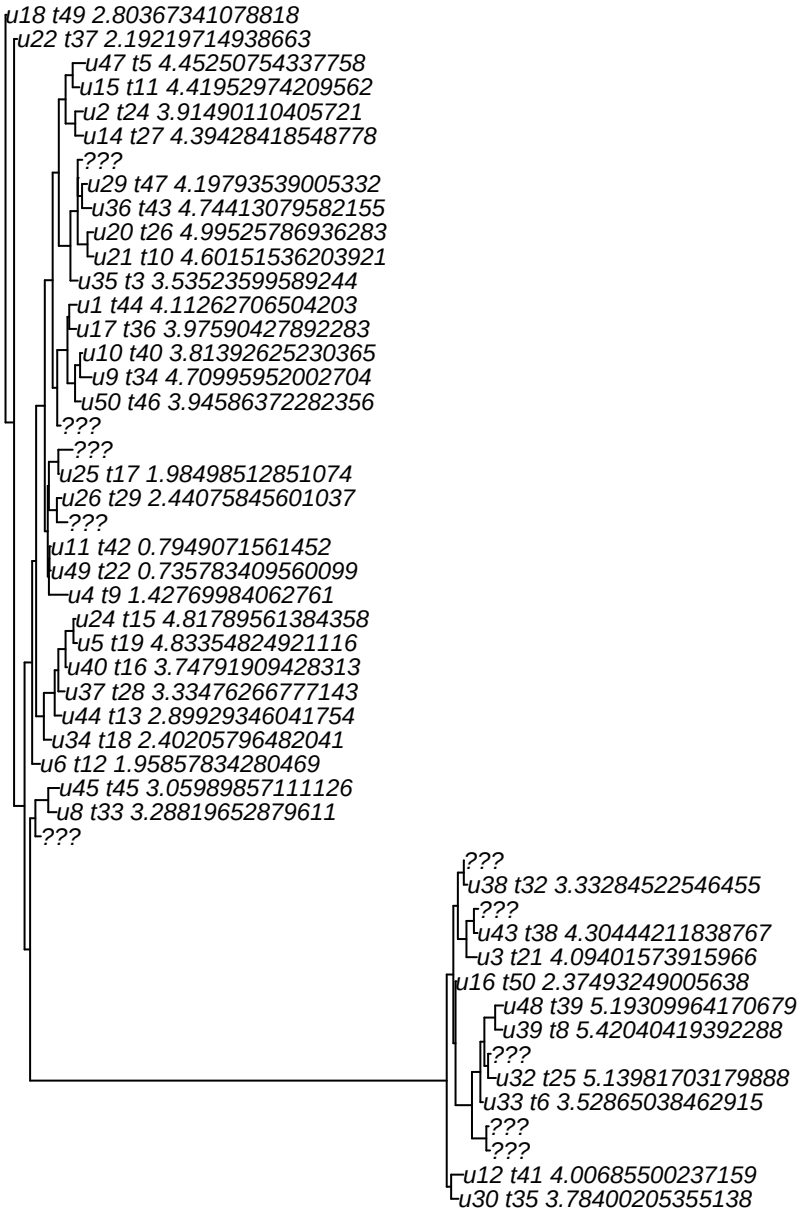

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0573482)
1
2
3
4
0.2578
0.1984
0.09511
0.3586
0.402
0.2152
0.221

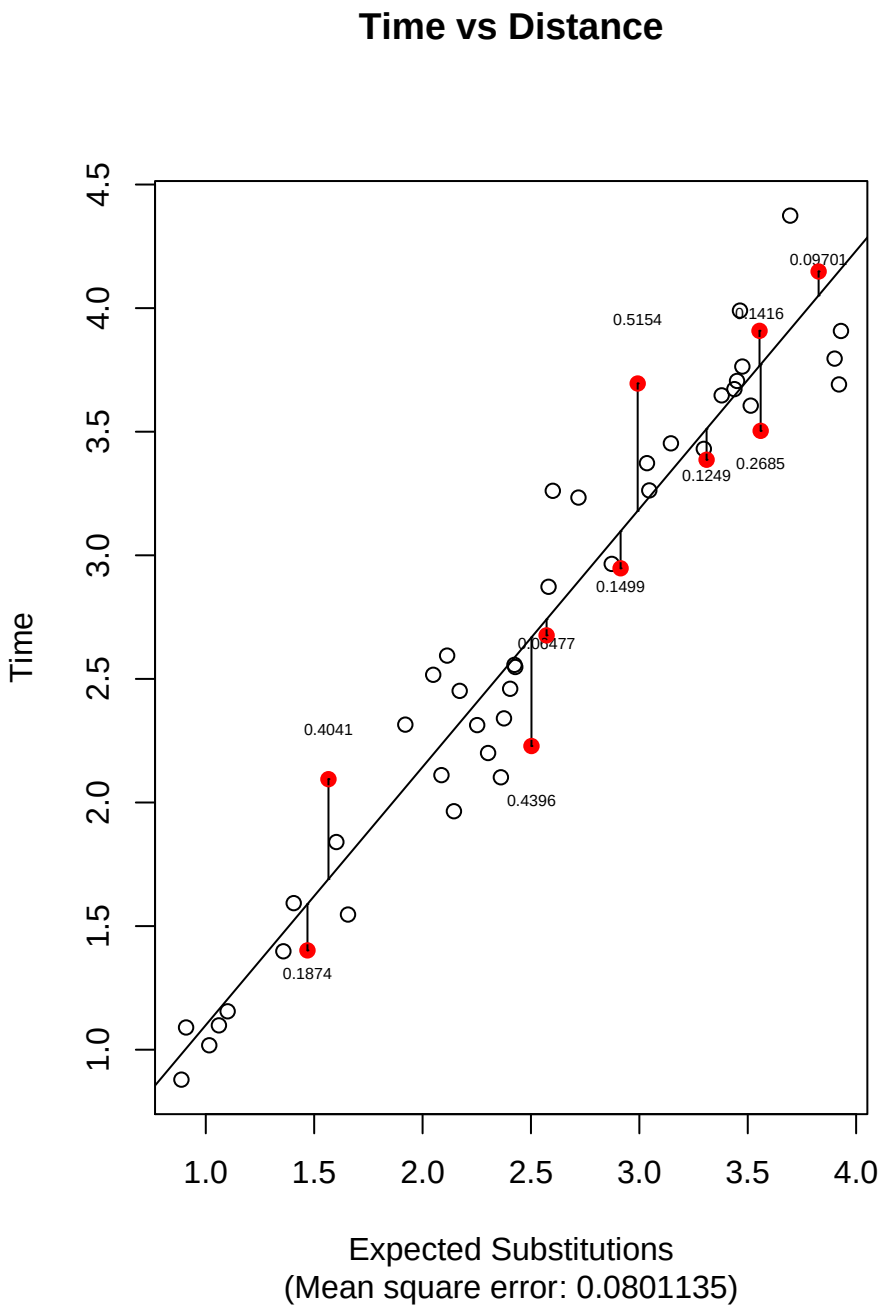

rtree: Simulated−no.24 (Remove 10)
u15 t4 3.59347786079161
u42 t40 3.01530193374492
u3 t12 2.18726749625057
u27 t39 2.35045569040813
u12 t15 3.02687346376479
u23 t33 3.33249082346447
u9 t20 1.21180983935483
u31 t7 1.64783951360732
???
???
???
u34 t9 2.17977919871919
u48 t27 3.86869228654541
???
???
u36 t37 3.50738646928221
u38 t11 3.97431263257749
u41 t8 1.80729285953566
u7 t23 2.04890783433802
???
u11 t36 4.55608125589788
u20 t48 4.31840178626589
u35 t14 3.96363582345657
u22 t28 4.13595335092396
u46 t24 3.76171620190144
u21 t17 3.22861367720179
u18 t34 3.15720796585083
u5 t30 2.00046243448742
u50 t42 2.48606255510822
u39 t21 2.75800210284069
u2 t10 3.04981325147673
u45 t50 3.02266651135869
u44 t26 2.40944437473081
u28 t2 3.05985579150729
u29 t41 2.49522735201754
u37 t19 2.93312752665952
u24 t1 1.47869470529258
u49 t3 0.540601953165606
u6 t31 3.72541049518622
u13 t43 3.00564643321559
???
u14 t6 2.22275503003038
???
???
u4 t16 2.76888271351345
u8 t47 2.46716544427909
u10 t5 2.23124758829363
???
u40 t49 2.70226327632554
u19 t18 2.01774206990376

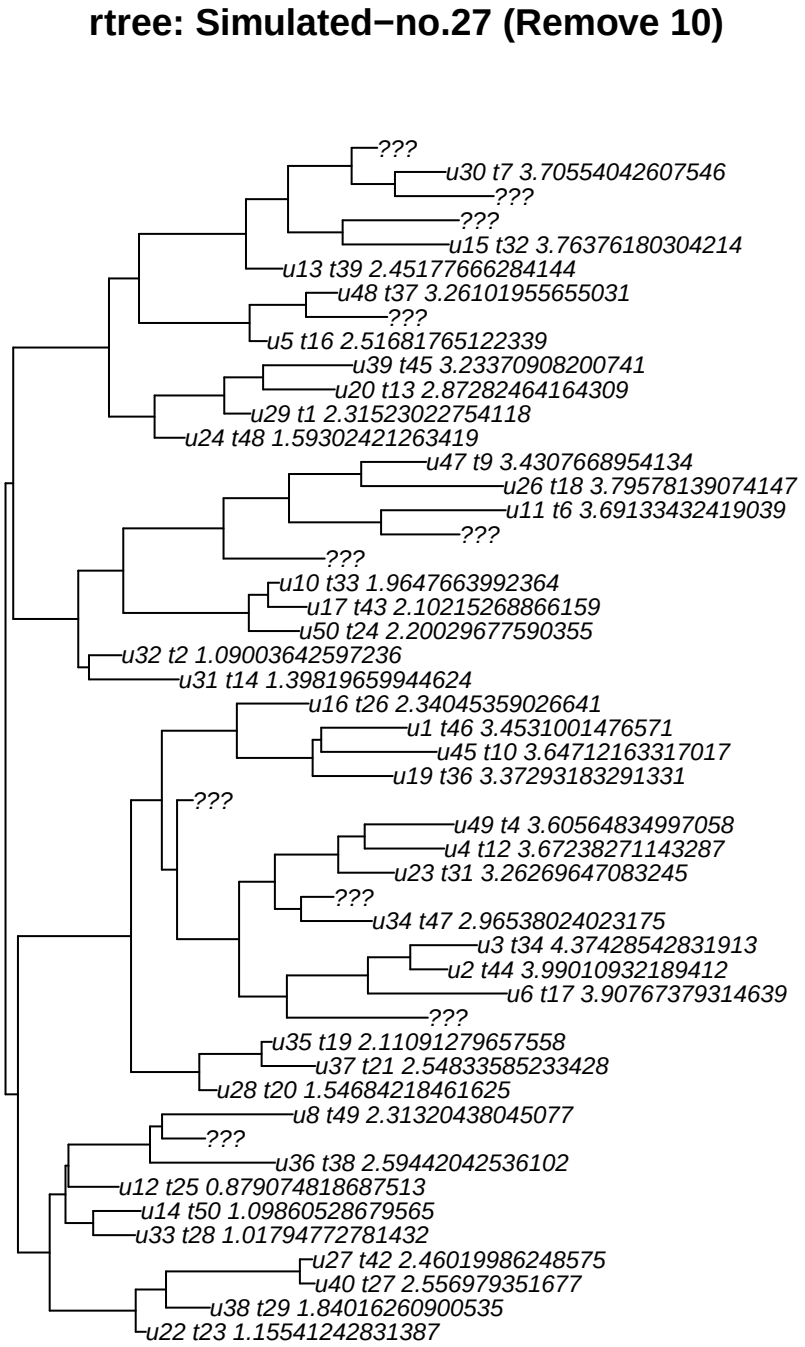

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0600466)
0.2162
0.2482
0.1509
0.1456
0.487
0.3386

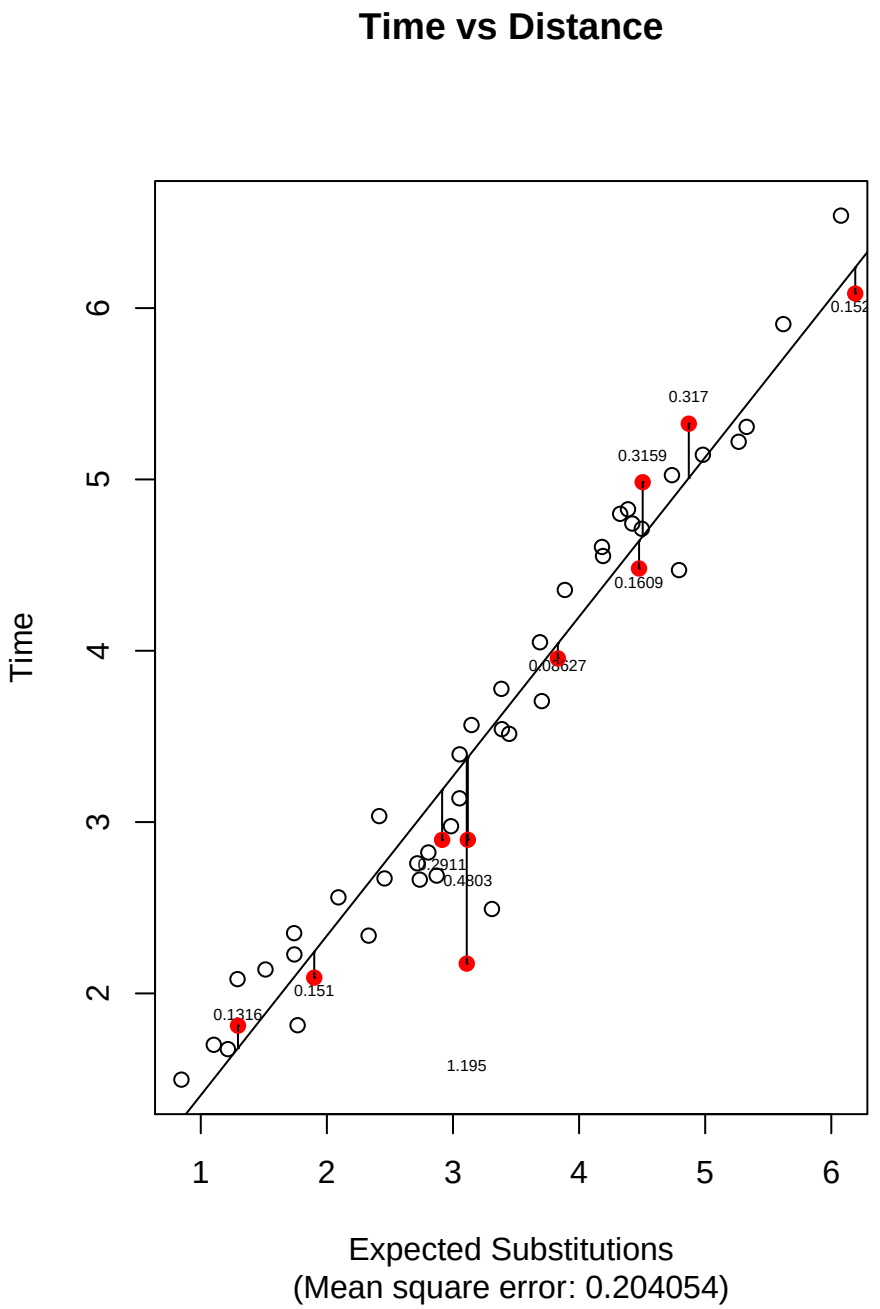

rtree: Simulated−no.25 (Remove 10)
u13 t12 1.04888192261569
u27 t1 1.70529396529309
u49 t23 1.54281542310491
u7 t4 2.08193729887716
u41 t40 3.46668526041321
u18 t30 3.59137369552627
???
???
u43 t3 3.35724727297202
???
u23 t39 3.82145441346802
u24 t34 3.7191623817198
u15 t27 3.45585612184368
???
u4 t8 3.96869787131436
u5 t13 4.77849893947132
u32 t5 4.50759765179828
???
u29 t20 2.9866709546186
u12 t6 5.28769955551252
u17 t46 6.20321362512186
u25 t25 5.71542441099882
u26 t11 5.56168824341148
u31 t9 4.25184248085134
u34 t47 3.90701086516492
u35 t17 4.69895975571126
???
u42 t10 2.59880732675083
u38 t16 2.77865440770984
u16 t26 4.38005473045632
u50 t21 4.26429843320511
u21 t44 3.89287947909907
u45 t41 2.97921355743892
u40 t18 3.53851509233937
u37 t22 3.71193009614944
u47 t2 4.46982007869519
u33 t37 3.97089385124855
???
u44 t24 4.85956441983581
u19 t38 5.68104057386518
u28 t50 5.98614788404666
u10 t45 5.57613349473104
???
u14 t43 3.92315845820121
u9 t48 4.36704668379389
???
u1 t19 4.87288484652527
???
u8 t42 3.63719738158397
u22 t33 3.65951114683412

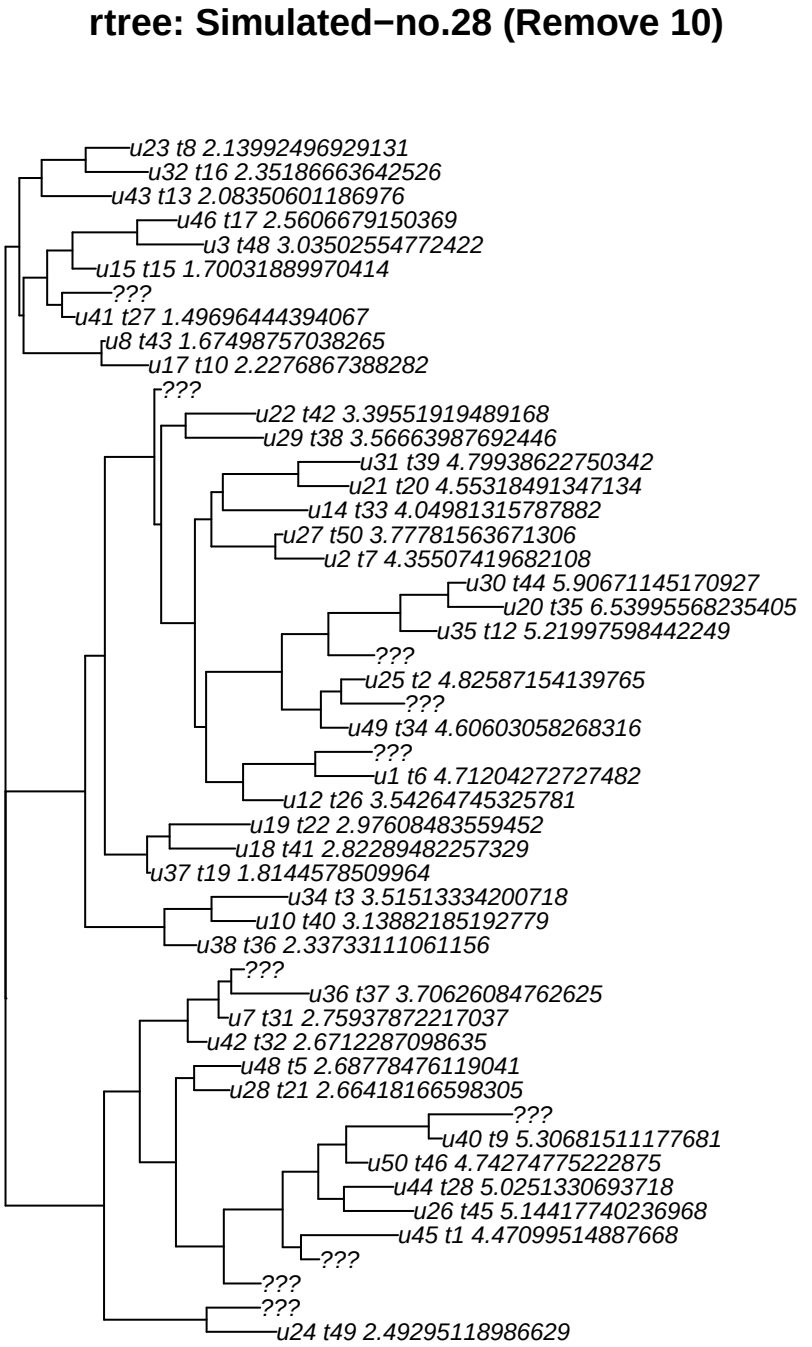

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.457257)
0
10
20
30
40
1
2
3
4
5
0.286
0.5994
0.4511
0.8101
1.153
0.7703

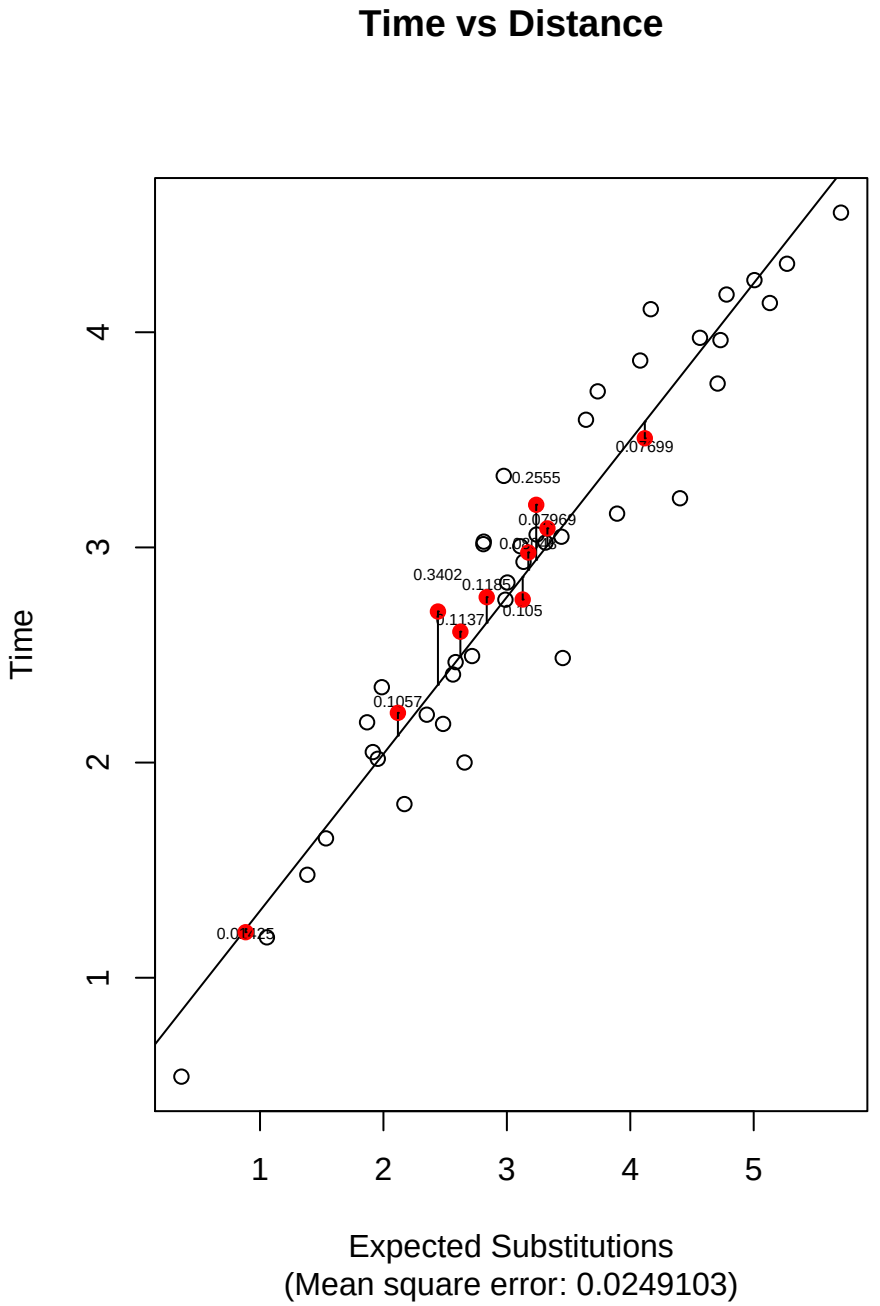

rtree: Simulated−no.26 (Remove 10)
u18 t49 2.80367341078818
u22 t37 2.19219714938663
u47 t5 4.45250754337758
u15 t11 4.41952974209562
u2 t24 3.91490110405721
u14 t27 4.39428418548778
???
u29 t47 4.19793539005332
u36 t43 4.74413079582155
u20 t26 4.99525786936283
u21 t10 4.60151536203921
u35 t3 3.53523599589244
u1 t44 4.11262706504203
u17 t36 3.97590427892283
u10 t40 3.81392625230365
u9 t34 4.70995952002704
u50 t46 3.94586372282356
???
???
u25 t17 1.98498512851074
u26 t29 2.44075845601037
???
u11 t42 0.7949071561452
u49 t22 0.735783409560099
u4 t9 1.42769984062761
u24 t15 4.81789561384358
u5 t19 4.83354824921116
u40 t16 3.74791909428313
u37 t28 3.33476266777143
u44 t13 2.89929346041754
u34 t18 2.40205796482041
u6 t12 1.95857834280469
u45 t45 3.05989857111126
u8 t33 3.28819652879611
???
???
u38 t32 3.33284522546455
???
u43 t38 4.30444211838767
u3 t21 4.09401573915966
u16 t50 2.37493249005638
u48 t39 5.19309964170679
u39 t8 5.42040419392288
???
u32 t25 5.13981703179888
u33 t6 3.52865038462915
???
???
u12 t41 4.00685500237159
u30 t35 3.78400205355138

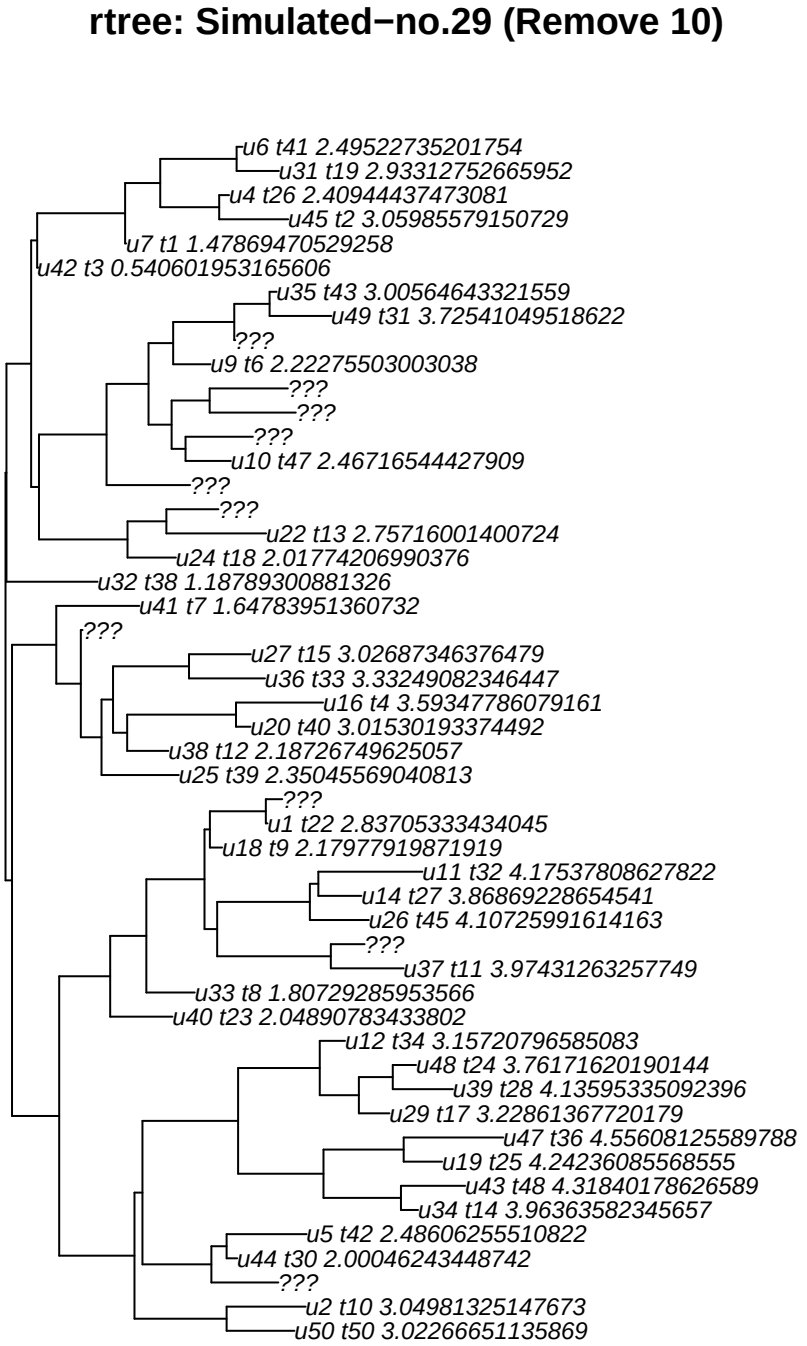

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0801135)
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
0.09701
0.1416
0.5154
0.2685
0.1249
0.1499
0.00477
0.4041
0.4396
0.1874

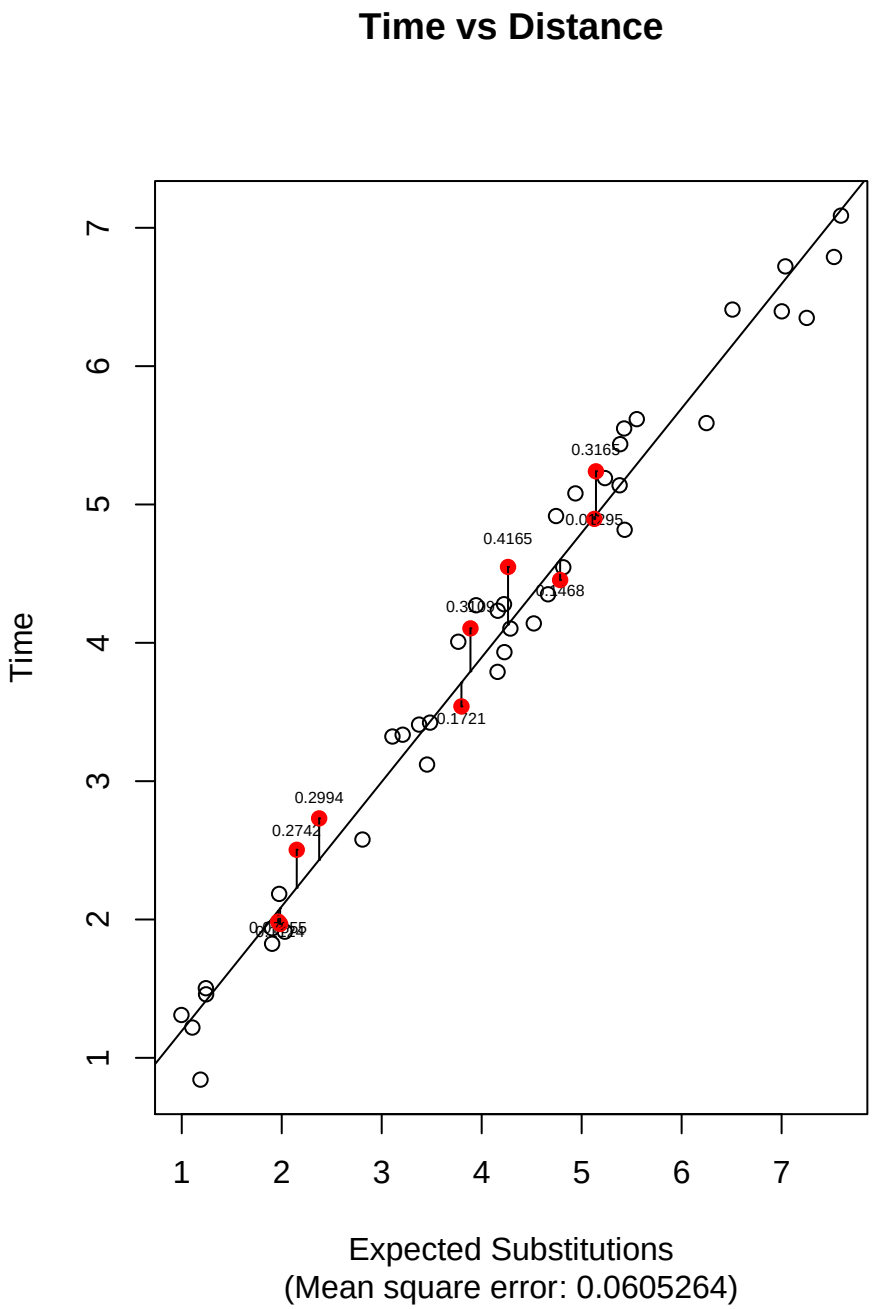

rtree: Simulated−no.27 (Remove 10)
???
u30 t7 3.70554042607546
???
???
u15 t32 3.76376180304214
u13 t39 2.45177666284144
u48 t37 3.26101955655031
???
u5 t16 2.51681765122339
u39 t45 3.23370908200741
u20 t13 2.87282464164309
u29 t1 2.31523022754118
u24 t48 1.59302421263419
u47 t9 3.4307668954134
u26 t18 3.79578139074147
u11 t6 3.69133432419039
???
???
u10 t33 1.9647663992364
u17 t43 2.10215268866159
u50 t24 2.20029677590355
u32 t2 1.09003642597236
u31 t14 1.39819659944624
u16 t26 2.34045359026641
u1 t46 3.4531001476571
u45 t10 3.64712163317017
u19 t36 3.37293183291331
???
u49 t4 3.60564834997058
u4 t12 3.67238271143287
u23 t31 3.26269647083245
???
u34 t47 2.96538024023175
u3 t34 4.37428542831913
u2 t44 3.99010932189412
u6 t17 3.90767379314639
???
u35 t19 2.11091279657558
u37 t21 2.54833585233428
u28 t20 1.54684218461625
u8 t49 2.31320438045077
???
u36 t38 2.59442042536102
u12 t25 0.879074818687513
u14 t50 1.09860528679565
u33 t28 1.01794772781432
u27 t42 2.46019986248575
u40 t27 2.556979351677
u38 t29 1.84016260900535
u22 t23 1.15541242831387

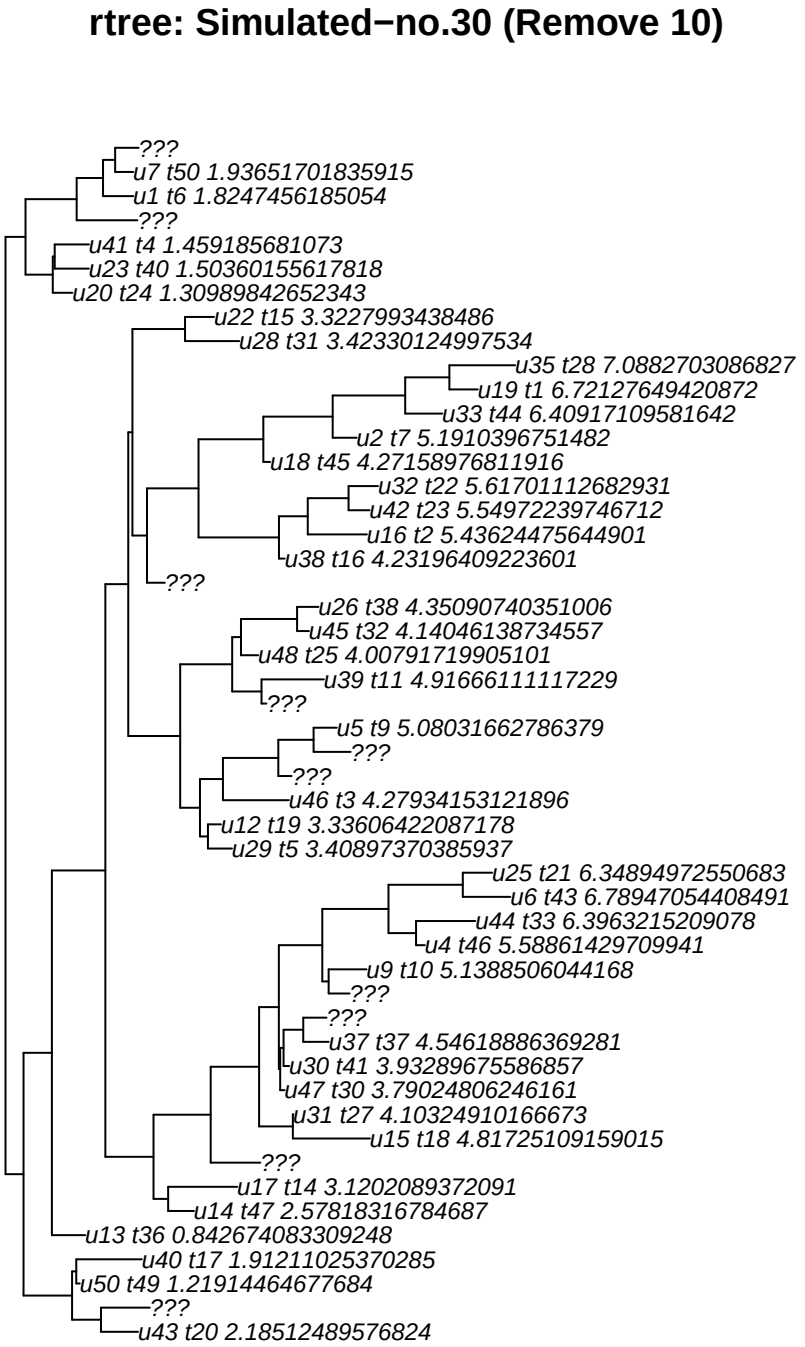

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.204054)
0.1316
0.151
0.2911
0.4803
1.195
0.08627
0.1609
0.3159
0.317
0.152

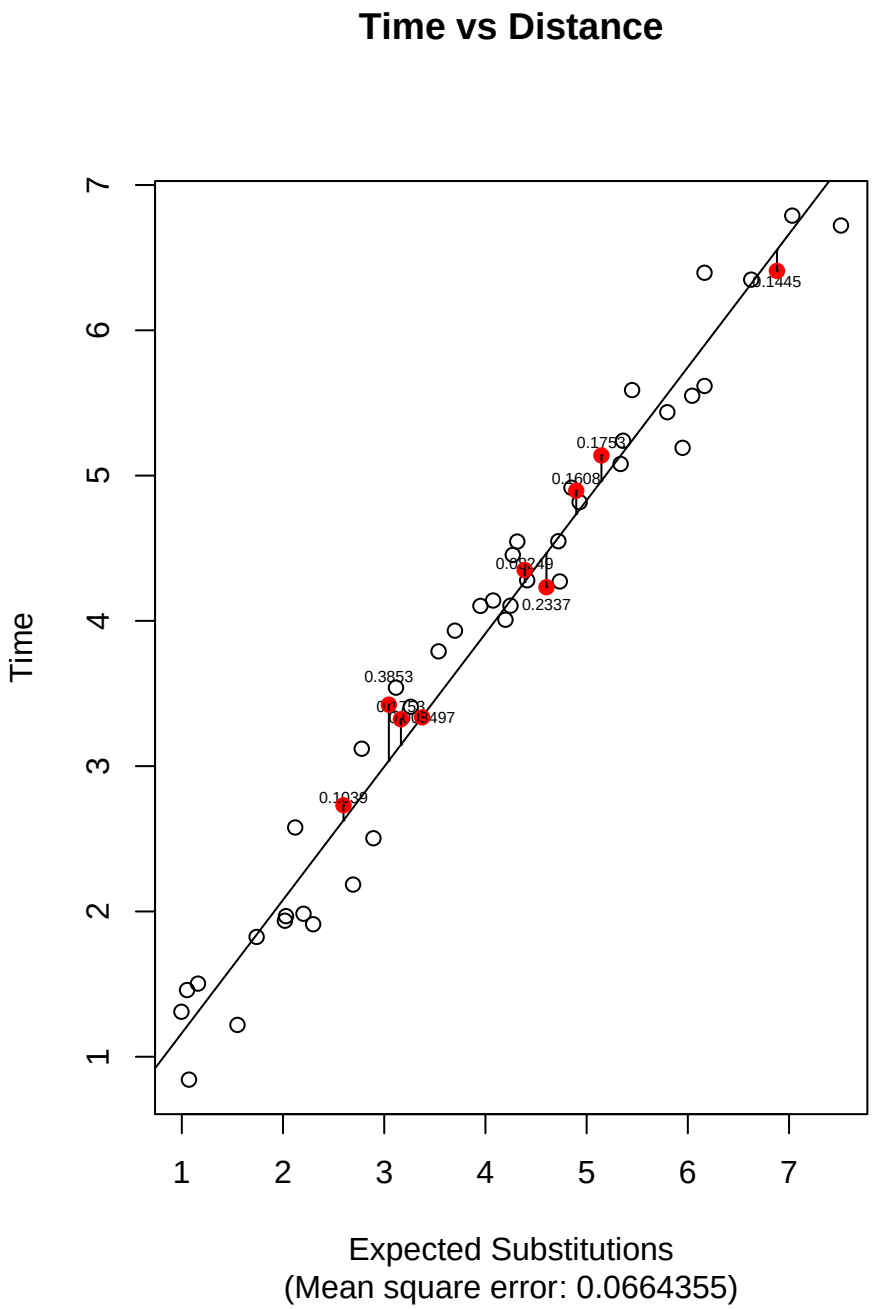

rtree: Simulated−no.28 (Remove 10)
u23 t8 2.13992496929131
u32 t16 2.35186663642526
u43 t13 2.08350601186976
u46 t17 2.5606679150369
u3 t48 3.03502554772422
u15 t15 1.70031889970414
???
u41 t27 1.49696444394067
u8 t43 1.67498757038265
u17 t10 2.2276867388282
???
u22 t42 3.39551919489168
u29 t38 3.56663987692446
u31 t39 4.79938622750342
u21 t20 4.55318491347134
u14 t33 4.04981315787882
u27 t50 3.77781563671306
u2 t7 4.35507419682108
u30 t44 5.90671145170927
u20 t35 6.53995568235405
u35 t12 5.21997598442249
???
u25 t2 4.82587154139765
???
u49 t34 4.60603058268316
???
u1 t6 4.71204272727482
u12 t26 3.54264745325781
u19 t22 2.97608483559452
u18 t41 2.82289482257329
u37 t19 1.8144578509964
u34 t3 3.51513334200718
u10 t40 3.13882185192779
u38 t36 2.33733111061156
???
u36 t37 3.70626084762625
u7 t31 2.75937872217037
u42 t32 2.6712287098635
u48 t5 2.68778476119041
u28 t21 2.66418166598305
???
u40 t9 5.30681511177681
u50 t46 4.74274775222875
u44 t28 5.0251330693718
u26 t45 5.14417740236968
u45 t1 4.47099514887668
???
???
???
u24 t49 2.49295118986629

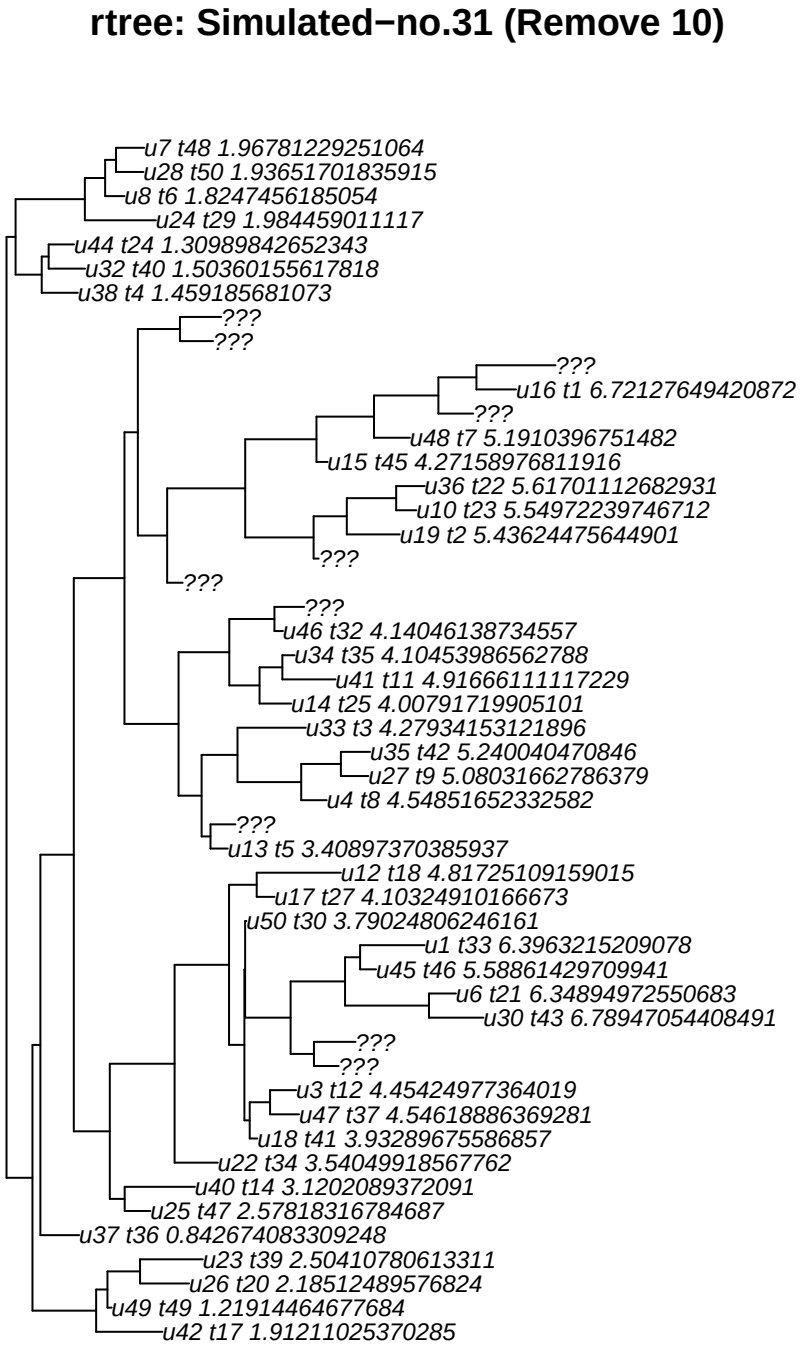

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0249103)
1
2
3
4
5
0.07699
0.2555
0.07969
0.3402
0.1185
0.1137
0.105
0.1057

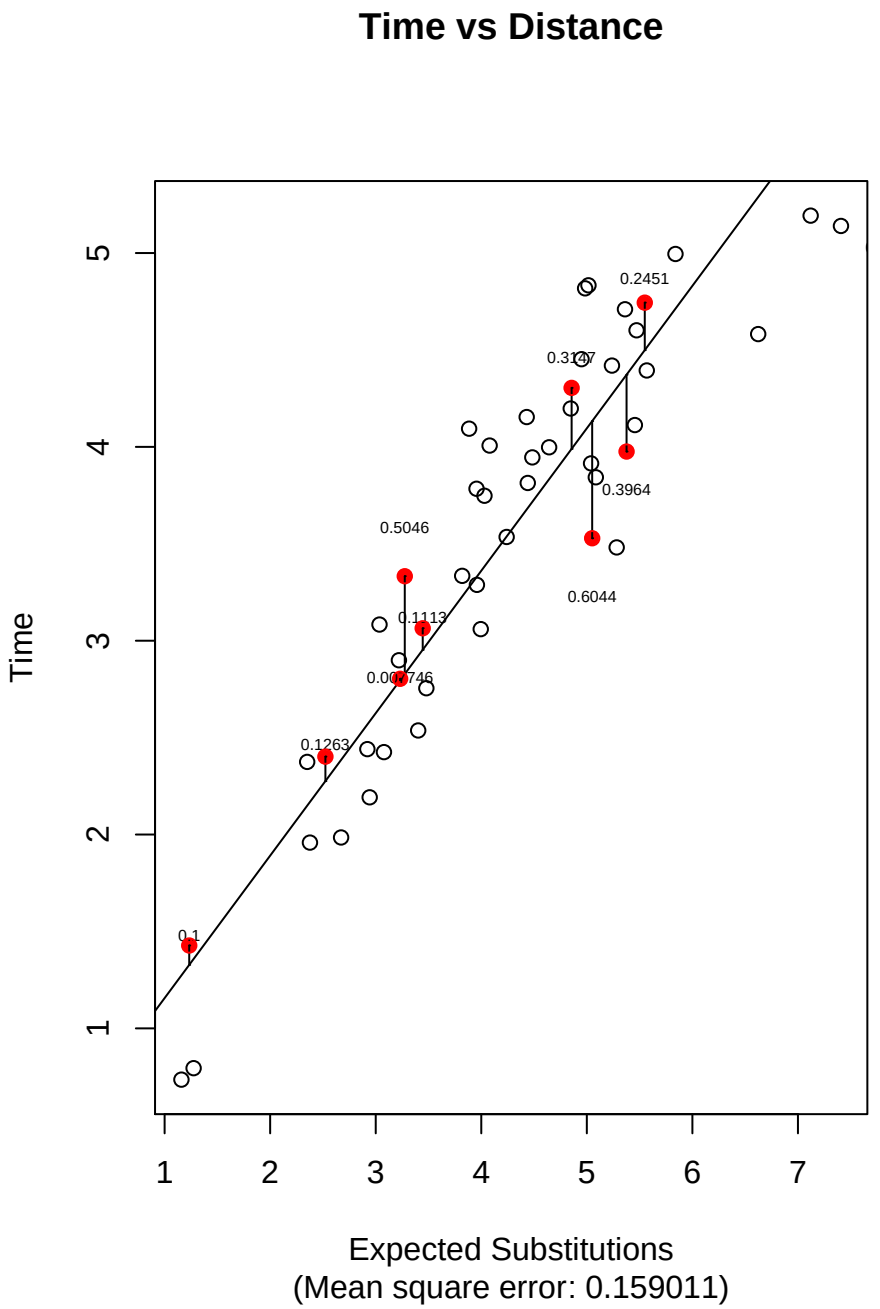

rtree: Simulated−no.29 (Remove 10)
u6 t41 2.49522735201754
u31 t19 2.93312752665952
u4 t26 2.40944437473081
u45 t2 3.05985579150729
u7 t1 1.47869470529258
u42 t3 0.540601953165606
u35 t43 3.00564643321559
u49 t31 3.72541049518622
???
u9 t6 2.22275503003038
???
???
???
u10 t47 2.46716544427909
???
???
u22 t13 2.75716001400724
u24 t18 2.01774206990376
u32 t38 1.18789300881326
u41 t7 1.64783951360732
???
u27 t15 3.02687346376479
u36 t33 3.33249082346447
u16 t4 3.59347786079161
u20 t40 3.01530193374492
u38 t12 2.18726749625057
u25 t39 2.35045569040813
???
u1 t22 2.83705333434045
u18 t9 2.17977919871919
u11 t32 4.17537808627822
u14 t27 3.86869228654541
u26 t45 4.10725991614163
???
u37 t11 3.97431263257749
u33 t8 1.80729285953566
u40 t23 2.04890783433802
u12 t34 3.15720796585083
u48 t24 3.76171620190144
u39 t28 4.13595335092396
u29 t17 3.22861367720179
u47 t36 4.55608125589788
u19 t25 4.24236085568555
u43 t48 4.31840178626589
u34 t14 3.96363582345657
u5 t42 2.48606255510822
u44 t30 2.00046243448742
???
u2 t10 3.04981325147673
u50 t50 3.02266651135869

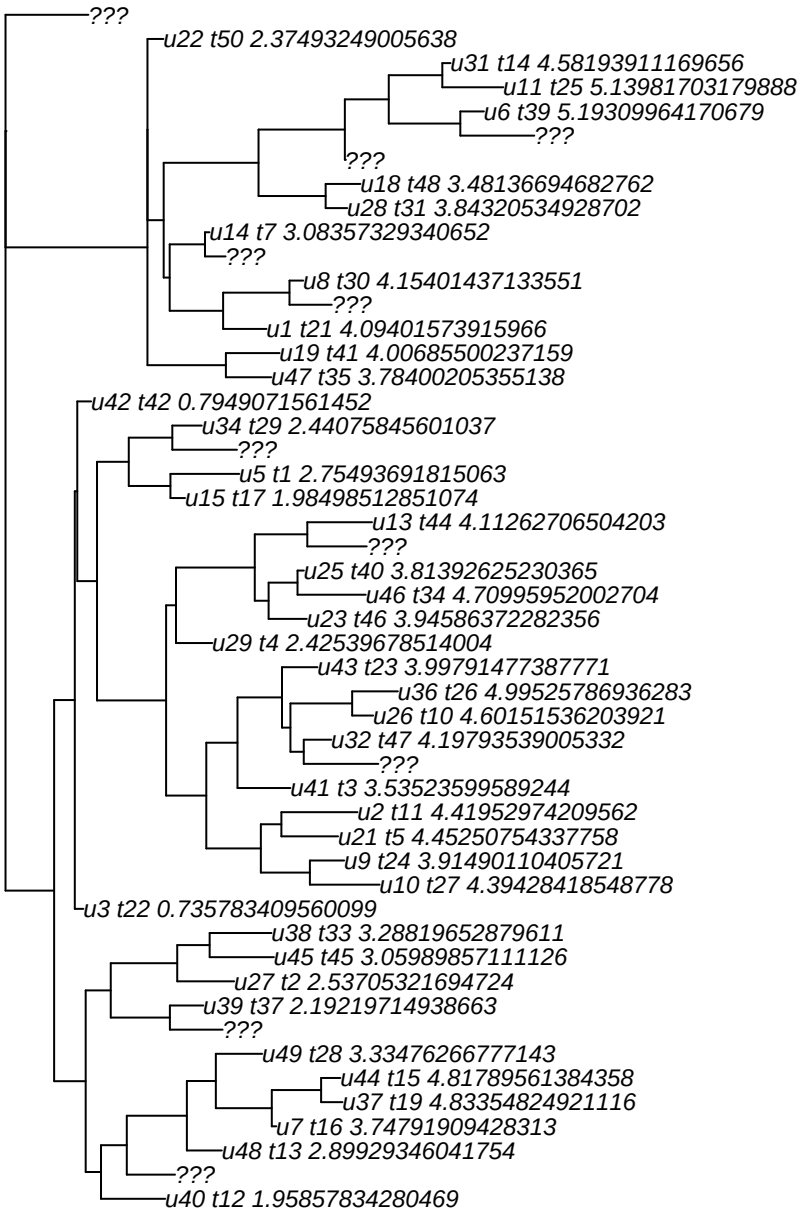

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0605264)
1
2
3
4
5
6
7
0.3165
0.4165
0.1468
0.1721
0.2994
0.2742

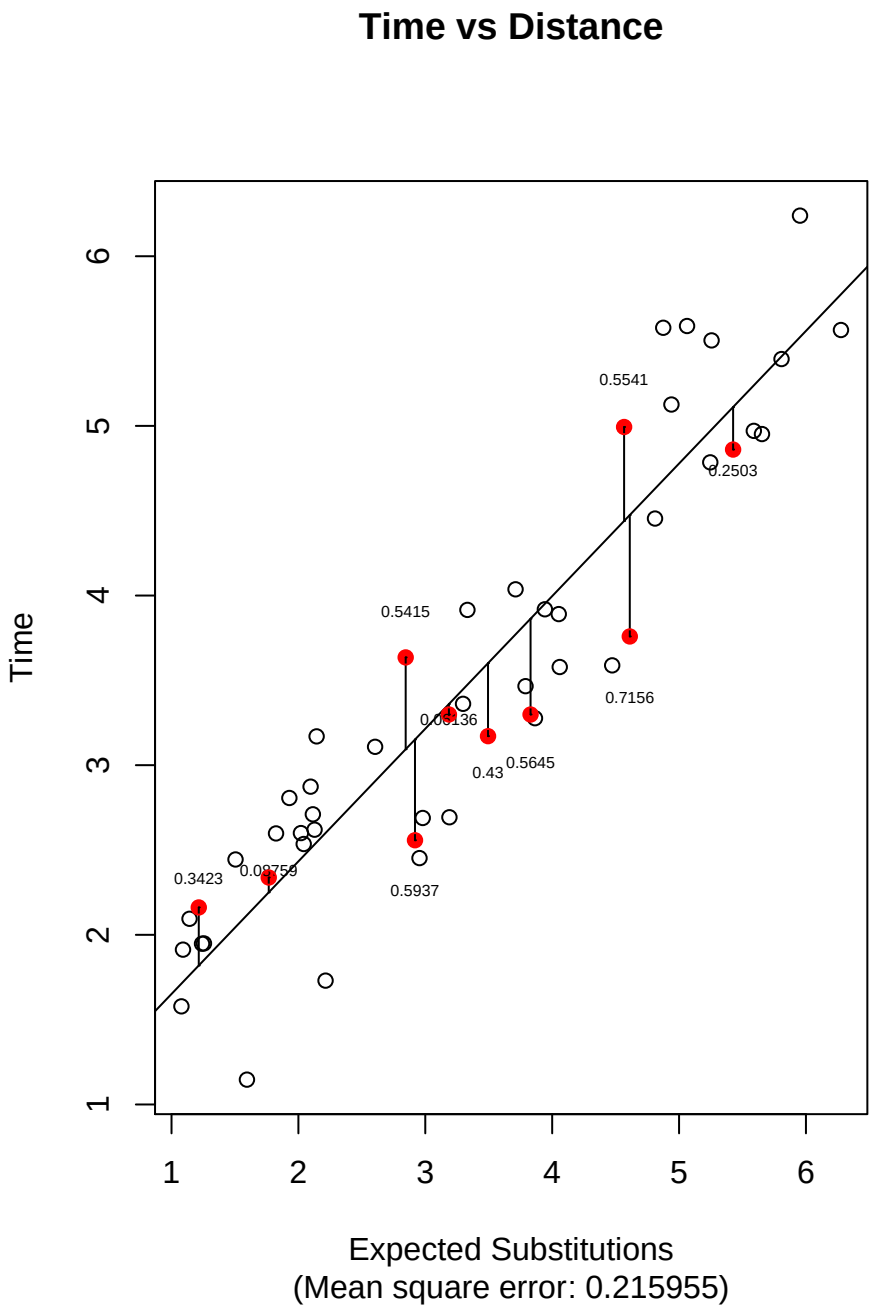

rtree: Simulated−no.30 (Remove 10)
???
u7 t50 1.93651701835915
u1 t6 1.8247456185054
???
u41 t4 1.459185681073
u23 t40 1.50360155617818
u20 t24 1.30989842652343
u22 t15 3.3227993438486
u28 t31 3.42330124997534
u35 t28 7.0882703086827
u19 t1 6.72127649420872
u33 t44 6.40917109581642
u2 t7 5.1910396751482
u18 t45 4.27158976811916
u32 t22 5.61701112682931
u42 t23 5.54972239746712
u16 t2 5.43624475644901
u38 t16 4.23196409223601
???
u26 t38 4.35090740351006
u45 t32 4.14046138734557
u48 t25 4.00791719905101
u39 t11 4.91666111117229
???
u5 t9 5.08031662786379
???
???
u46 t3 4.27934153121896
u12 t19 3.33606422087178
u29 t5 3.40897370385937
u25 t21 6.34894972550683
u6 t43 6.78947054408491
u44 t33 6.3963215209078
u4 t46 5.58861429709941
u9 t10 5.1388506044168
???
???
u37 t37 4.54618886369281
u30 t41 3.93289675586857
u47 t30 3.79024806246161
u31 t27 4.10324910166673
u15 t18 4.81725109159015
???
u17 t14 3.1202089372091
u14 t47 2.57818316784687
u13 t36 0.842674083309248
u40 t17 1.91211025370285
u50 t49 1.21914464677684
???
u43 t20 2.18512489576824

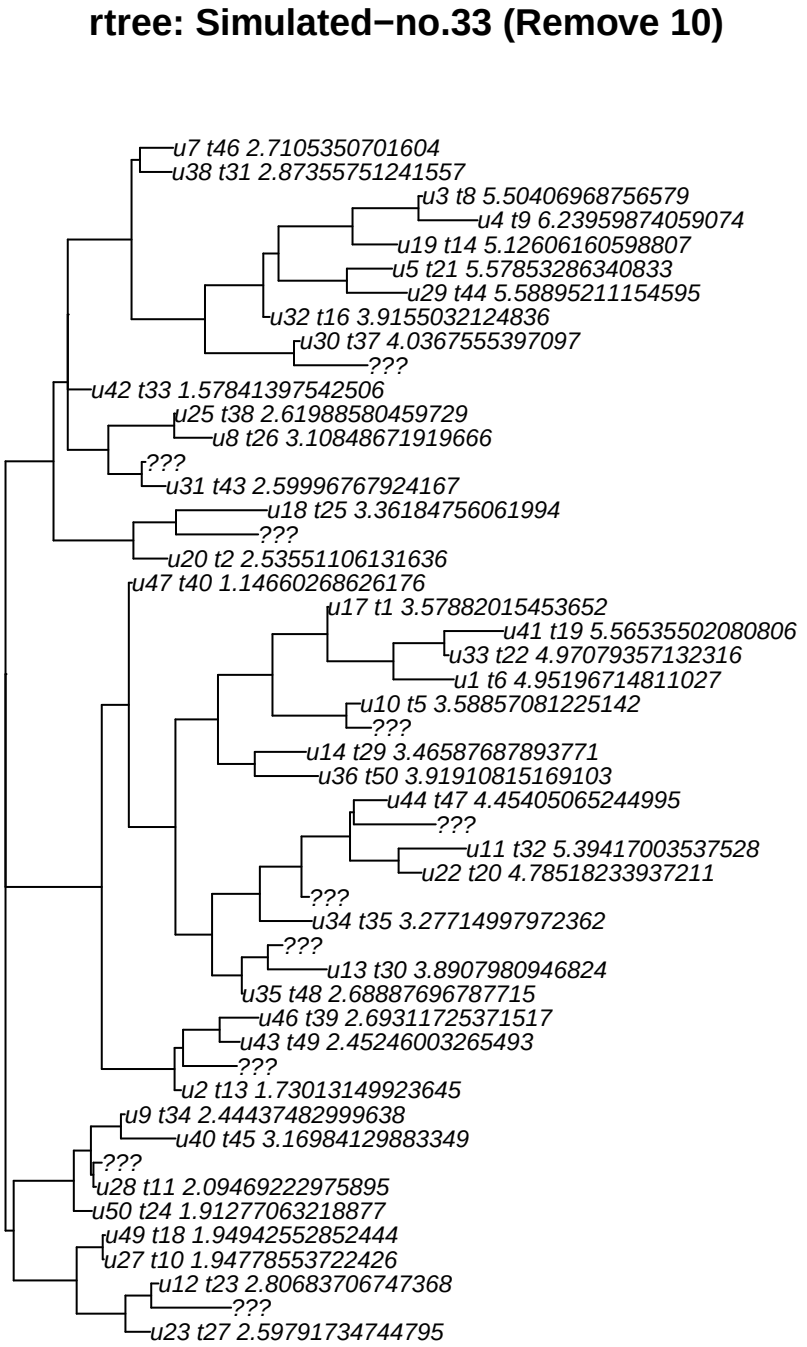

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0664355)
1
2
3
4
5
6
7
0.1445
0.1753
0.1608
0.2337
0.3853
0.1039

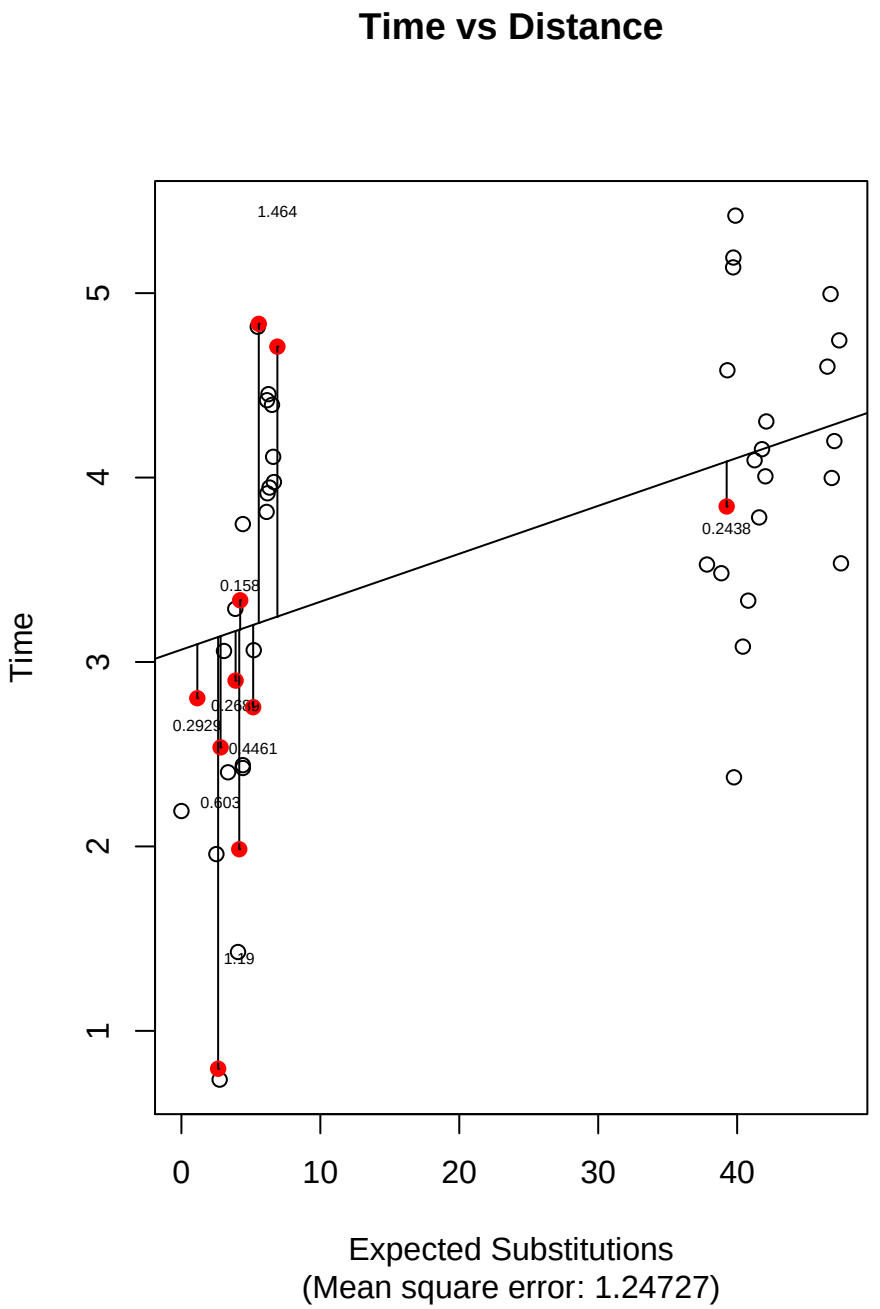

rtree: Simulated−no.31 (Remove 10)
u7 t48 1.96781229251064
u28 t50 1.93651701835915
u8 t6 1.8247456185054
u24 t29 1.984459011117
u44 t24 1.30989842652343
u32 t40 1.50360155617818
u38 t4 1.459185681073
???
???
???
u16 t1 6.72127649420872
???
u48 t7 5.1910396751482
u15 t45 4.27158976811916
u36 t22 5.61701112682931
u10 t23 5.54972239746712
u19 t2 5.43624475644901
???
???
???
u46 t32 4.14046138734557
u34 t35 4.10453986562788
u41 t11 4.91666111117229
u14 t25 4.00791719905101
u33 t3 4.27934153121896
u35 t42 5.240040470846
u27 t9 5.08031662786379
u4 t8 4.54851652332582
???
u13 t5 3.40897370385937
u12 t18 4.81725109159015
u17 t27 4.10324910166673
u50 t30 3.79024806246161
u1 t33 6.3963215209078
u45 t46 5.58861429709941
u6 t21 6.34894972550683
u30 t43 6.78947054408491
???
???
u3 t12 4.45424977364019
u47 t37 4.54618886369281
u18 t41 3.93289675586857
u22 t34 3.54049918567762
u40 t14 3.1202089372091
u25 t47 2.57818316784687
u37 t36 0.842674083309248
u23 t39 2.50410780613311
u26 t20 2.18512489576824
u49 t49 1.21914464677684
u42 t17 1.91211025370285

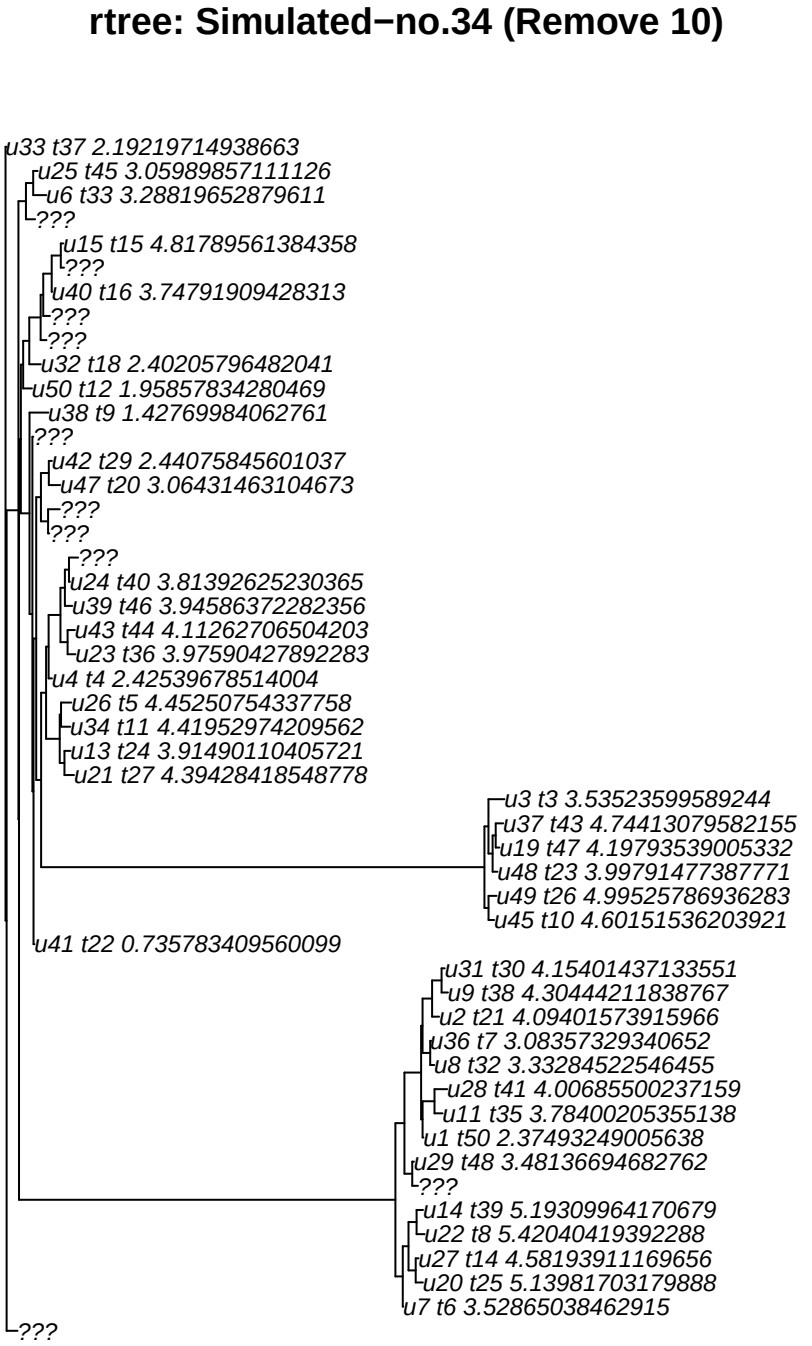

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.159011)
0.1
0.1263
0.5046
0.1113
0.2451
0.3964
0.6044

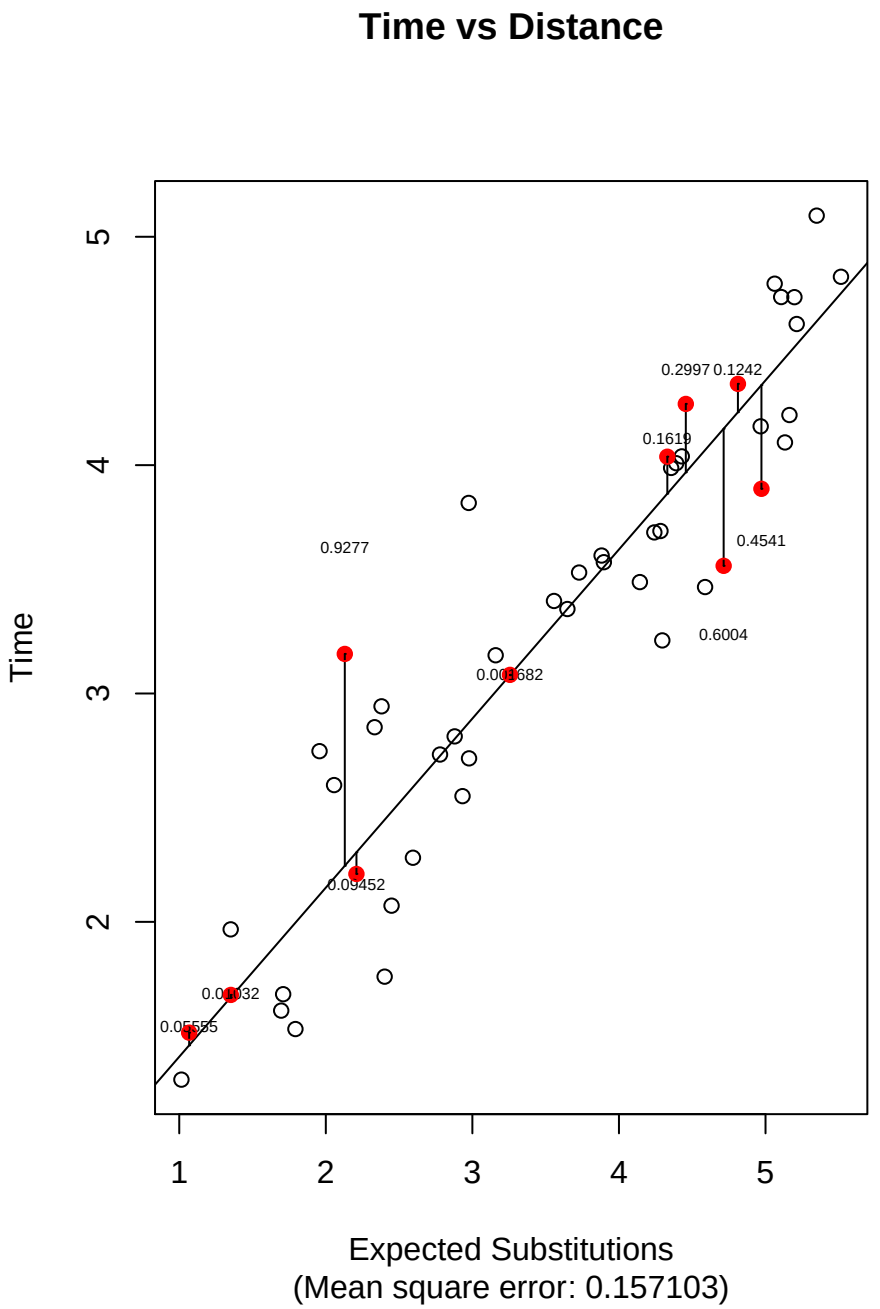

rtree: Simulated−no.32 (Remove 10)
???
u22 t50 2.37493249005638
u31 t14 4.58193911169656
u11 t25 5.13981703179888
u6 t39 5.19309964170679
???
???
u18 t48 3.48136694682762
u28 t31 3.84320534928702
u14 t7 3.08357329340652
???
u8 t30 4.15401437133551
???
u1 t21 4.09401573915966
u19 t41 4.00685500237159
u47 t35 3.78400205355138
u42 t42 0.7949071561452
u34 t29 2.44075845601037
???
u5 t1 2.75493691815063
u15 t17 1.98498512851074
u13 t44 4.11262706504203
???
u25 t40 3.81392625230365
u46 t34 4.70995952002704
u23 t46 3.94586372282356
u29 t4 2.42539678514004
u43 t23 3.99791477387771
u36 t26 4.99525786936283
u26 t10 4.60151536203921
u32 t47 4.19793539005332
???
u41 t3 3.53523599589244
u2 t11 4.41952974209562
u21 t5 4.45250754337758
u9 t24 3.91490110405721
u10 t27 4.39428418548778
u3 t22 0.735783409560099
u38 t33 3.28819652879611
u45 t45 3.05989857111126
u27 t2 2.53705321694724
u39 t37 2.19219714938663
???
u49 t28 3.33476266777143
u44 t15 4.81789561384358
u37 t19 4.83354824921116
u7 t16 3.74791909428313
u48 t13 2.89929346041754
???
u40 t12 1.95857834280469

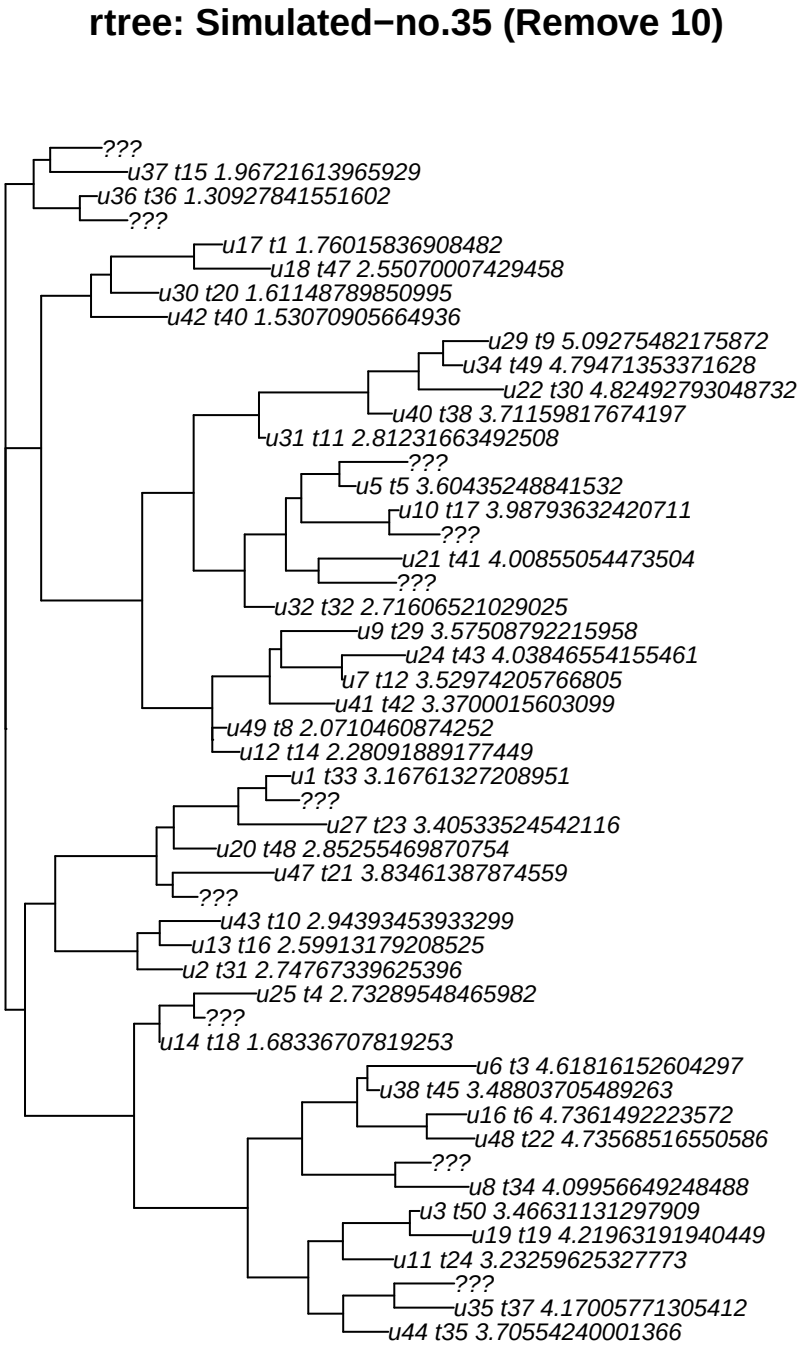

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.215955)
1
2
3
4
5
6
0.3423
0.09759
0.5937
0.5415
0.06136
0.43
0.5645
0.5541
0.7156
0.2503

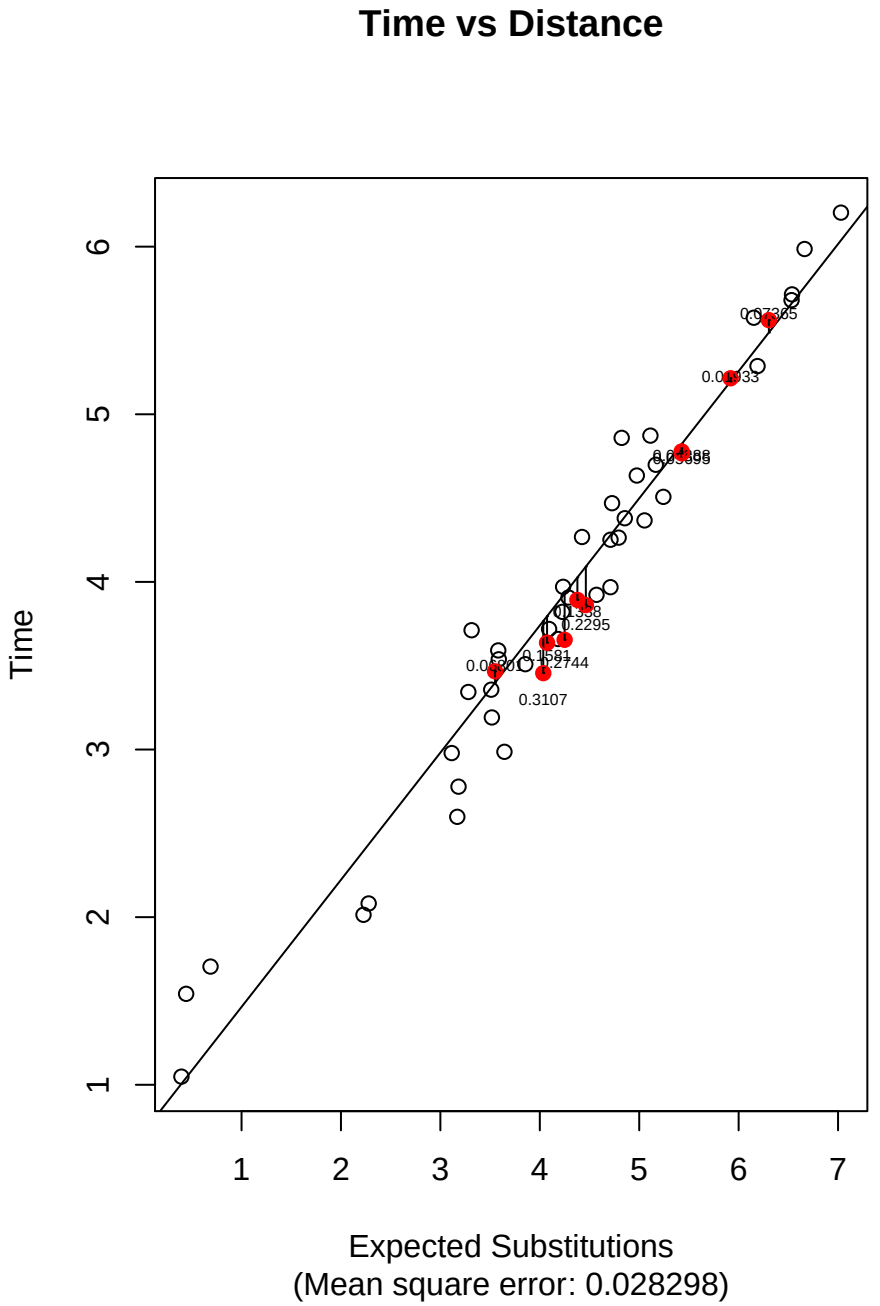

rtree: Simulated−no.33 (Remove 10)
u7 t46 2.7105350701604
u38 t31 2.87355751241557
u3 t8 5.50406968756579
u4 t9 6.23959874059074
u19 t14 5.12606160598807
u5 t21 5.57853286340833
u29 t44 5.58895211154595
u32 t16 3.9155032124836
u30 t37 4.0367555397097
???
u42 t33 1.57841397542506
u25 t38 2.61988580459729
u8 t26 3.10848671919666
???
u31 t43 2.59996767924167
u18 t25 3.36184756061994
???
u20 t2 2.53551106131636
u47 t40 1.14660268626176
u17 t1 3.57882015453652
u41 t19 5.56535502080806
u33 t22 4.97079357132316
u1 t6 4.95196714811027
u10 t5 3.58857081225142
???
u14 t29 3.46587687893771
u36 t50 3.91910815169103
u44 t47 4.45405065244995
???
u11 t32 5.39417003537528
u22 t20 4.78518233937211
???
u34 t35 3.27714997972362
???
u13 t30 3.8907980946824
u35 t48 2.68887696787715
u46 t39 2.69311725371517
u43 t49 2.45246003265493
???
u2 t13 1.73013149923645
u9 t34 2.44437482999638
u40 t45 3.16984129883349
???
u28 t11 2.09469222975895
u50 t24 1.91277063218877
u49 t18 1.94942552852444
u27 t10 1.94778553722426
u12 t23 2.80683706747368
???
u23 t27 2.59791734744795

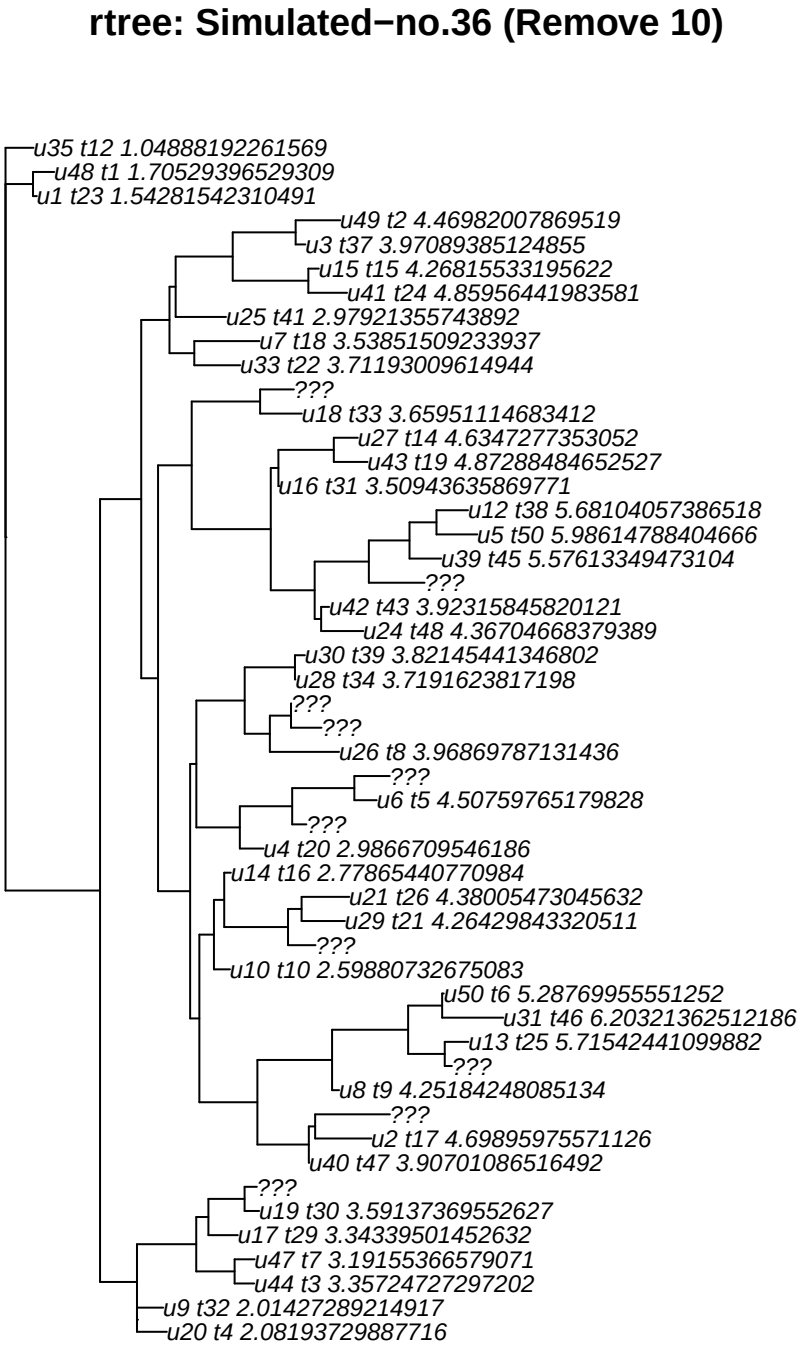

Time vs Distance
1.464
0.2438
0.158
0.2929
0.2689
0.4461
0.603
1.19
Time
1
2
3
4
5
0
10
20
30
40
Expected Substitutions
(Mean square error: 1.24727)

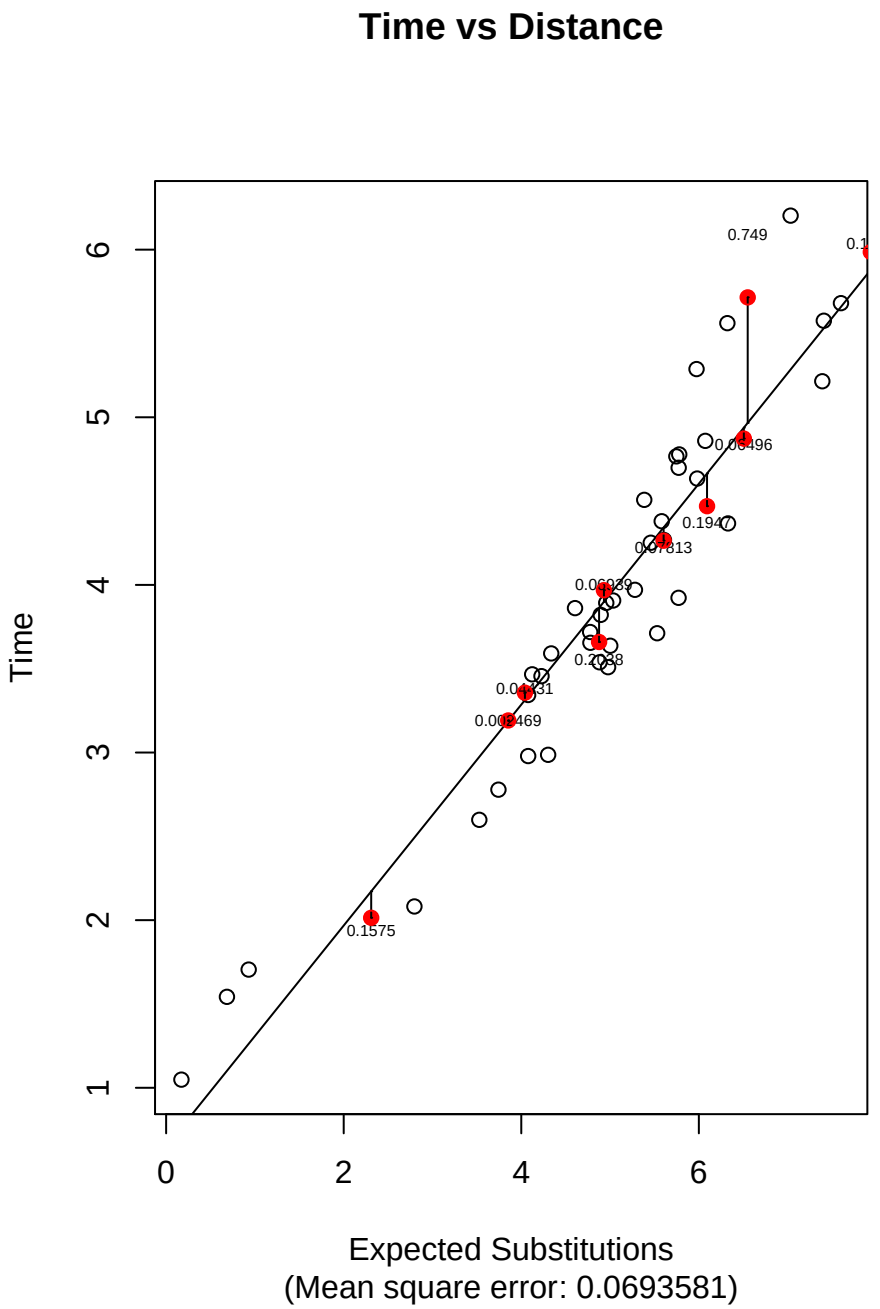

rtree: Simulated−no.34 (Remove 10)
u33 t37 2.19219714938663
u25 t45 3.05989857111126
u6 t33 3.28819652879611
???
u15 t15 4.81789561384358
???
u40 t16 3.74791909428313
???
???
u32 t18 2.40205796482041
u50 t12 1.95857834280469
u38 t9 1.42769984062761
???
u42 t29 2.44075845601037
u47 t20 3.06431463104673
???
???
???
u24 t40 3.81392625230365
u39 t46 3.94586372282356
u43 t44 4.11262706504203
u23 t36 3.97590427892283
u4 t4 2.42539678514004
u26 t5 4.45250754337758
u34 t11 4.41952974209562
u13 t24 3.91490110405721
u21 t27 4.39428418548778
u3 t3 3.53523599589244
u37 t43 4.74413079582155
u19 t47 4.19793539005332
u48 t23 3.99791477387771
u49 t26 4.99525786936283
u45 t10 4.60151536203921
u41 t22 0.735783409560099
u31 t30 4.15401437133551
u9 t38 4.30444211838767
u2 t21 4.09401573915966
u36 t7 3.08357329340652
u8 t32 3.33284522546455
u28 t41 4.00685500237159
u11 t35 3.78400205355138
u1 t50 2.37493249005638
u29 t48 3.48136694682762
???
u14 t39 5.19309964170679
u22 t8 5.42040419392288
u27 t14 4.58193911169656
u20 t25 5.13981703179888
u7 t6 3.52865038462915
???

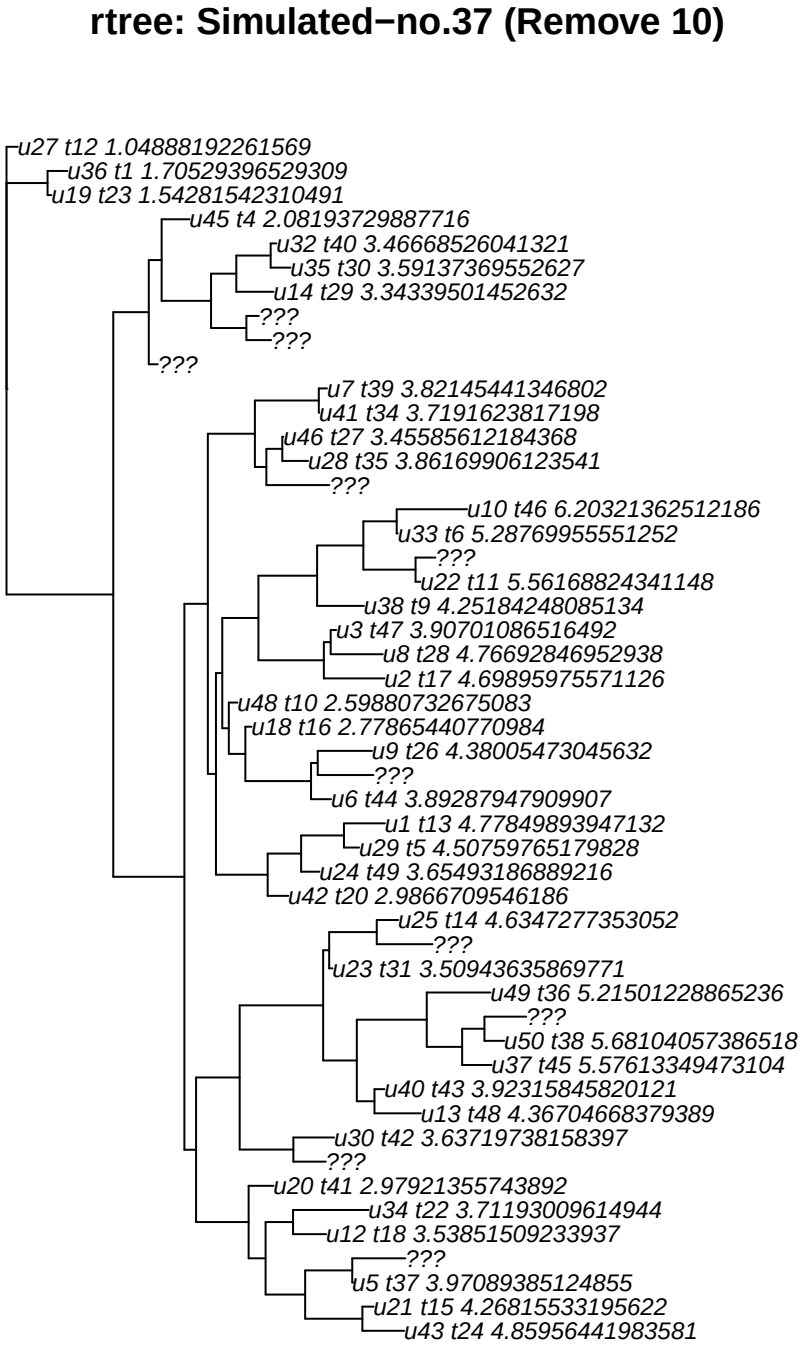

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.157103)
0.2997
0.1242
0.1619
0.4541
0.9277
0.6004
0.09452
0.055555

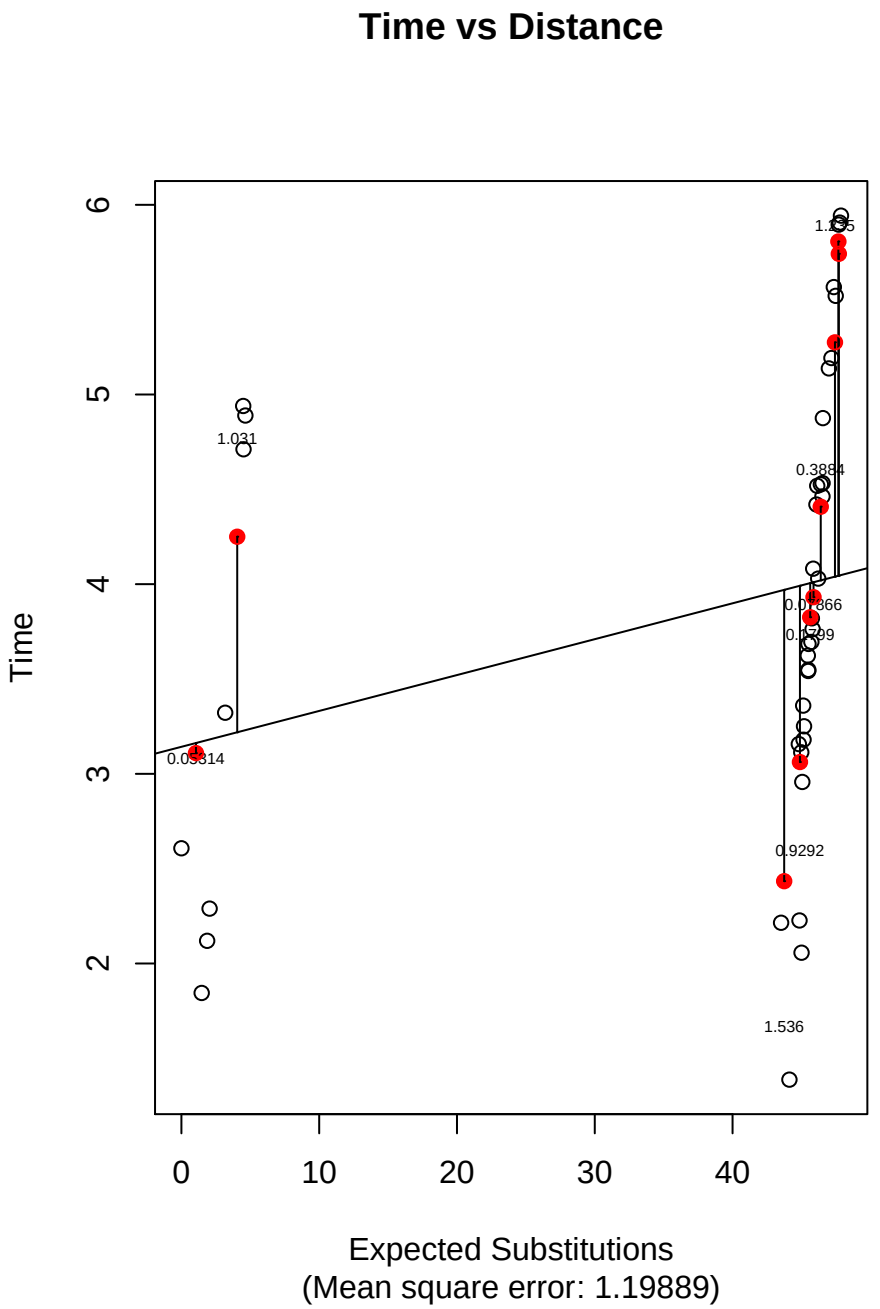

rtree: Simulated−no.35 (Remove 10)
???
u37 t15 1.96721613965929
u36 t36 1.30927841551602
???
u17 t1 1.76015836908482
u18 t47 2.55070007429458
u30 t20 1.61148789850995
u42 t40 1.53070905664936
u29 t9 5.09275482175872
u34 t49 4.79471353371628
u22 t30 4.82492793048732
u40 t38 3.71159817674197
u31 t11 2.81231663492508
???
u5 t5 3.60435248841532
u10 t17 3.98793632420711
???
u21 t41 4.00855054473504
???
u32 t32 2.71606521029025
u9 t29 3.57508792215958
u24 t43 4.03846554155461
u7 t12 3.52974205766805
u41 t42 3.3700015603099
u49 t8 2.0710460874252
u12 t14 2.28091889177449
u1 t33 3.16761327208951
???
u27 t23 3.40533524542116
u20 t48 2.85255469870754
u47 t21 3.83461387874559
???
u43 t10 2.94393453933299
u13 t16 2.59913179208525
u2 t31 2.74767339625396
u25 t4 2.73289548465982
???
u14 t18 1.68336707819253
u6 t3 4.61816152604297
u38 t45 3.48803705489263
u16 t6 4.7361492223572
u48 t22 4.73568516550586
???
u8 t34 4.09956649248488
u3 t50 3.46631131297909
u19 t19 4.21963191940449
u11 t24 3.23259625327773
???
u35 t37 4.17005771305412
u44 t35 3.70554240001366

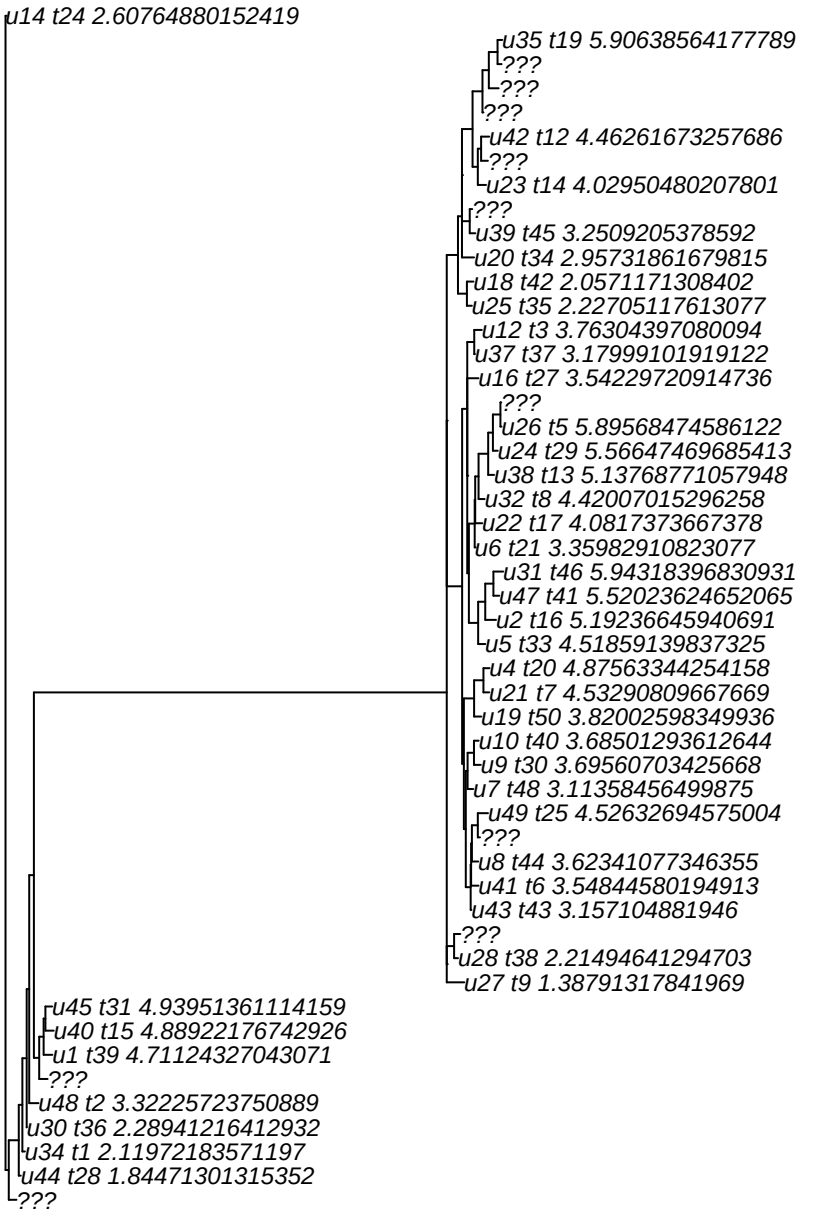

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.028298)
1
2
3
4
5
6
7
0.2295
0.2744
0.3107

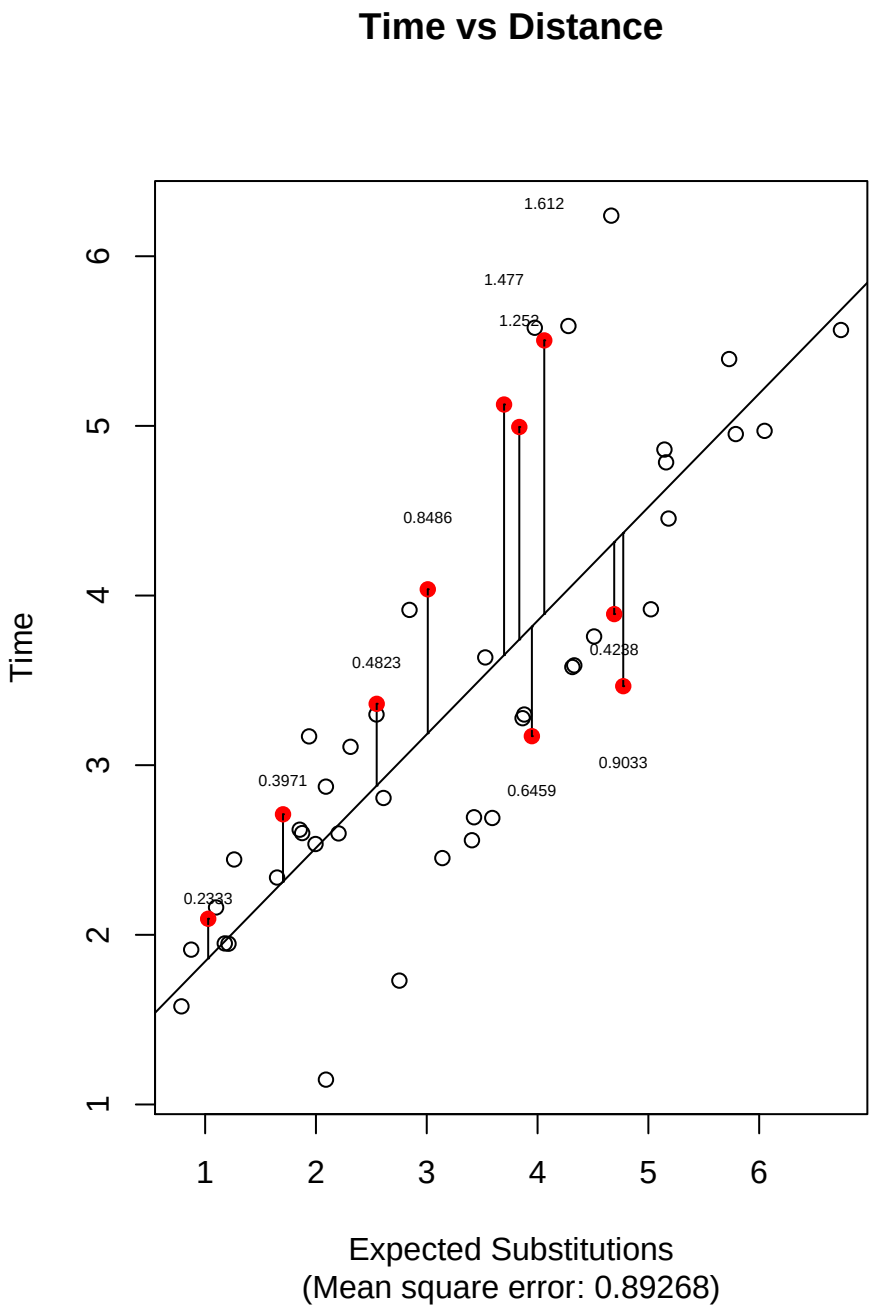

rtree: Simulated−no.36 (Remove 10)
u35 t12 1.04888192261569
u48 t1 1.70529396529309
u1 t23 1.54281542310491
u49 t2 4.46982007869519
u3 t37 3.97089385124855
u15 t15 4.26815533195622
u41 t24 4.85956441983581
u25 t41 2.97921355743892
u7 t18 3.53851509233937
u33 t22 3.71193009614944
???
u18 t33 3.65951114683412
u27 t14 4.6347277353052
u43 t19 4.87288484652527
u16 t31 3.50943635869771
u12 t38 5.68104057386518
u5 t50 5.98614788404666
u39 t45 5.57613349473104
???
u42 t43 3.92315845820121
u24 t48 4.36704668379389
u30 t39 3.82145441346802
u28 t34 3.7191623817198
???
???
u26 t8 3.96869787131436
???
u6 t5 4.50759765179828
???
u4 t20 2.9866709546186
u14 t16 2.77865440770984
u21 t26 4.38005473045632
u29 t21 4.26429843320511
???
u10 t10 2.59880732675083
u50 t6 5.28769955551252
u31 t46 6.20321362512186
u13 t25 5.71542441099882
???
u8 t9 4.25184248085134
???
u2 t17 4.69895975571126
u40 t47 3.90701086516492
???
u19 t30 3.59137369552627
u17 t29 3.34339501452632
u47 t7 3.19155366579071
u44 t3 3.35724727297202
u9 t32 2.01427289214917
u20 t4 2.08193729887716

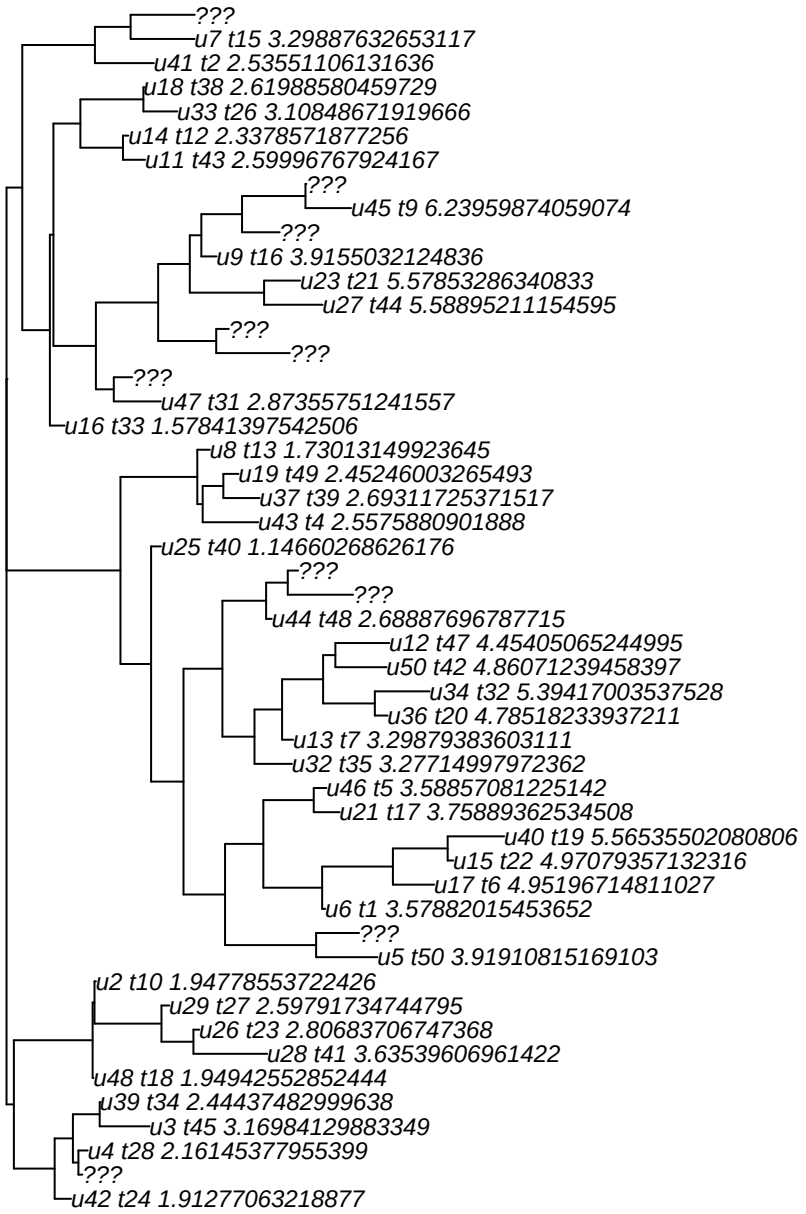

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0693581)
0
2
4
6
1
2
3
4
5
6
0.749
0.1575

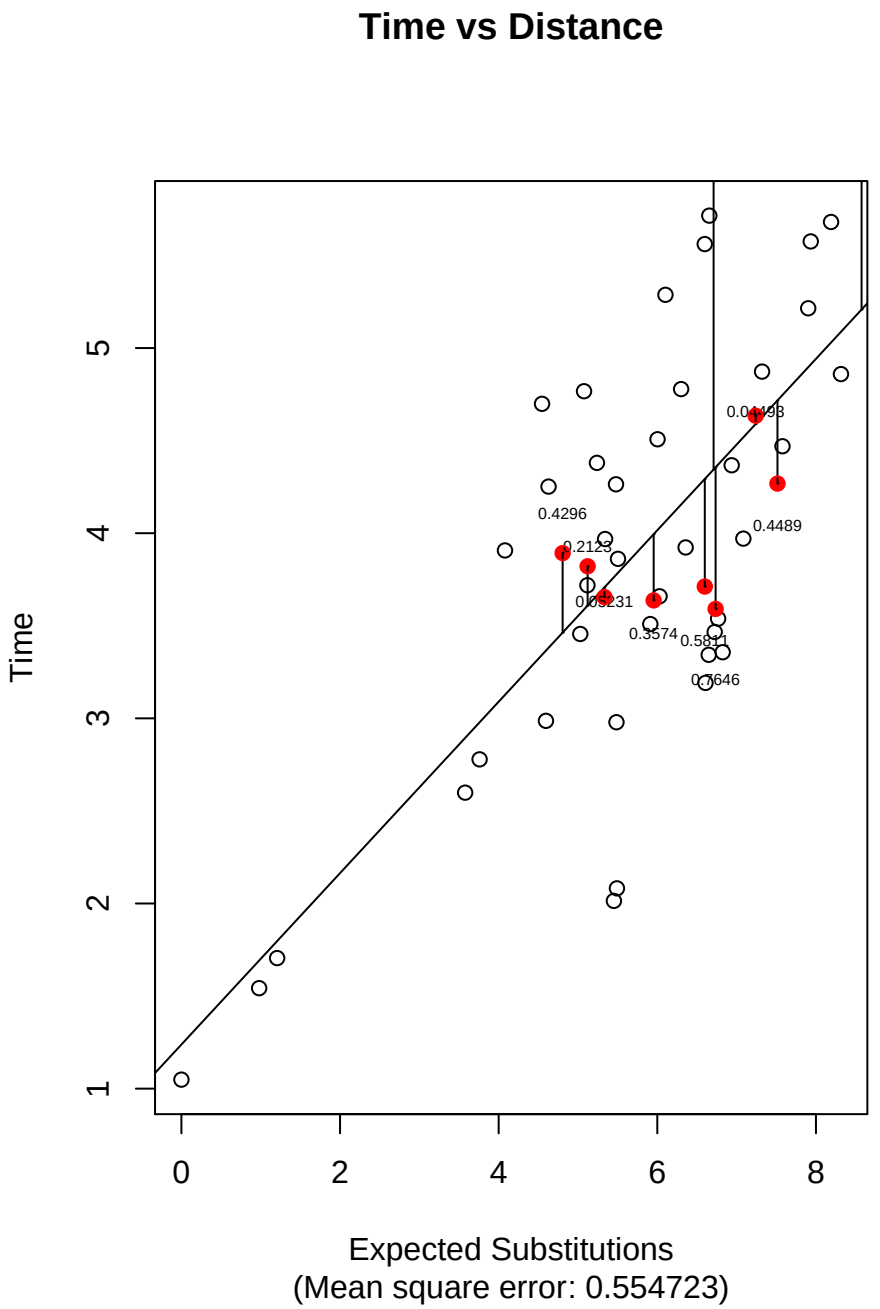

rtree: Simulated−no.37 (Remove 10)
u27 t12 1.04888192261569
u36 t1 1.70529396529309
u19 t23 1.54281542310491
u45 t4 2.08193729887716
u32 t40 3.46668526041321
u35 t30 3.59137369552627
u14 t29 3.34339501452632
???
???
???
u7 t39 3.82145441346802
u41 t34 3.7191623817198
u46 t27 3.45585612184368
u28 t35 3.86169906123541
???
u10 t46 6.20321362512186
u33 t6 5.28769955551252
???
u22 t11 5.56168824341148
u38 t9 4.25184248085134
u3 t47 3.90701086516492
u8 t28 4.76692846952938
u2 t17 4.69895975571126
u48 t10 2.59880732675083
u18 t16 2.77865440770984
u9 t26 4.38005473045632
???
u6 t44 3.89287947909907
u1 t13 4.77849893947132
u29 t5 4.50759765179828
u24 t49 3.65493186889216
u42 t20 2.9866709546186
u25 t14 4.6347277353052
???
u23 t31 3.50943635869771
u49 t36 5.21501228865236
???
u50 t38 5.68104057386518
u37 t45 5.57613349473104
u40 t43 3.92315845820121
u13 t48 4.36704668379389
u30 t42 3.63719738158397
???
u20 t41 2.97921355743892
u34 t22 3.71193009614944
u12 t18 3.53851509233937
???
u5 t37 3.97089385124855
u21 t15 4.26815533195622
u43 t24 4.85956441983581

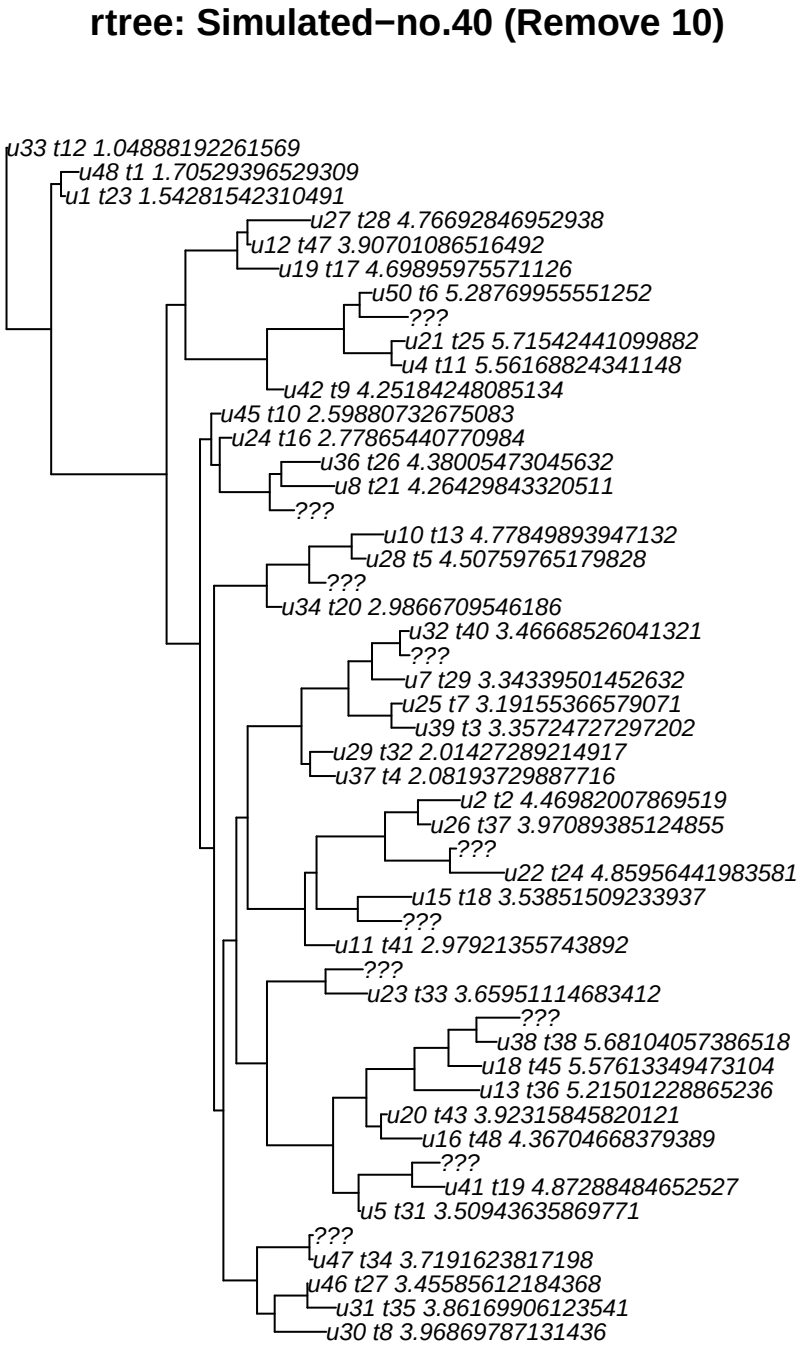

Time vs Distance
Time
Expected Substitutions
(Mean square error: 1.19889)
0
10
20
30
40
2
3
4
5
6
1.031
0.3884
0.9292
1.536

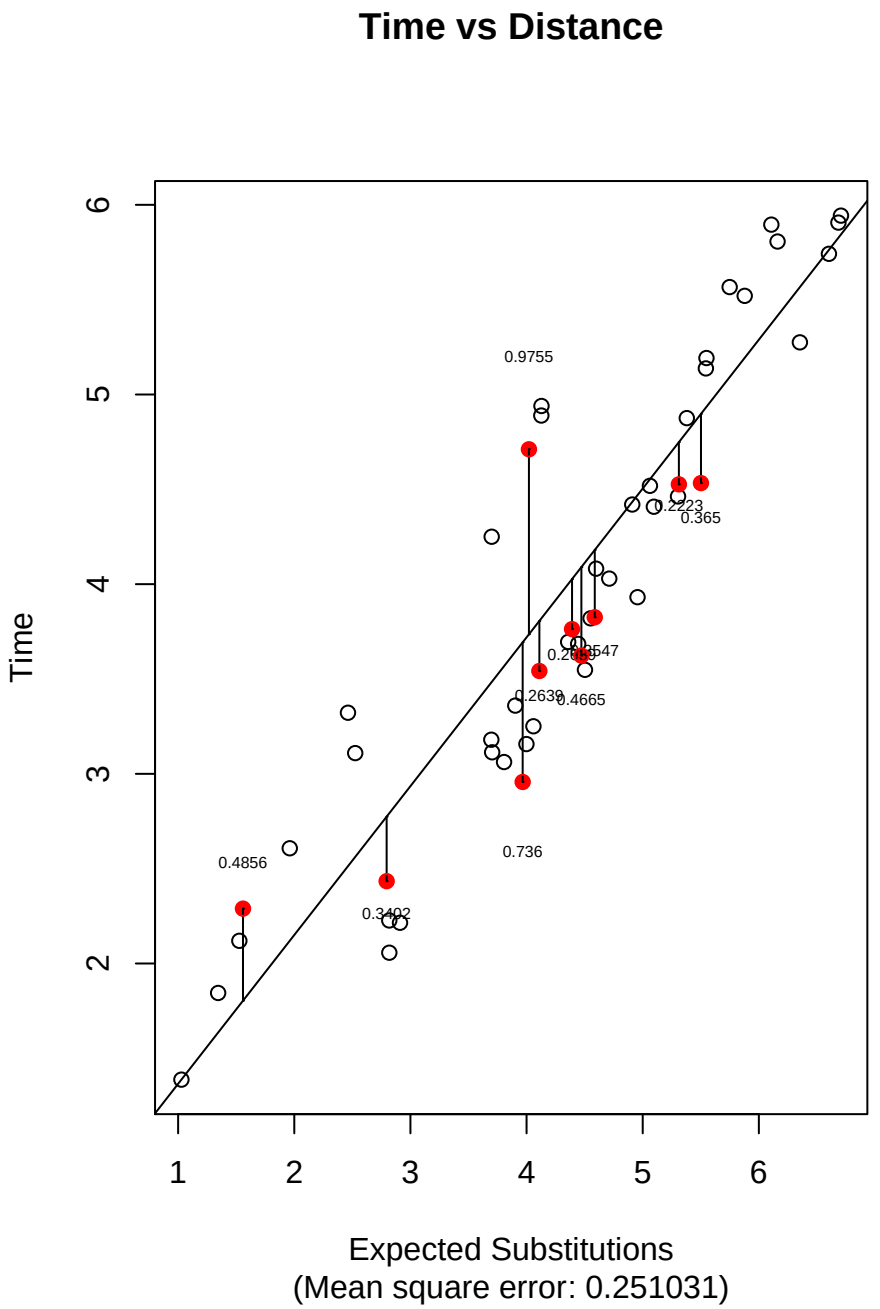

rtree: Simulated−no.38 (Remove 10)
u14 t24 2.60764880152419
u35 t19 5.90638564177789
???
???
???
u42 t12 4.46261673257686
???
u23 t14 4.02950480207801
???
u39 t45 3.2509205378592
u20 t34 2.95731861679815
u18 t42 2.0571171308402
u25 t35 2.22705117613077
u12 t3 3.76304397080094
u37 t37 3.17999101919122
u16 t27 3.54229720914736
???
u26 t5 5.89568474586122
u24 t29 5.56647469685413
u38 t13 5.13768771057948
u32 t8 4.42007015296258
u22 t17 4.0817373667378
u6 t21 3.35982910823077
u31 t46 5.94318396830931
u47 t41 5.52023624652065
u2 t16 5.19236645940691
u5 t33 4.51859139837325
u4 t20 4.87563344254158
u21 t7 4.53290809667669
u19 t50 3.82002598349936
u10 t40 3.68501293612644
u9 t30 3.69560703425668
u7 t48 3.11358456499875
u49 t25 4.52632694575004
???
u8 t44 3.62341077346355
u41 t6 3.54844580194913
u43 t43 3.157104881946
???
u28 t38 2.21494641294703
u27 t9 1.38791317841969
u45 t31 4.93951361114159
u40 t15 4.88922176742926
u1 t39 4.71124327043071
???
u48 t2 3.32225723750889
u30 t36 2.28941216412932
u34 t1 2.11972183571197
u44 t28 1.84471301315352
???

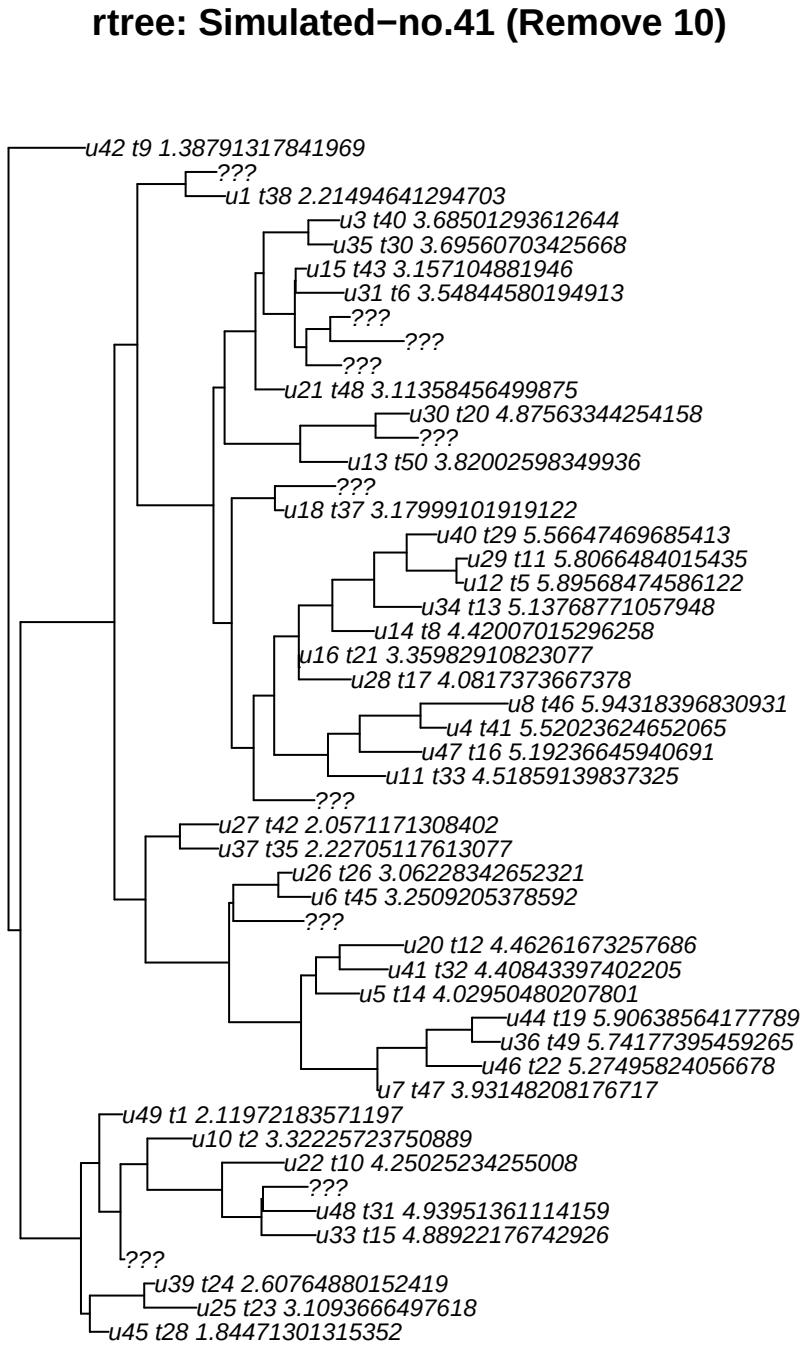

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.89268)
1.612
1.477
1.253
0.8486
0.4823
0.4288
0.3971
0.6459
0.9033
0.2333
1
2
3
4
5
6

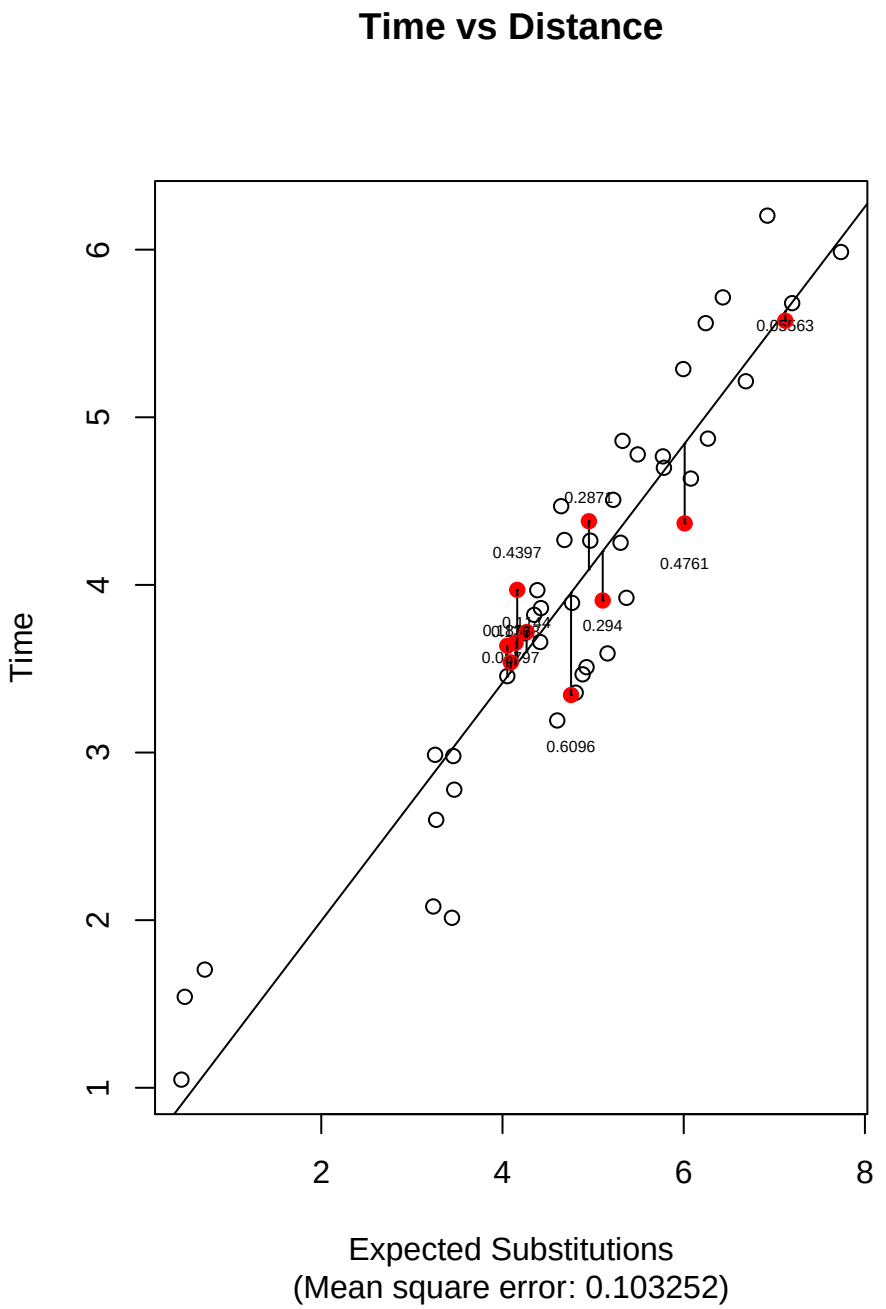

rtree: Simulated−no.39 (Remove 10)
???
u7 t15 3.29887632653117
u41 t2 2.53551106131636
u18 t38 2.61988580459729
u33 t26 3.10848671919666
u14 t12 2.3378571877256
u11 t43 2.59996767924167
???
u45 t9 6.23959874059074
???
u9 t16 3.9155032124836
u23 t21 5.57853286340833
u27 t44 5.58895211154595
???
???
???
u47 t31 2.87355751241557
u16 t33 1.57841397542506
u8 t13 1.73013149923645
u19 t49 2.45246003265493
u37 t39 2.69311725371517
u43 t4 2.5575880901888
u25 t40 1.14660268626176
???
???
u44 t48 2.68887696787715
u12 t47 4.45405065244995
u50 t42 4.86071239458397
u34 t32 5.39417003537528
u36 t20 4.78518233937211
u13 t7 3.29879383603111
u32 t35 3.27714997972362
u46 t5 3.58857081225142
u21 t17 3.75889362534508
u40 t19 5.56535502080806
u15 t22 4.97079357132316
u17 t6 4.95196714811027
u6 t1 3.57882015453652
???
u5 t50 3.91910815169103
u2 t10 1.94778553722426
u29 t27 2.59791734744795
u26 t23 2.80683706747368
u28 t41 3.63539606961422
u48 t18 1.94942552852444
u39 t34 2.44437482999638
u3 t45 3.16984129883349
u4 t28 2.16145377955399
???
u42 t24 1.91277063218877

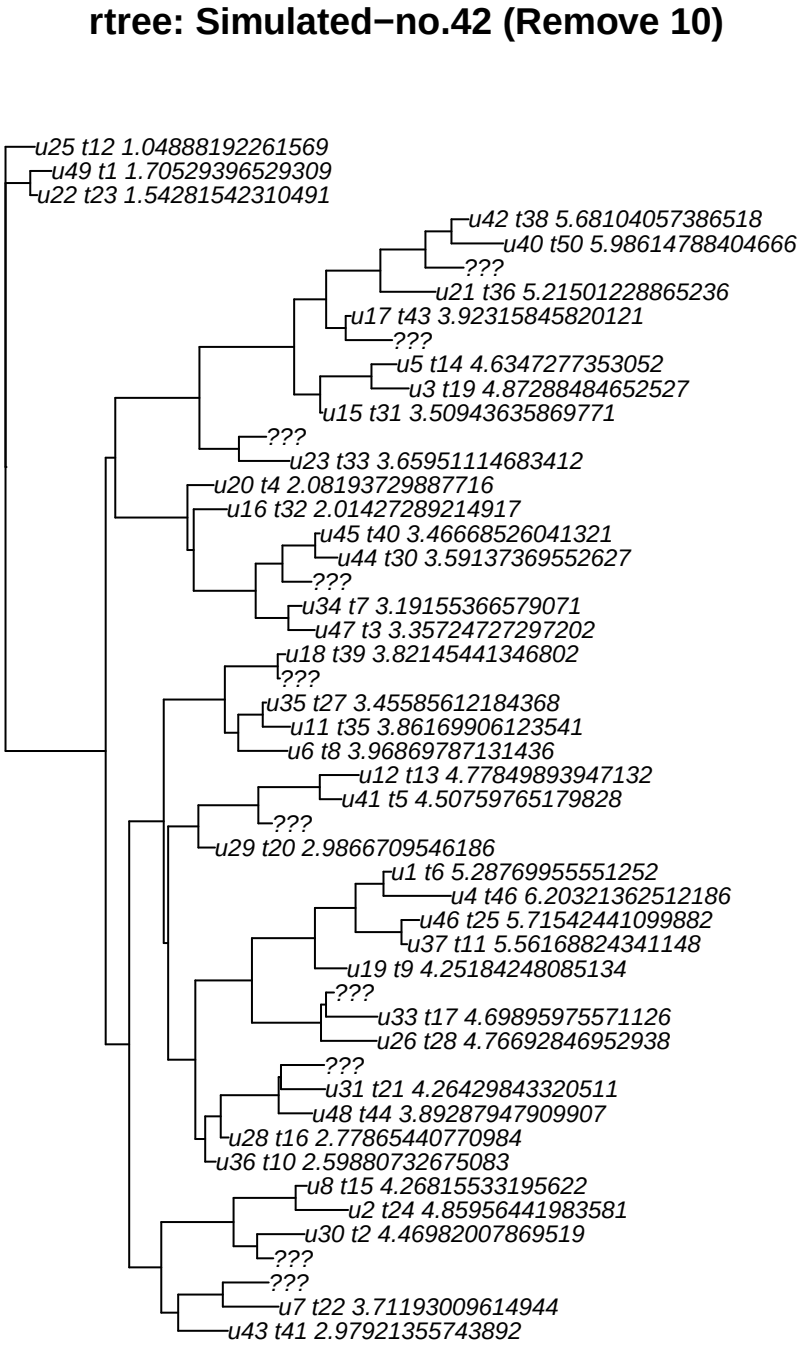

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.554723)
0
2
4
6
8
1
2
3
4
5
0.4296
0.2123
0.4489
0.3574
0.5811

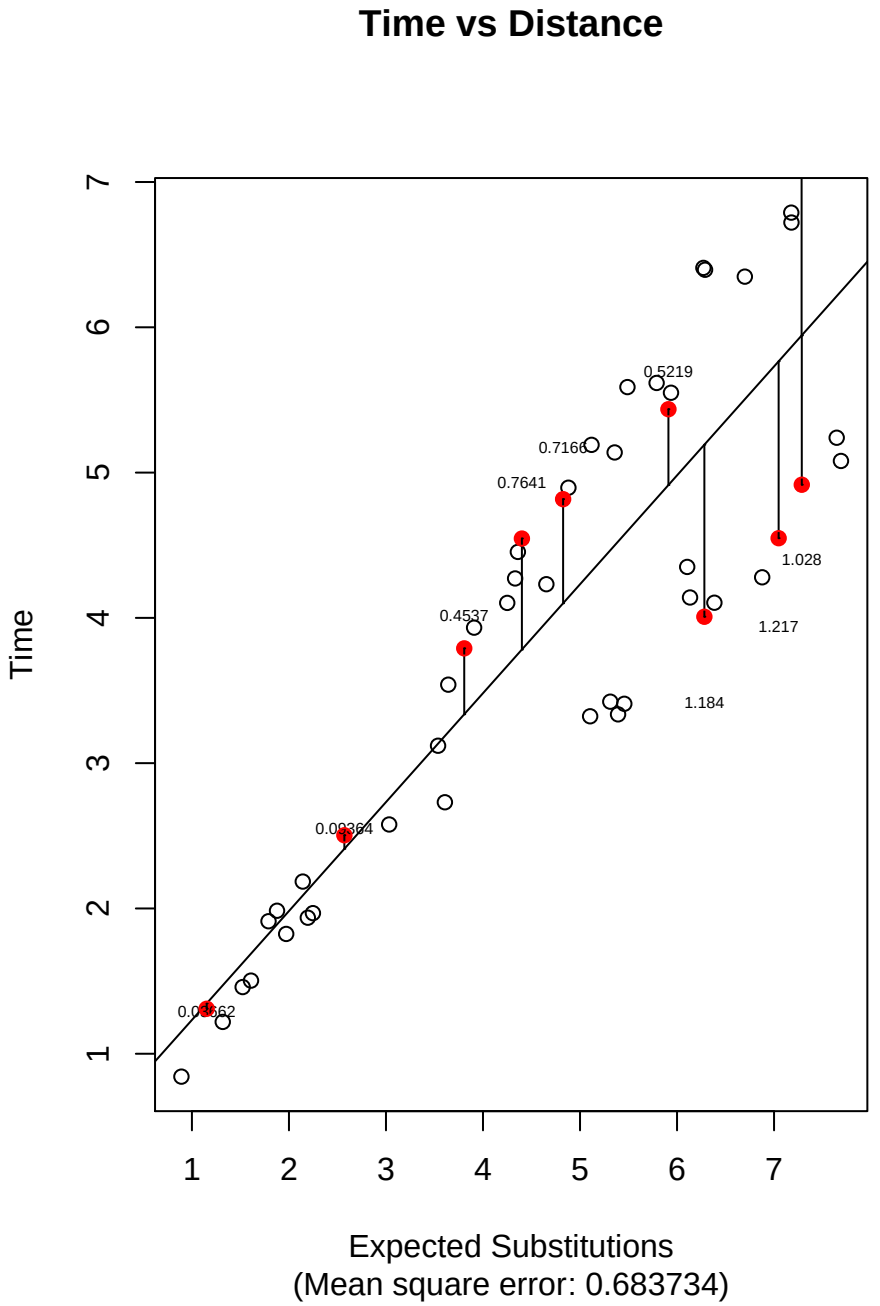

rtree: Simulated−no.40 (Remove 10)
u33 t12 1.04888192261569
u48 t1 1.70529396529309
u1 t23 1.54281542310491
u27 t28 4.76692846952938
u12 t47 3.90701086516492
u19 t17 4.69895975571126
u50 t6 5.28769955551252
???
u21 t25 5.71542441099882
u4 t11 5.56168824341148
u42 t9 4.25184248085134
u45 t10 2.59880732675083
u24 t16 2.77865440770984
u36 t26 4.38005473045632
u8 t21 4.26429843320511
???
u10 t13 4.77849893947132
u28 t5 4.50759765179828
???
u34 t20 2.9866709546186
u32 t40 3.46668526041321
???
u7 t29 3.34339501452632
u25 t7 3.19155366579071
u39 t3 3.35724727297202
u29 t32 2.01427289214917
u37 t4 2.08193729887716
u2 t2 4.46982007869519
u26 t37 3.97089385124855
???
u22 t24 4.85956441983581
u15 t18 3.53851509233937
???
u11 t41 2.97921355743892
???
u23 t33 3.65951114683412
???
u38 t38 5.68104057386518
u18 t45 5.57613349473104
u13 t36 5.21501228865236
u20 t43 3.92315845820121
u16 t48 4.36704668379389
???
u41 t19 4.87288484652527
u5 t31 3.50943635869771
???
u47 t34 3.7191623817198
u46 t27 3.45585612184368
u31 t35 3.86169906123541
u30 t8 3.96869787131436

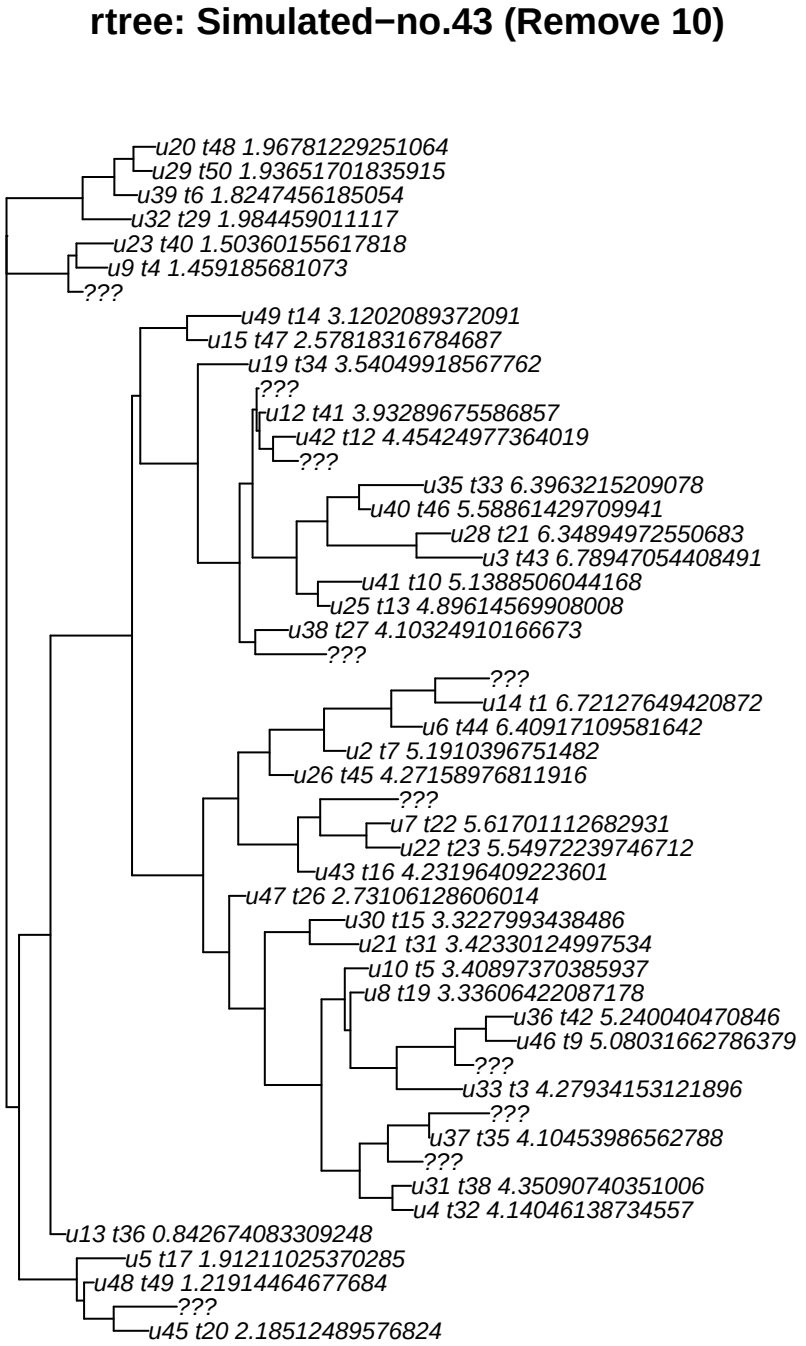

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.251031)
0.9755
0.2223
0.365
0.2547
0.2639
0.4665
0.736
0.4856
0.3402

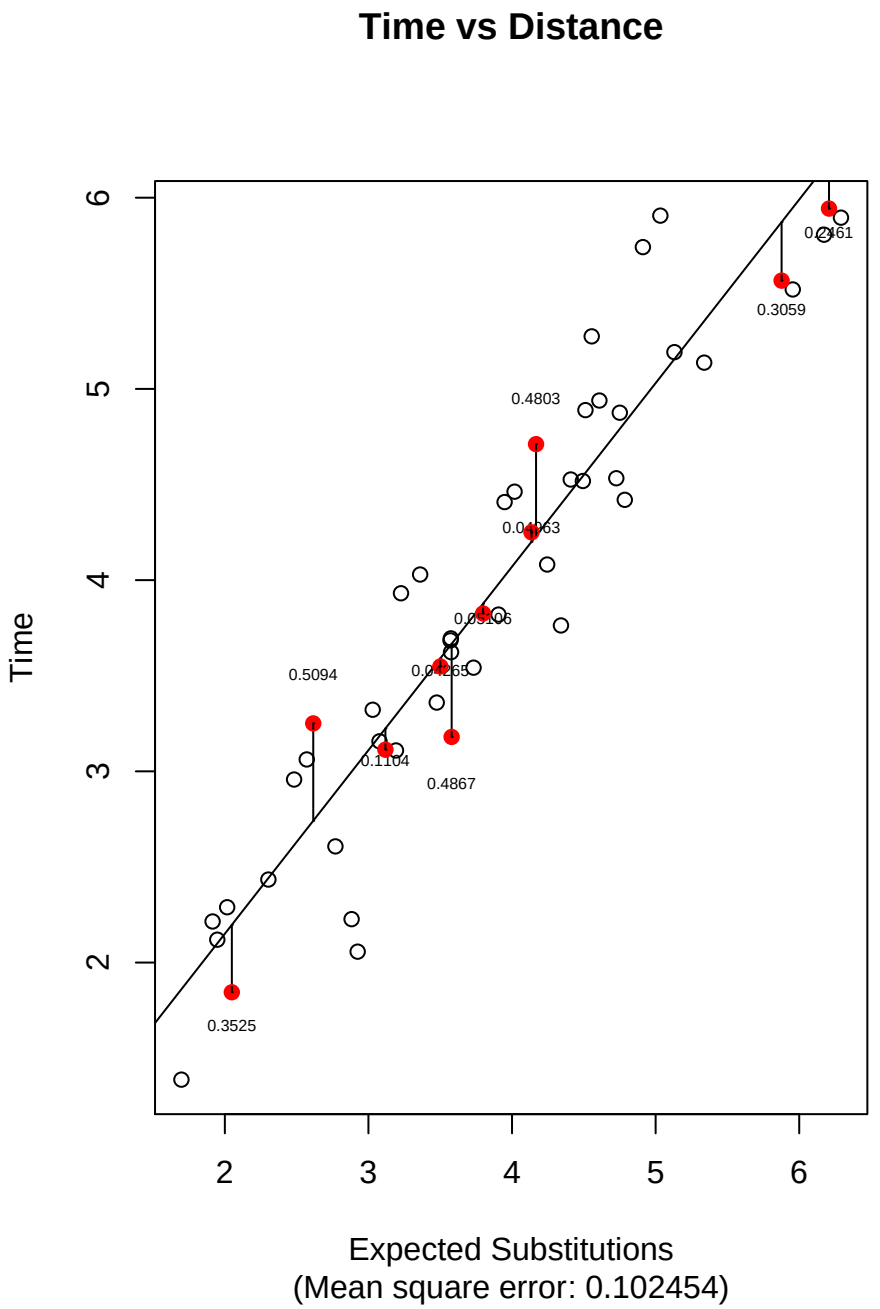

rtree: Simulated−no.41 (Remove 10)
u42 t9 1.38791317841969
???
u1 t38 2.21494641294703
u3 t40 3.68501293612644
u35 t30 3.69560703425668
u15 t43 3.157104881946
u31 t6 3.54844580194913
???
???
???
u21 t48 3.11358456499875
u30 t20 4.87563344254158
???
u13 t50 3.82002598349936
???
u18 t37 3.17999101919122
u40 t29 5.56647469685413
u29 t11 5.8066484015435
u12 t5 5.89568474586122
u34 t13 5.13768771057948
u14 t8 4.42007015296258
u16 t21 3.35982910823077
u28 t17 4.0817373667378
u8 t46 5.94318396830931
u4 t41 5.52023624652065
u47 t16 5.19236645940691
u11 t33 4.51859139837325
???
u27 t42 2.0571171308402
u37 t35 2.22705117613077
u26 t26 3.06228342652321
u6 t45 3.2509205378592
???
u20 t12 4.46261673257686
u41 t32 4.40843397402205
u5 t14 4.02950480207801
u44 t19 5.90638564177789
u36 t49 5.74177395459265
u46 t22 5.27495824056678
u7 t47 3.93148208176717
u49 t1 2.11972183571197
u10 t2 3.32225723750889
u22 t10 4.25025234255008
???
u48 t31 4.93951361114159
u33 t15 4.88922176742926
???
u39 t24 2.60764880152419
u25 t23 3.1093666497618
u45 t28 1.84471301315352

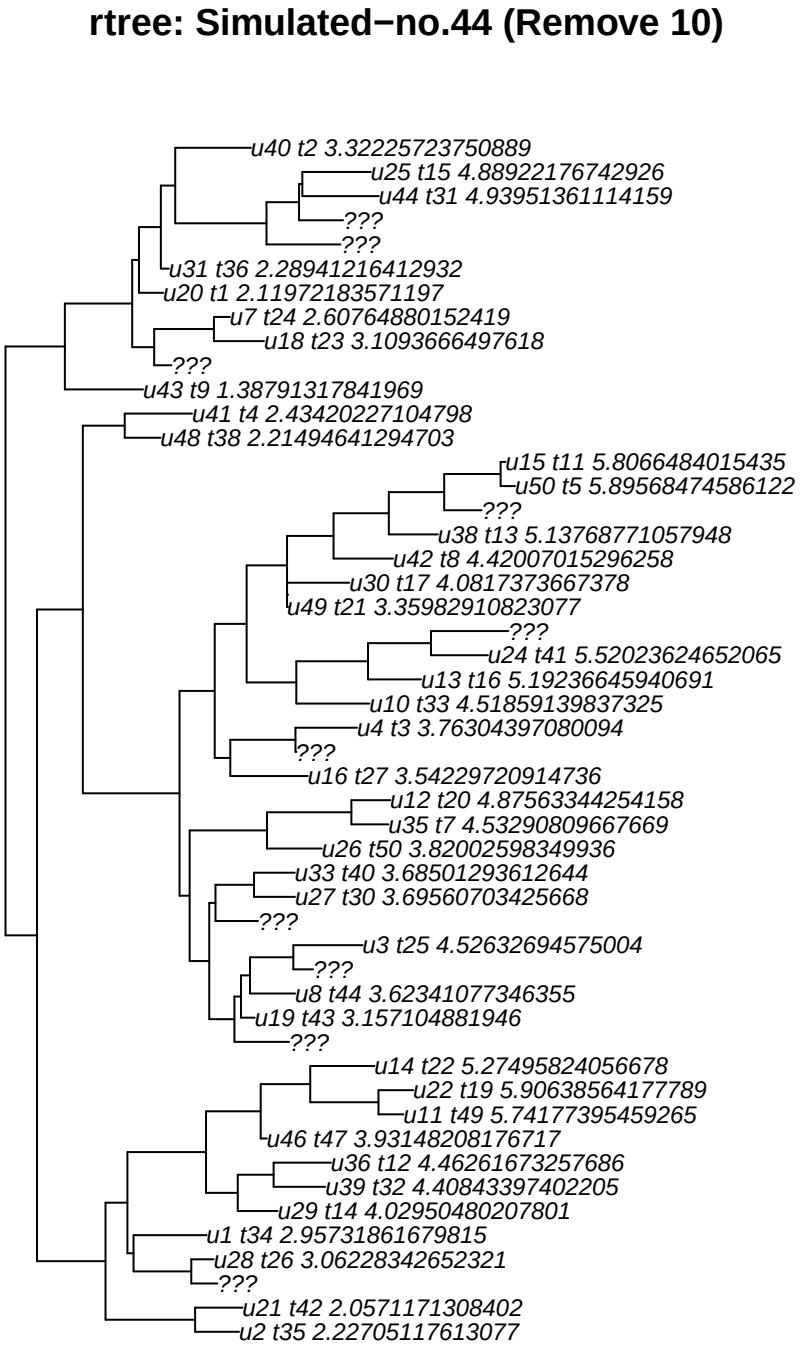

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.103252)
1
2
3
4
5
6
2
4
6
8
0.4397
0.294
0.6096
0.4761

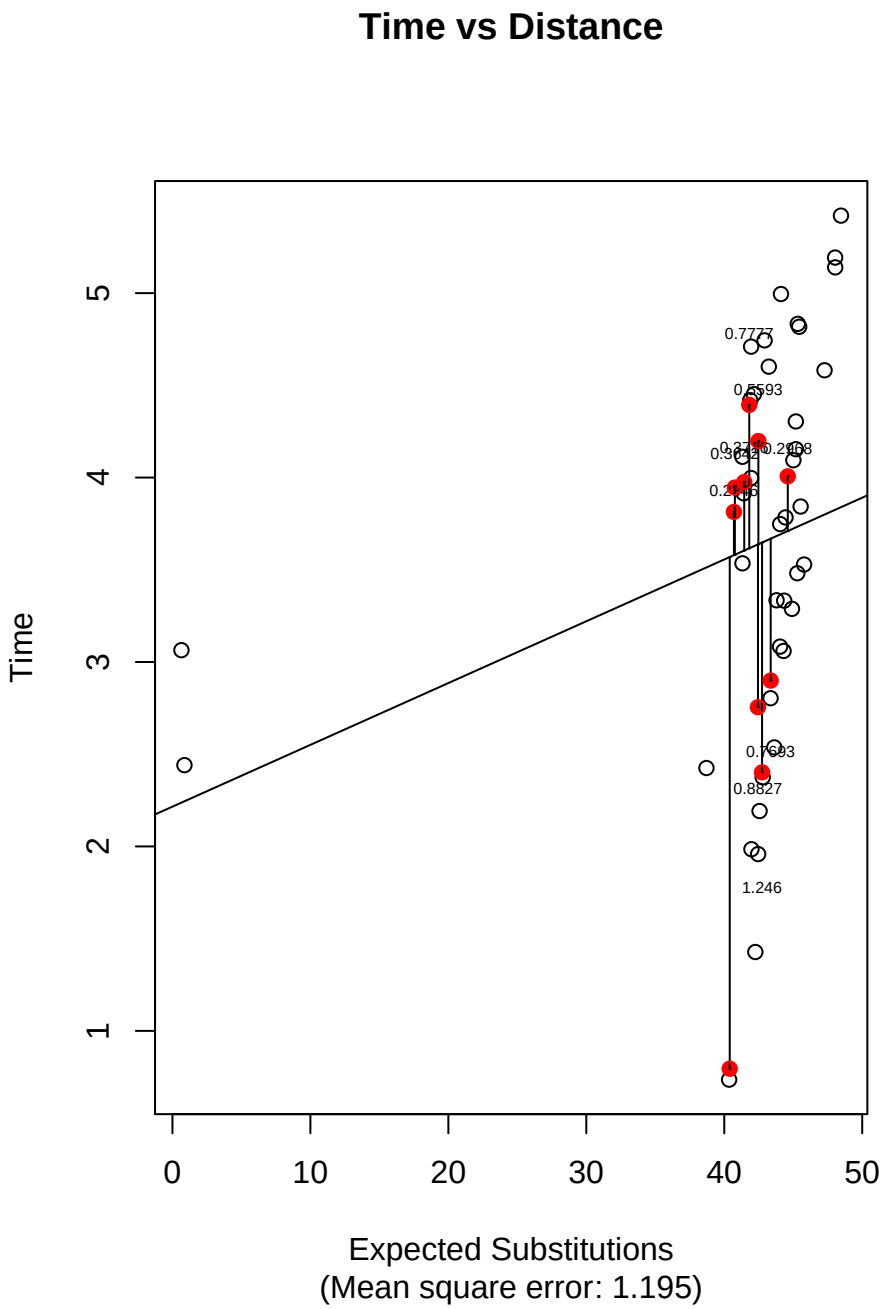

rtree: Simulated−no.42 (Remove 10)
u25 t12 1.04888192261569
u49 t1 1.70529396529309
u22 t23 1.54281542310491
u42 t38 5.68104057386518
u40 t50 5.98614788404666
???
u21 t36 5.21501228865236
u17 t43 3.92315845820121
???
u5 t14 4.6347277353052
u3 t19 4.87288484652527
u15 t31 3.50943635869771
???
u23 t33 3.65951114683412
u20 t4 2.08193729887716
u16 t32 2.01427289214917
u45 t40 3.46668526041321
u44 t30 3.59137369552627
???
u34 t7 3.19155366579071
u47 t3 3.35724727297202
u18 t39 3.82145441346802
???
u35 t27 3.45585612184368
u11 t35 3.86169906123541
u6 t8 3.96869787131436
u12 t13 4.77849893947132
u41 t5 4.50759765179828
???
u29 t20 2.9866709546186
u1 t6 5.28769955551252
u4 t46 6.20321362512186
u46 t25 5.71542441099882
u37 t11 5.56168824341148
u19 t9 4.25184248085134
???
u33 t17 4.69895975571126
u26 t28 4.76692846952938
???
u31 t21 4.26429843320511
u48 t44 3.89287947909907
u28 t16 2.77865440770984
u36 t10 2.59880732675083
u8 t15 4.26815533195622
u2 t24 4.85956441983581
u30 t2 4.46982007869519
???
???
u7 t22 3.71193009614944
u43 t41 2.97921355743892

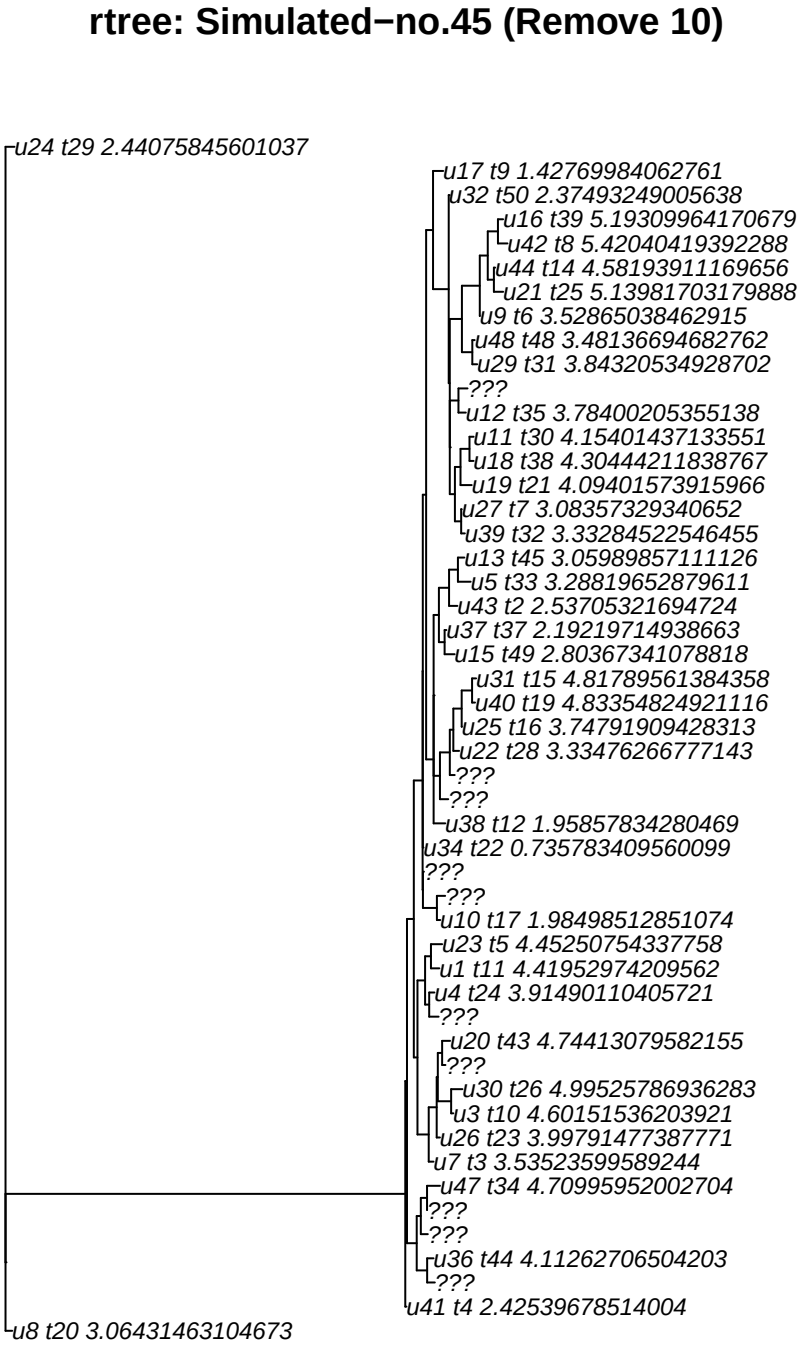

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.683734)
0.5219
0.7166
0.7641
1.028
0.4537
1.217
1.184
0.00364
0.00362

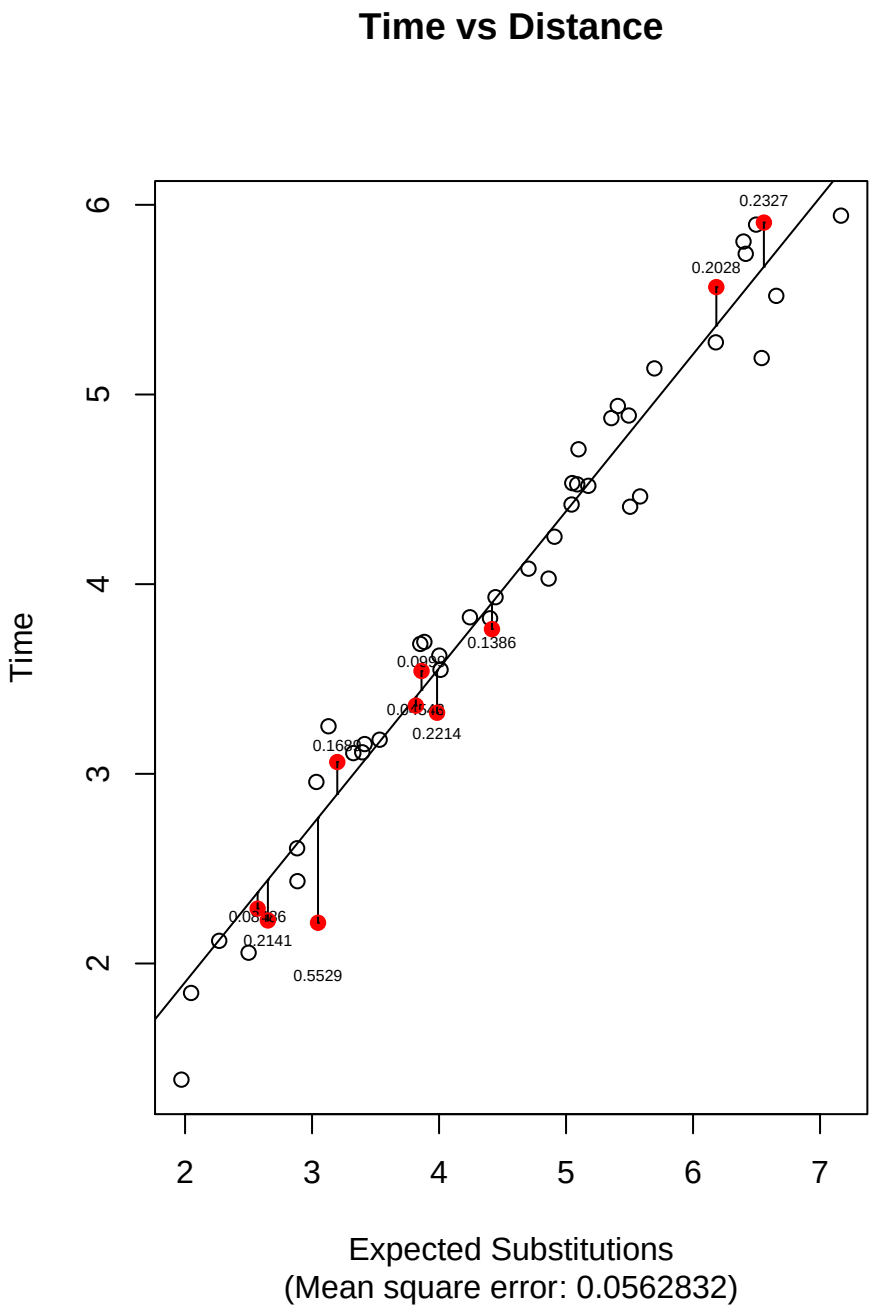

rtree: Simulated−no.43 (Remove 10)
u20 t48 1.96781229251064
u29 t50 1.93651701835915
u39 t6 1.8247456185054
u32 t29 1.984459011117
u23 t40 1.50360155617818
u9 t4 1.459185681073
???
u49 t14 3.1202089372091
u15 t47 2.57818316784687
u19 t34 3.54049918567762
???
u12 t41 3.93289675586857
u42 t12 4.45424977364019
???
u35 t33 6.3963215209078
u40 t46 5.58861429709941
u28 t21 6.34894972550683
u3 t43 6.78947054408491
u41 t10 5.1388506044168
u25 t13 4.89614569908008
u38 t27 4.10324910166673
???
???
u14 t1 6.72127649420872
u6 t44 6.40917109581642
u2 t7 5.1910396751482
u26 t45 4.27158976811916
???
u7 t22 5.61701112682931
u22 t23 5.54972239746712
u43 t16 4.23196409223601
u47 t26 2.73106128606014
u30 t15 3.3227993438486
u21 t31 3.42330124997534
u10 t5 3.40897370385937
u8 t19 3.33606422087178
u36 t42 5.240040470846
u46 t9 5.08031662786379
???
u33 t3 4.27934153121896
???
u37 t35 4.10453986562788
???
u31 t38 4.35090740351006
u4 t32 4.14046138734557
u13 t36 0.842674083309248
u5 t17 1.91211025370285
u48 t49 1.21914464677684
???
u45 t20 2.18512489576824

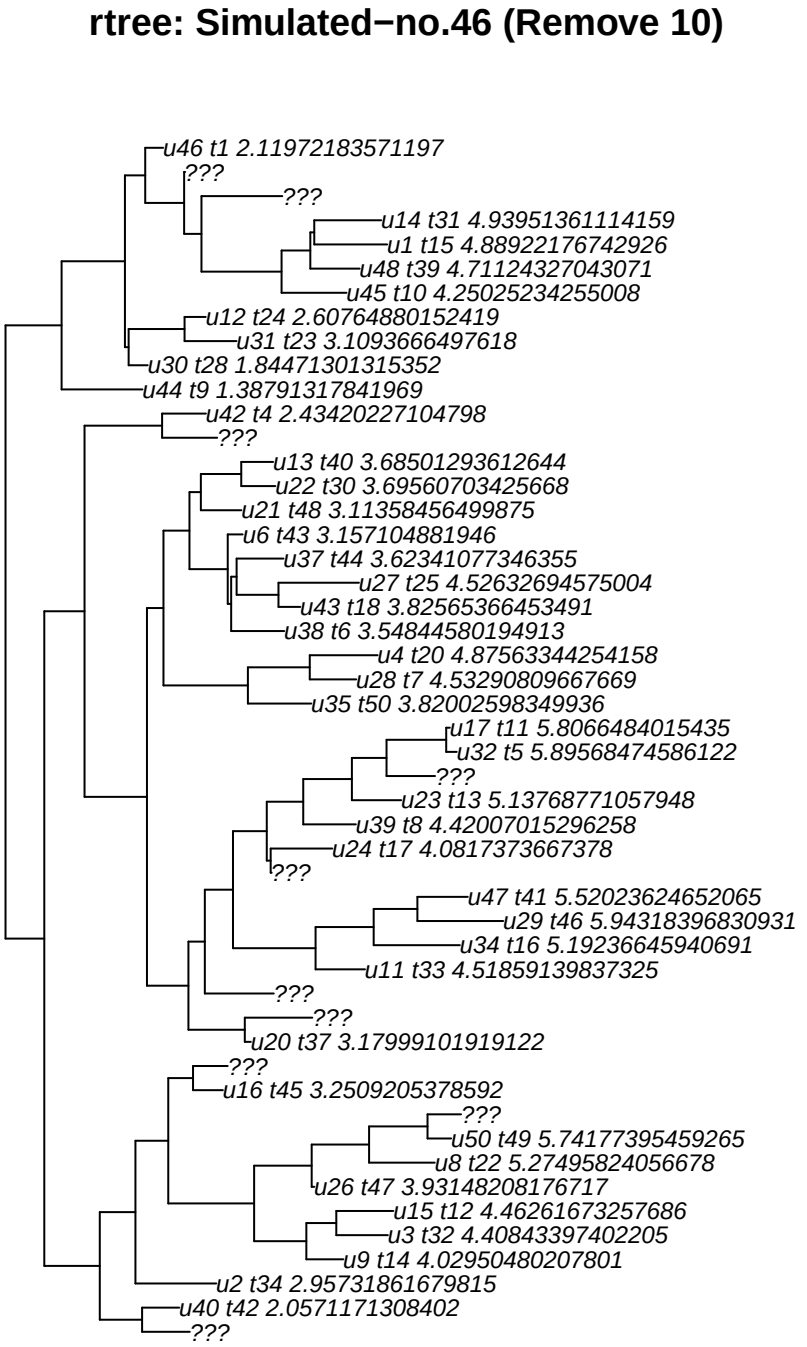

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.102454)
0.3525
0.5094
0.1104
0.4867
0.4803
0.3059

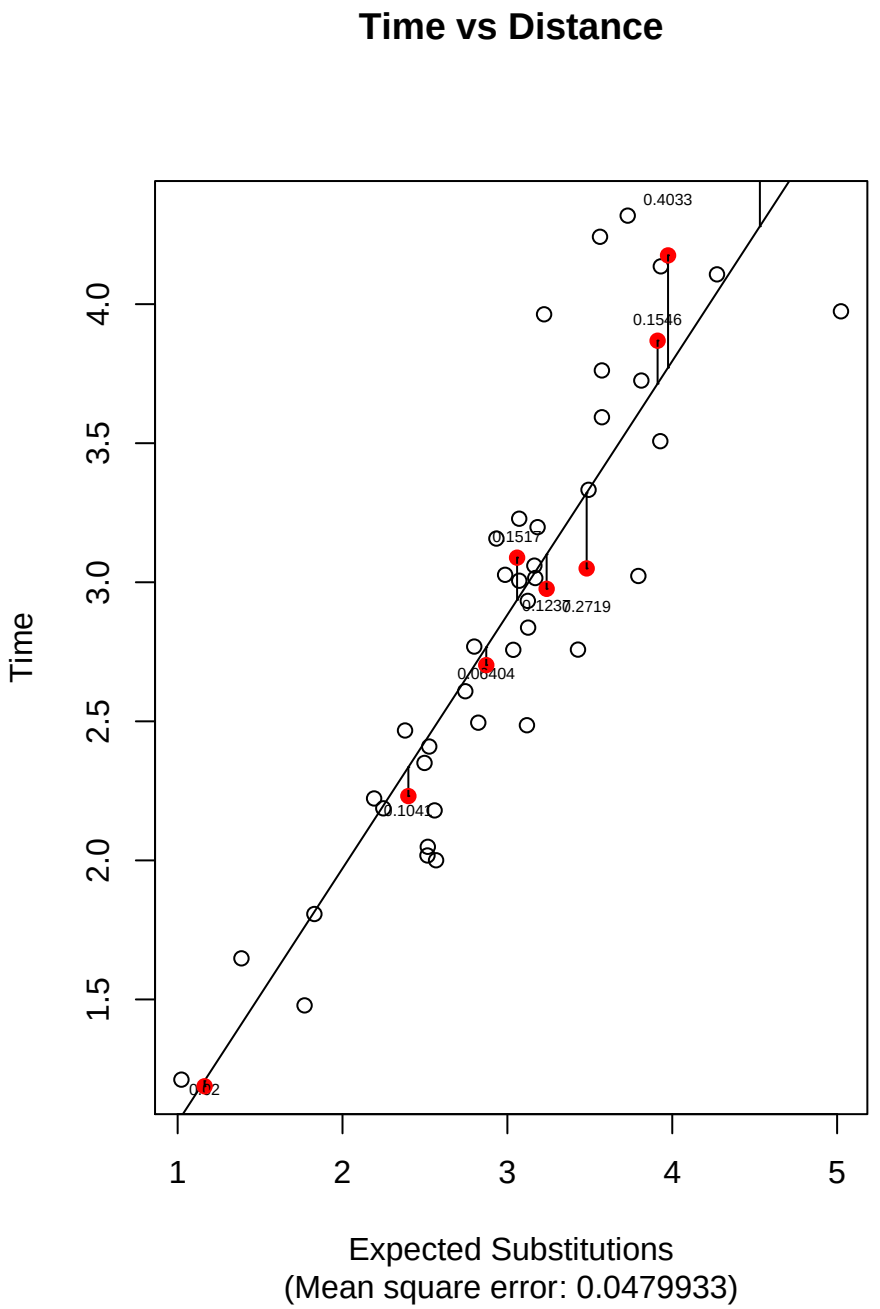

rtree: Simulated−no.44 (Remove 10)
u40 t2 3.32225723750889
u25 t15 4.88922176742926
u44 t31 4.93951361114159
???
???
u31 t36 2.28941216412932
u20 t1 2.11972183571197
u7 t24 2.60764880152419
u18 t23 3.1093666497618
???
u43 t9 1.38791317841969
u41 t4 2.43420227104798
u48 t38 2.21494641294703
u15 t11 5.8066484015435
u50 t5 5.89568474586122
???
u38 t13 5.13768771057948
u42 t8 4.42007015296258
u30 t17 4.0817373667378
u49 t21 3.35982910823077
???
u24 t41 5.52023624652065
u13 t16 5.19236645940691
u10 t33 4.51859139837325
u4 t3 3.76304397080094
???
u16 t27 3.54229720914736
u12 t20 4.87563344254158
u35 t7 4.53290809667669
u26 t50 3.82002598349936
u33 t40 3.68501293612644
u27 t30 3.69560703425668
???
u3 t25 4.52632694575004
???
u8 t44 3.62341077346355
u19 t43 3.157104881946
???
u14 t22 5.27495824056678
u22 t19 5.90638564177789
u11 t49 5.74177395459265
u46 t47 3.93148208176717
u36 t12 4.46261673257686
u39 t32 4.40843397402205
u29 t14 4.02950480207801
u1 t34 2.95731861679815
u28 t26 3.06228342652321
???
u21 t42 2.0571171308402
u2 t35 2.22705117613077

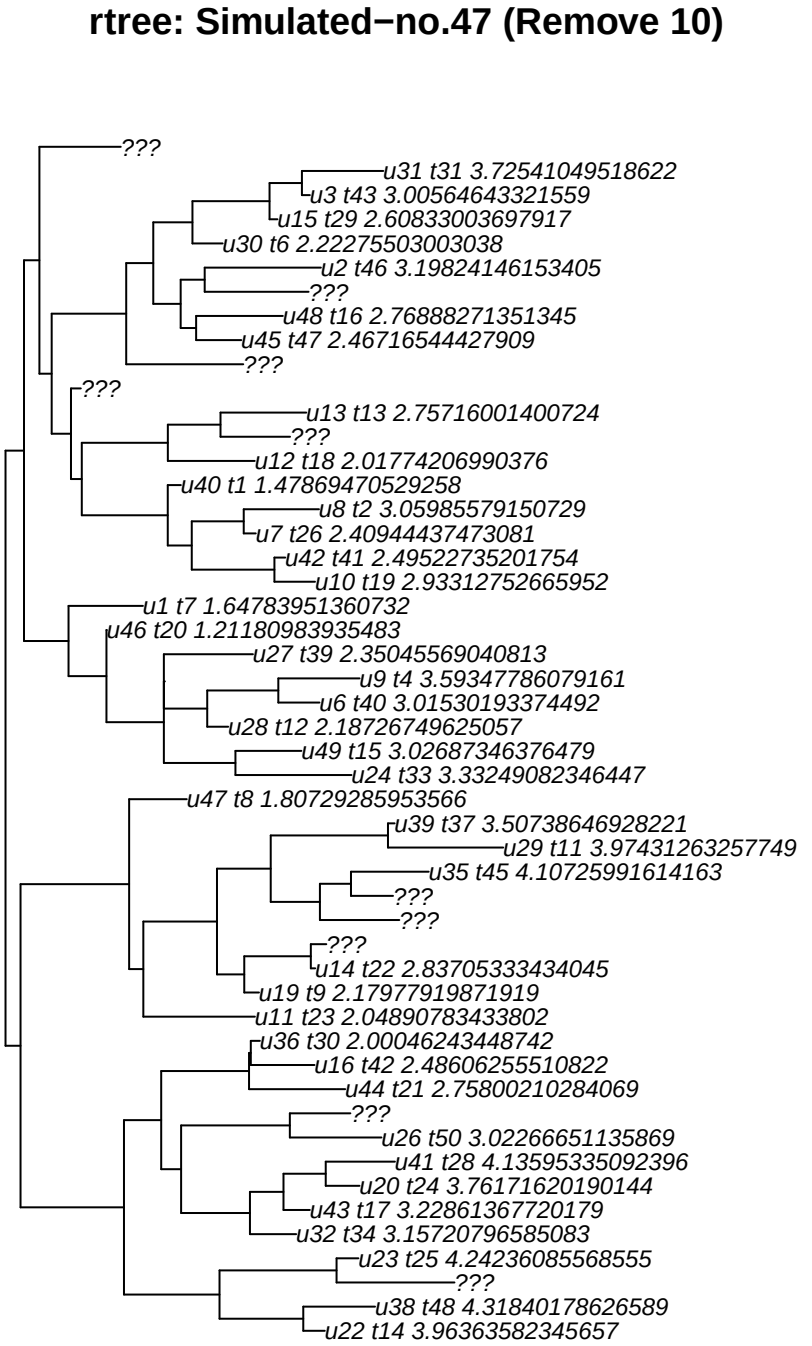

Time vs Distance
Time
Expected Substitutions
(Mean square error: 1.195)
0
10
20
30
40
50
1
2
3
4
5
0.7777
0.8827
1.246

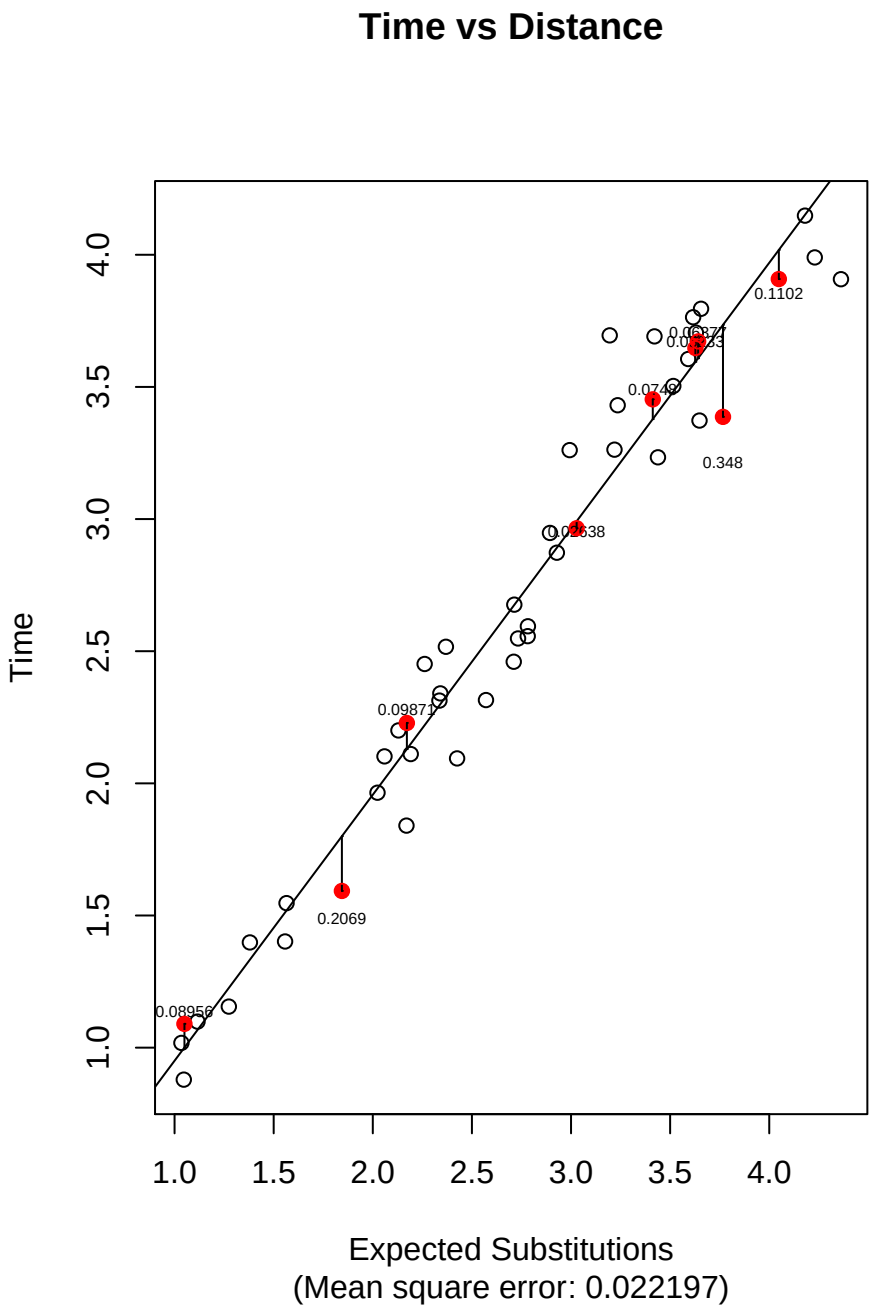

rtree: Simulated−no.45 (Remove 10)
u24 t29 2.44075845601037
u8 t20 3.06431463104673
u17 t9 1.42769984062761
u32 t50 2.37493249005638
u16 t39 5.19309964170679
u42 t8 5.42040419392288
u44 t14 4.58193911169656
u21 t25 5.13981703179888
u9 t6 3.52865038462915
u48 t48 3.48136694682762
u29 t31 3.84320534928702
???
u12 t35 3.78400205355138
u11 t30 4.15401437133551
u18 t38 4.30444211838767
u19 t21 4.09401573915966
u27 t7 3.08357329340652
u39 t32 3.33284522546455
u13 t45 3.05989857111126
u5 t33 3.28819652879611
u43 t2 2.53705321694724
u37 t37 2.19219714938663
u15 t49 2.80367341078818
u31 t15 4.81789561384358
u40 t19 4.83354824921116
u25 t16 3.74791909428313
u22 t28 3.33476266777143
???
???
u38 t12 1.95857834280469
u34 t22 0.735783409560099
???
???
u10 t17 1.98498512851074
u23 t5 4.45250754337758
u1 t11 4.41952974209562
u4 t24 3.91490110405721
???
u20 t43 4.74413079582155
???
u30 t26 4.99525786936283
u3 t10 4.60151536203921
u26 t23 3.99791477387771
u7 t3 3.53523599589244
u47 t34 4.70995952002704
???
???
u36 t44 4.11262706504203
???
u41 t4 2.42539678514004

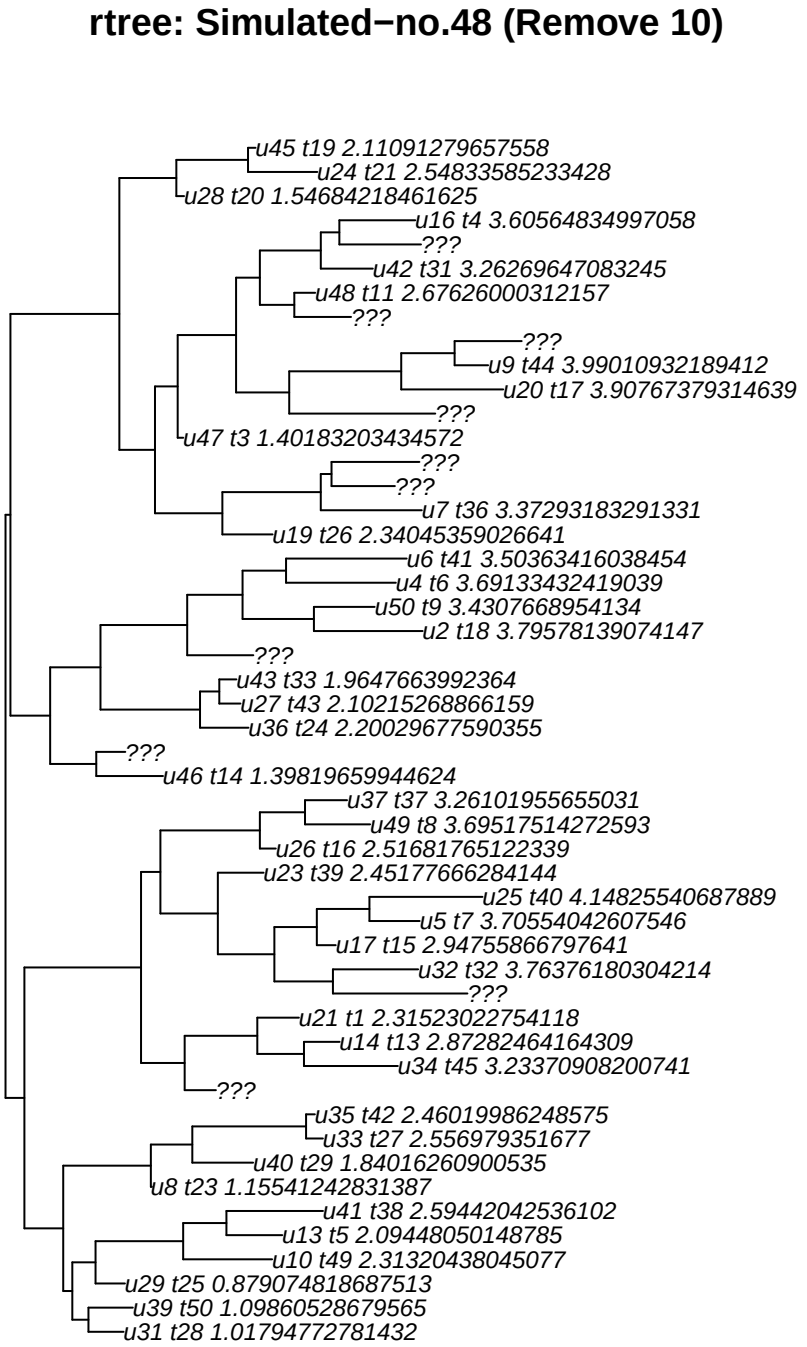

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0562832)
2
3
4
5
6
7
0.2327
0.2028
0.1386
0.2214
0.2141
0.5529

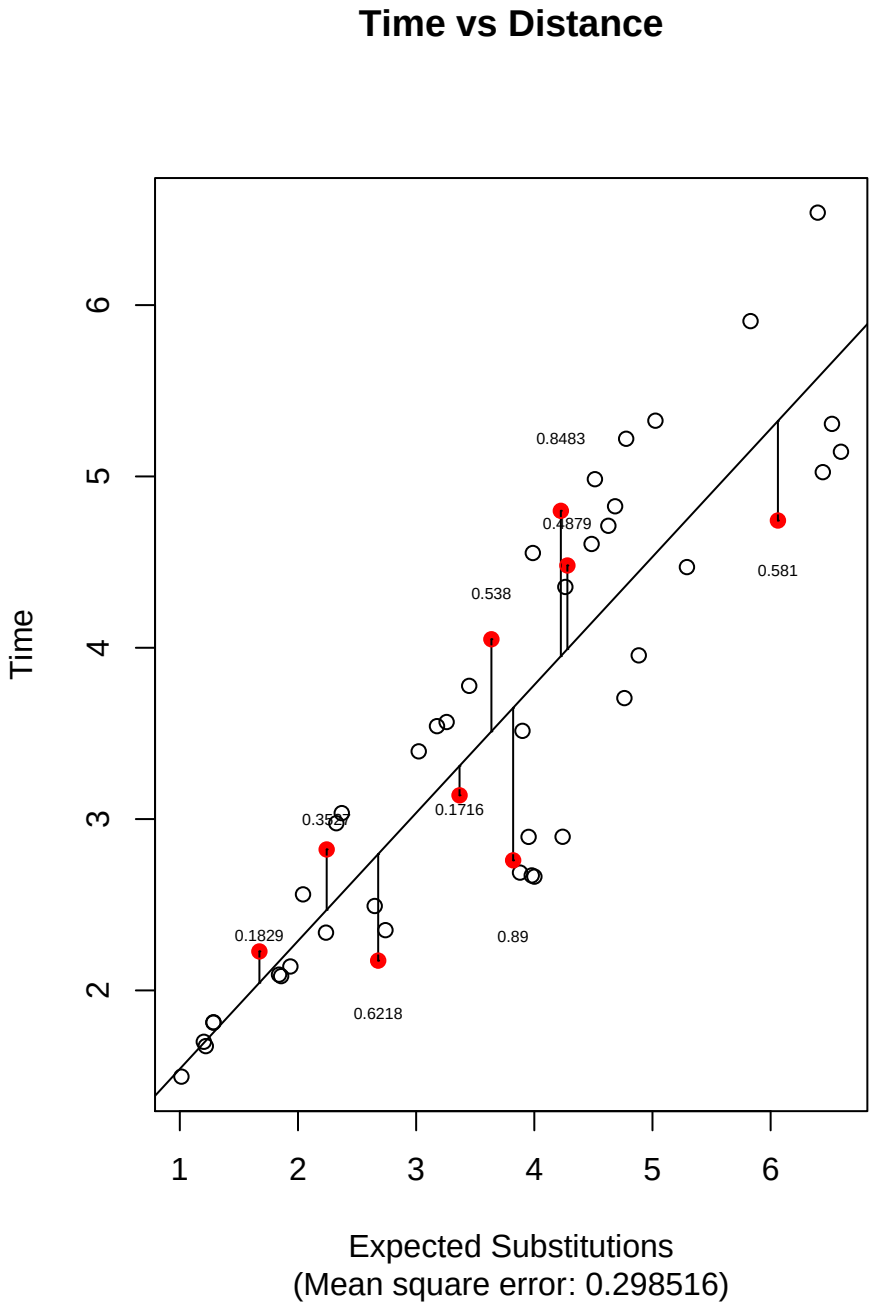

rtree: Simulated−no.46 (Remove 10)
u46 t1 2.11972183571197
???
???
u14 t31 4.93951361114159
u1 t15 4.88922176742926
u48 t39 4.71124327043071
u45 t10 4.25025234255008
u12 t24 2.60764880152419
u31 t23 3.1093666497618
u30 t28 1.84471301315352
u44 t9 1.38791317841969
u42 t4 2.43420227104798
???
u13 t40 3.68501293612644
u22 t30 3.69560703425668
u21 t48 3.11358456499875
u6 t43 3.157104881946
u37 t44 3.62341077346355
u27 t25 4.52632694575004
u43 t18 3.82565366453491
u38 t6 3.54844580194913
u4 t20 4.87563344254158
u28 t7 4.53290809667669
u35 t50 3.82002598349936
u17 t11 5.8066484015435
u32 t5 5.89568474586122
???
u23 t13 5.13768771057948
u39 t8 4.42007015296258
u24 t17 4.0817373667378
???
u47 t41 5.52023624652065
u29 t46 5.94318396830931
u34 t16 5.19236645940691
u11 t33 4.51859139837325
???
???
u20 t37 3.17999101919122
???
u16 t45 3.2509205378592
???
u50 t49 5.74177395459265
u8 t22 5.27495824056678
u26 t47 3.93148208176717
u15 t12 4.46261673257686
u3 t32 4.40843397402205
u9 t14 4.02950480207801
u2 t34 2.95731861679815
u40 t42 2.0571171308402
???

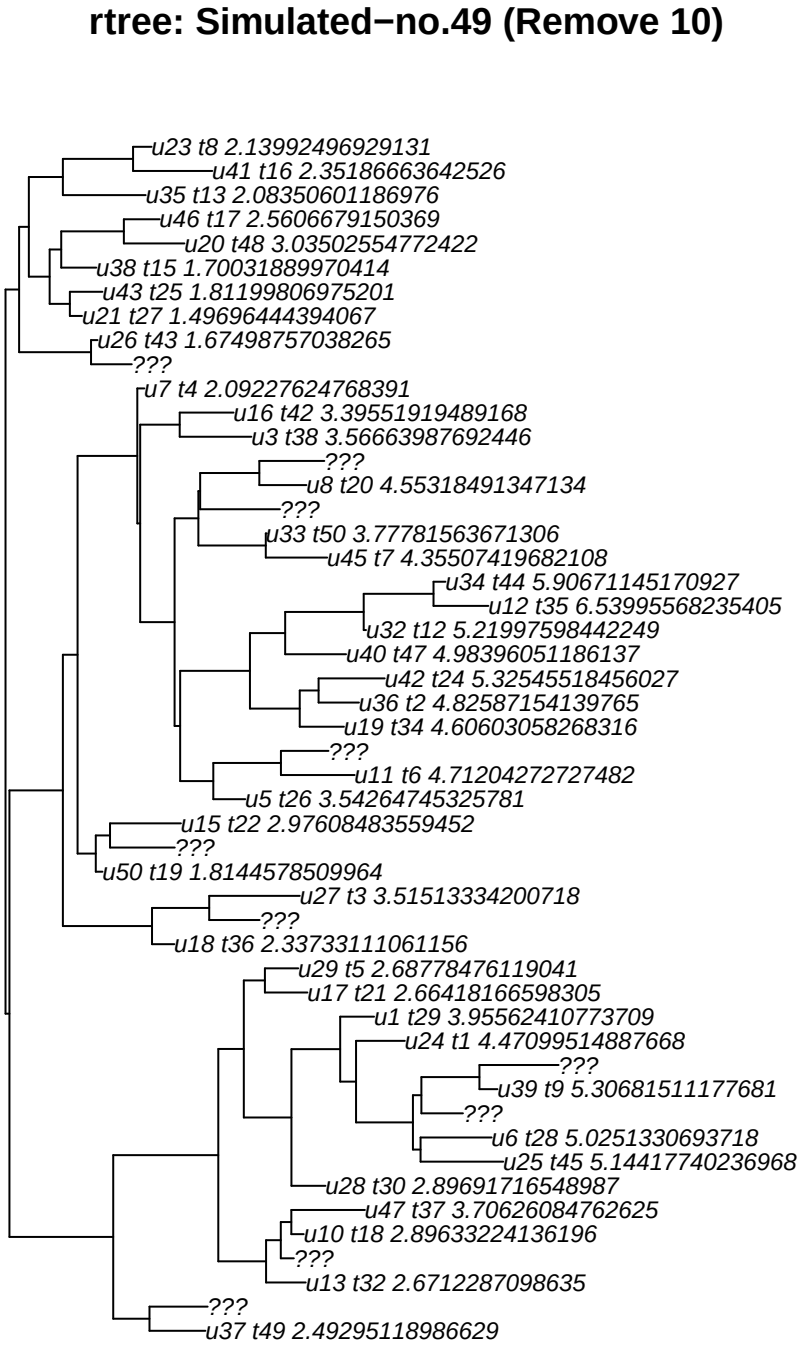

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.0479933)
0.4033
0.1546
0.1517
0.1237
0.2719
0.06404
0.1041
0.02

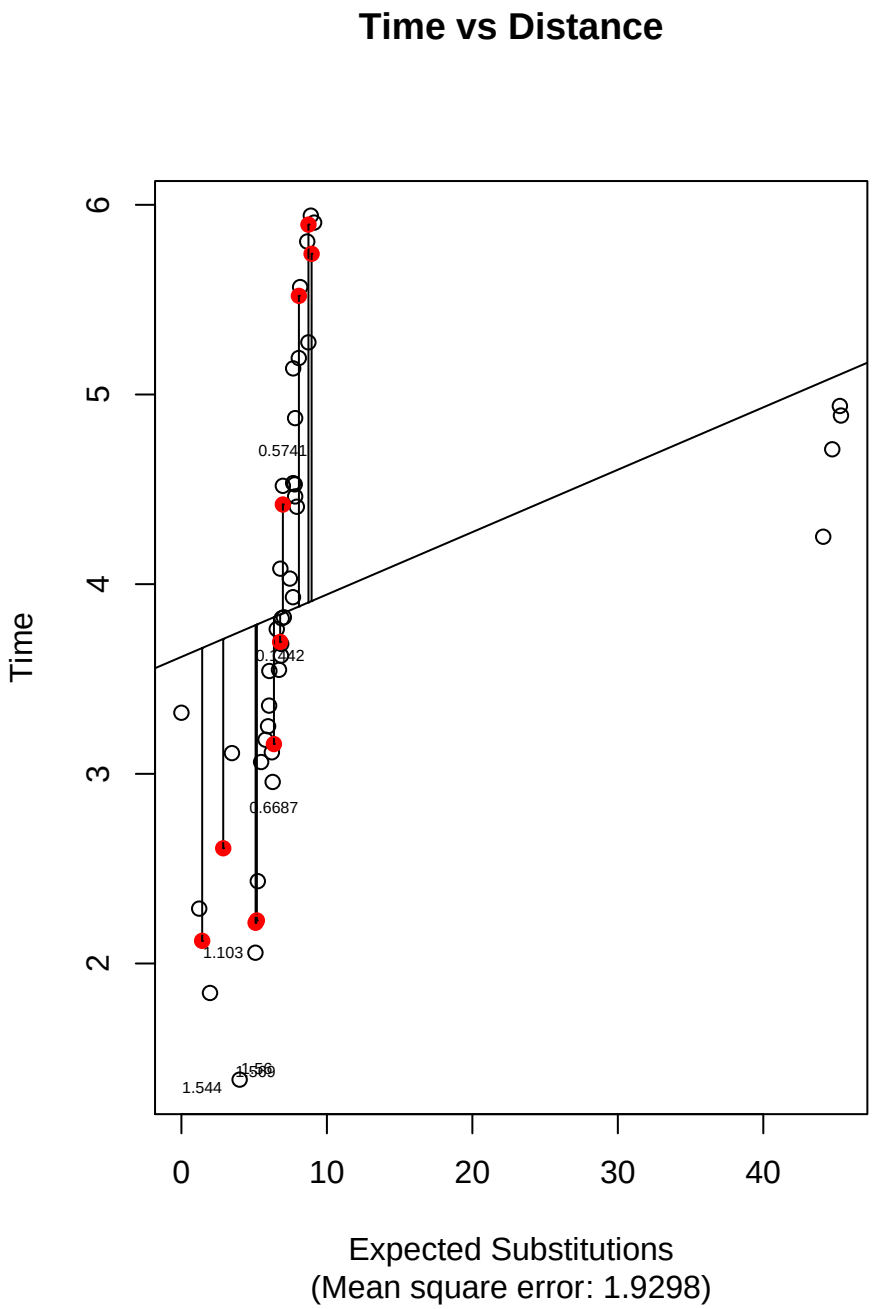

rtree: Simulated−no.47 (Remove 10)
???
u31 t31 3.72541049518622
u3 t43 3.00564643321559
u15 t29 2.60833003697917
u30 t6 2.22275503003038
u2 t46 3.19824146153405
???
u48 t16 2.76888271351345
u45 t47 2.46716544427909
???
???
u13 t13 2.75716001400724
???
u12 t18 2.01774206990376
u40 t1 1.47869470529258
u8 t2 3.05985579150729
u7 t26 2.40944437473081
u42 t41 2.49522735201754
u10 t19 2.93312752665952
u1 t7 1.64783951360732
u46 t20 1.21180983935483
u27 t39 2.35045569040813
u9 t4 3.59347786079161
u6 t40 3.01530193374492
u28 t12 2.18726749625057
u49 t15 3.02687346376479
u24 t33 3.33249082346447
u47 t8 1.80729285953566
u39 t37 3.50738646928221
u29 t11 3.97431263257749
u35 t45 4.10725991614163
???
???
???
u14 t22 2.83705333434045
u19 t9 2.17977919871919
u11 t23 2.04890783433802
u36 t30 2.00046243448742
u16 t42 2.48606255510822
u44 t21 2.75800210284069
???
u26 t50 3.02266651135869
u41 t28 4.13595335092396
u20 t24 3.76171620190144
u43 t17 3.22861367720179
u32 t34 3.15720796585083
u23 t25 4.24236085568555
???
u38 t48 4.31840178626589
u22 t14 3.96363582345657

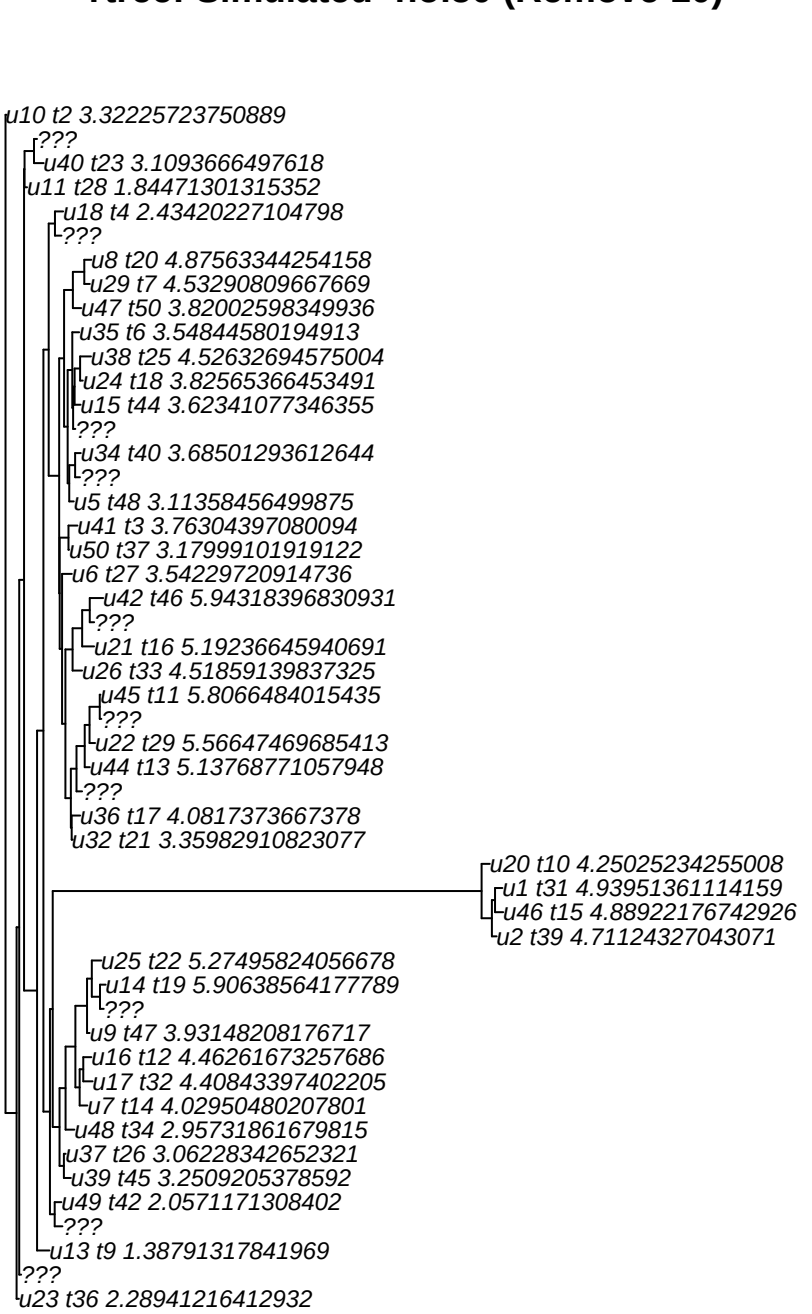

Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.022197)
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.08956
0.2069
0.09871
0.1102
0.07483
0.348

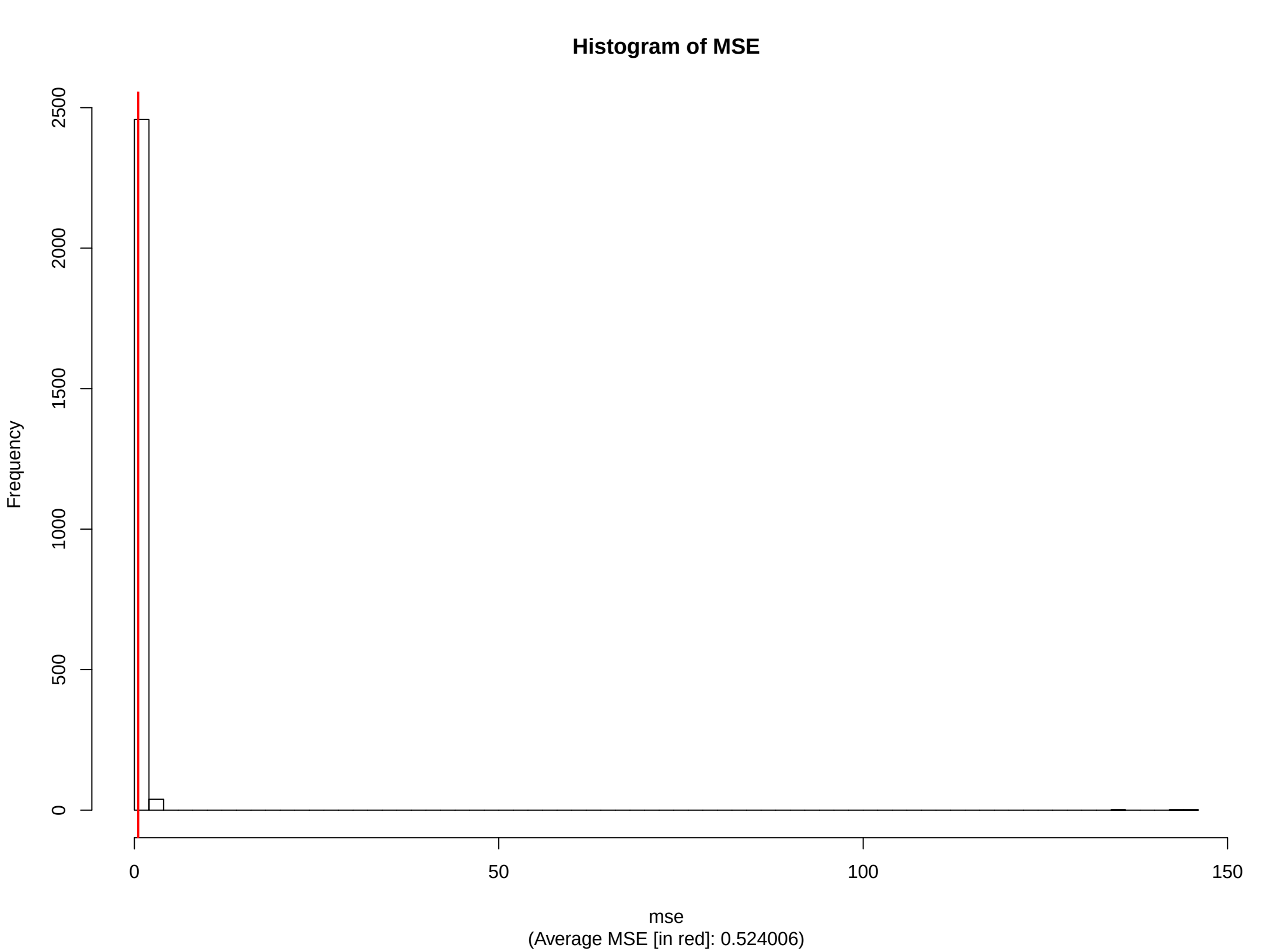

rtree: Simulated−no.48 (Remove 10)
u45 t19 2.11091279657558
u24 t21 2.54833585233428
u28 t20 1.54684218461625
u16 t4 3.60564834997058
???
u42 t31 3.26269647083245
u48 t11 2.67626000312157
???
???
u9 t44 3.99010932189412
u20 t17 3.90767379314639
???
u47 t3 1.40183203434572
???
???
u7 t36 3.37293183291331
u19 t26 2.34045359026641
u6 t41 3.50363416038454
u4 t6 3.69133432419039
u50 t9 3.4307668954134
u2 t18 3.79578139074147
???
u43 t33 1.9647663992364
u27 t43 2.10215268866159
u36 t24 2.20029677590355
???
u46 t14 1.39819659944624
u37 t37 3.26101955655031
u49 t8 3.69517514272593
u26 t16 2.51681765122339
u23 t39 2.45177666284144
u25 t40 4.14825540687889
u5 t7 3.70554042607546
u17 t15 2.94755866797641
u32 t32 3.76376180304214
???
u21 t1 2.31523022754118
u14 t13 2.87282464164309
u34 t45 3.23370908200741
???
u35 t42 2.46019986248575
u33 t27 2.556979351677
u40 t29 1.84016260900535
u8 t23 1.15541242831387
u41 t38 2.59442042536102
u13 t5 2.09448050148785
u10 t49 2.31320438045077
u29 t25 0.879074818687513
u39 t50 1.09860528679565
u31 t28 1.01794772781432


Time vs Distance
Time
Expected Substitutions
(Mean square error: 0.298516)
0.8483
0.4879
0.581
0.538
0.1716
0.3557
0.1829
0.89
0.6218


rtree: Simulated−no.49 (Remove 10)
u23 t8 2.13992496929131
u41 t16 2.35186663642526
u35 t13 2.08350601186976
u46 t17 2.5606679150369
u20 t48 3.03502554772422
u38 t15 1.70031889970414
u43 t25 1.81199806975201
u21 t27 1.49696444394067
u26 t43 1.67498757038265
???
u7 t4 2.09227624768391
u16 t42 3.39551919489168
u3 t38 3.56663987692446
???
u8 t20 4.55318491347134
???
u33 t50 3.77781563671306
u45 t7 4.35507419682108
u34 t44 5.90671145170927
u12 t35 6.53995568235405
u32 t12 5.21997598442249
u40 t47 4.98396051186137
u42 t24 5.32545518456027
u36 t2 4.82587154139765
u19 t34 4.60603058268316
???
u11 t6 4.71204272727482
u5 t26 3.54264745325781
u15 t22 2.97608483559452
???
u50 t19 1.8144578509964
u27 t3 3.51513334200718
???
u18 t36 2.33733111061156
u29 t5 2.68778476119041
u17 t21 2.66418166598305
u1 t29 3.95562410773709
u24 t1 4.47099514887668
???
u39 t9 5.30681511177681
???
u6 t28 5.0251330693718
u25 t45 5.14417740236968
u28 t30 2.89691716548987
u47 t37 3.70626084762625
u10 t18 2.89633224136196
???
u13 t32 2.6712287098635
???
u37 t49 2.49295118986629


Time vs Distance
Time
Expected Substitutions
(Mean square error: 1.9298)
0
10
20
30
40
2
3
4
5
6
0.5741
0.6687
1.103
1.544


rtree: Simulated−no.50 (Remove 10)
u10 t2 3.32225723750889
???
u40 t23 3.1093666497618
u11 t28 1.84471301315352
u18 t4 2.43420227104798
???
u8 t20 4.87563344254158
u29 t7 4.53290809667669
u47 t50 3.82002598349936
u35 t6 3.54844580194913
u38 t25 4.52632694575004
u24 t18 3.82565366453491
u15 t44 3.62341077346355
???
u34 t40 3.68501293612644
???
u5 t48 3.11358456499875
u41 t3 3.76304397080094
u50 t37 3.17999101919122
u6 t27 3.54229720914736
u42 t46 5.94318396830931
???
u21 t16 5.19236645940691
u26 t33 4.51859139837325
u45 t11 5.8066484015435
???
u22 t29 5.56647469685413
u44 t13 5.13768771057948
???
u36 t17 4.0817373667378
u32 t21 3.35982910823077
u20 t10 4.25025234255008
u1 t31 4.93951361114159
u46 t15 4.88922176742926
u2 t39 4.71124327043071
u25 t22 5.27495824056678
u14 t19 5.90638564177789
???
u9 t47 3.93148208176717
u16 t12 4.46261673257686
u17 t32 4.40843397402205
u7 t14 4.02950480207801
u48 t34 2.95731861679815
u37 t26 3.06228342652321
u39 t45 3.2509205378592
u49 t42 2.0571171308402
???
u13 t9 1.38791317841969
???
u23 t36 2.28941216412932


Histogram of MSE
Frequency
0
500
1000
1500
2000
2500
0
50
100
150
mse
(Average MSE [in red]: 0.524006)