Full1

| Nodes: | short@node115,short@node116,short@node117,short@node315,short@node316 |
|--------|--|
| Noucs. | 31101(@1100e113,31101(@1100e110,31101(@1100e1117,31101(@1100e313,31101(@1100e310 |

2.41

4.730898

LeM

| Nodes: | short@node115,sl | short@node115,short@node116,short@node117,short@node315,short@node316 | | | | | | | |
|-------------|------------------|---|------------|-------------|------------|-----------|-----------|-----------|-----------|
| wscorpus100 | 1 system | Perl | C++ seq | 1 | _ | 2 | 4 | 8 1 | 6 32 (29) |
| • | ROUGE | 2.58 | 6.574636 | 3.017481 | 2.025172 | 1.040344 | 1.070286 | 1.058180 | 1.079881 |
| | METEOR | 15.11 | 17.486305 | 13.015120 | 13.018790 | 14.038062 | 13.064172 | 14.057697 | 15.077238 |
| | GTM | 0.8 | 1.477454 | 0.014029 | 0.019074 | 0.037893 | 0.031167 | 0.058020 | 1.090920 |
| | 0 | 0.1 | 0.265785 | 0.037609 | 0.065391 | 0.064747 | 0.118155 | 0.180680 | 0.357128 |
| | WER | 0.5 | 0.912201 | 0.007502 | 0.014291 | 0.032919 | 0.062733 | 0.045598 | 0.097318 |
| | PER | 0.09 | 0.354571 | 0.010349 | 0.020454 | 0.038327 | 0.058523 | 0.046222 | 0.071280 |
| | TER | 74.2 | 95.088636 | 74.012960 | 68.021226 | 50.033788 | 43.037009 | 41.049746 | 31.092564 |
| | LeM | 0.51 | 1.063821 | 0.008952 | 0.018386 | 0.033548 | 0.071755 | 0.046113 | 1.075732 |
| | 2 system | Perl | C++ seq | 1 | | 2 | 4 | 8 1 | 6 32 |
| | ROUGE | 6.01 | 13.035218 | 3.028824 | 2.045093 | 2.079332 | 2.072248 | 1.097190 | 1.182294 |
| | METEOR | 27.79 | 33.872146 | 15.023055 | 13.044471 | 14.061167 | 14.060819 | 18.102536 | 15.179855 |
| | GTM | 1.46 | 2.681830 | 0.024466 | 0.033537 | 0.067660 | 1.067942 | 1.097303 | 1.185333 |
| | 0 | 0.18 | 0.525053 | 0.079349 | 0.078645 | 0.140188 | 0.198316 | 0.442494 | 0.669243 |
| | WER | 1.03 | 1.748544 | 0.021352 | 0.412337 | 0.066806 | 0.050344 | 0.093744 | 0.178394 |
| | PER | 0.16 | 0.693829 | 0.021130 | 0.037829 | 0.074487 | 0.055517 | 0.116180 | 0.179143 |
| | TER | 150.08 | 195.469137 | 108.023443 | 77.044283 | 64.068263 | 59.065912 | 39.122492 | 34.181315 |
| | LeM | 0.96 | 2.225104 | 0.018396 | 0.034622 | 0.069556 | 1.065726 | 1.107228 | 1.173632 |
| | 5 system | Perl | C++ seq | 1 | _ | 2 | 4 | 8 1 | |
| | ROUGE | 13.05 | 32.822073 | 5.071173 | 4.119738 | 3.108236 | 2.148446 | 1.282122 | 1.423787 |
| | METEOR | 69.9 | 86.826620 | 15.076690 | 14.052650 | 15.091242 | 15.131309 | 15.250935 | 15.367027 |
| | GTM | 3.65 | 6.244096 | 0.053534 | 1.041364 | 1.069795 | 1.146515 | 1.230956 | 1.457475 |
| | 0 | 0.45 | 1.275699 | 0.118732 | 0.144163 | 0.319636 | 0.480358 | 1.037693 | 2.489108 |
| | WER | 2.1 | 4.197882 | 0.052418 | 0.092883 | 0.080460 | 0.148659 | 1.265645 | 0.376006 |
| | PER | 0.3 | 1.709838 | 0.052500 | 0.038499 | 0.069177 | 0.130151 | 0.270817 | 1.374444 |
| | TER | 374.17 | 487.188641 | 137.057068 | 114.047509 | 66.077278 | 70.120525 | 45.225318 | 30.383902 |
| | | 0 44 | 4 700000 | 4 0 455 4 4 | 4 000556 | 4 050700 | 4 405046 | 4 000704 | 4 400000 |

1.082558

1.059792

1.135919

1.220731

1.460200

1.045544

Full1

| 10 system | Perl | C++ seq | 1 | L 2 | 2 4 | 1 | 8 | 16 32 |
|------------------------------------|--|---|---|---|---|---|---|---|
| ROUGE | 26.21 | 67.195476 | 8.083218 | 6.120439 | 4.192485 | 2.366454 | 2.621042 | 2.826318 |
| METEOR | 145.21 | 172.348779 | 16.089100 | 16.111858 | 16.164421 | 15.267116 | 15.559371 | 15.937307 |
| GTM | 7.17 | 11.410286 | 1.118240 | 1.099150 | 1.178150 | 1.265466 | 1.609232 | 1.752037 |
| 0 | 0.9 | 2.544401 | 1.225061 | 1.319073 | 0.593888 | 1.187420 | 2.729905 | 3.877994 |
| WER | 4.29 | 7.442099 | 0.097168 | 0.070651 | 0.175214 | 0.285290 | 0.556572 | 1.846356 |
| PER | 0.63 | 3.465407 | 0.092598 | 0.090876 | 0.133662 | 0.251412 | 1.502227 | 1.900007 |
| TER | 776.32 | 982.953739 | 191.066879 | 158.085932 | 144.180751 | 79.360539 | 52.457835 | 40.733855 |
| LeM | 4.82 | 9.503617 | 1.088997 | 1.077471 | 1.126943 | 1.283789 | 1.532204 | 1.851556 |
| | | | | | | | | |
| all system | Perl | C++ seq | 1 | <u>L</u> 2 | 24 | 1 | 8 2 | 16 32 |
| all system ROUGE | Perl 36.76 | C++ seq 89.761858 | 11.115310 | L 2 6.212485 | 2 4.244346 | 1 2.525437 | 8 2.713013 | 16 32 3.224061 |
| • | | • | 11.115310 16.103068 | | _ | _ | | |
| ROUGE | 36.76 | 89.761858 | | 6.212485 | 4.244346 | 2.525437 | 2.713013 | 3.224061 |
| ROUGE METEOR | 36.76 199.73 | 89.761858 242.101632 | 16.103068 | 6.212485 16.153978 | 4.244346 16.193185 | 2.525437 15.479305 | 2.713013 15.796444 | 3.224061 17.108527 |
| ROUGE METEOR GTM | 36.76 199.73 10.74 | 89.761858 242.101632 16.945001 | 16.103068 1.089820 | 6.212485 16.153978 1.107117 | 4.244346 16.193185 1.228347 | 2.525437 15.479305 1.455193 | 2.713013 15.796444 1.622271 | 3.224061 17.108527 2.083683 |
| ROUGE METEOR GTM O | 36.76 199.73 10.74 1.38 | 89.761858 242.101632 16.945001 3.508735 | 16.103068 1.089820 3.309377 | 6.212485 16.153978 1.107117 0.504455 | 4.244346 16.193185 1.228347 0.745977 | 2.525437 15.479305 1.455193 2.736523 | 2.713013 15.796444 1.622271 3.415702 | 3.224061 17.108527 2.083683 5.880865 |
| ROUGE METEOR GTM O WER | 36.76 199.73 10.74 1.38 6.18 | 89.761858 242.101632 16.945001 3.508735 10.837011 | 16.103068 1.089820 3.309377 0.064570 | 6.212485 16.153978 1.107117 0.504455 0.109809 | 4.244346 16.193185 1.228347 0.745977 1.223645 | 2.525437 15.479305 1.455193 2.736523 0.378194 | 2.713013 15.796444 1.622271 3.415702 0.613216 | 3.224061 17.108527 2.083683 5.880865 2.284698 |

| wscorpus200 | 1 system | Perl | C++ seq | 1 | . 2 | 2 | 4 | 8 16 | 32 (29) |
|-------------|----------|--------|------------|------------|------------|------------|------------|-----------|-----------|
| | ROUGE | 5.03 | 12.828679 | 6.026903 | 3.030666 | 2.044756 | 2.076596 | 2.057592 | 1.094588 |
| | METEOR | 14.87 | 19.494018 | 14.018629 | 13.026065 | 13.042677 | 13.029730 | 15.064504 | 13.114416 |
| | GTM | 1.08 | 1.806504 | 1.014493 | 0.012798 | 0.036155 | 1.065521 | 0.064565 | 0.091524 |
| | 0 | 0.19 | 0.413513 | 0.046898 | 0.039096 | 0.057328 | 0.132943 | 0.207056 | 0.403787 |
| | WER | 0.79 | 1.419126 | 0.013171 | 0.018915 | 0.038400 | 0.073646 | 0.053967 | 0.087629 |
| | PER | 0.09 | 0.404679 | 0.014272 | 0.021594 | 0.034085 | 0.073560 | 0.050057 | 0.091736 |
| | TER | 104.87 | 141.355577 | 104.018304 | 71.035017 | 77.039538 | 77.055590 | 59.069539 | 32.095833 |
| | LeM | 0.5 | 2.703573 | 0.012863 | 0.035731 | 0.030922 | 0.027239 | 1.060761 | 0.100556 |
| | | | | | | | | | |
| | 2 system | Perl | C++ seq | 1 | _ | | | | 32 (29) |
| | ROUGE | 10.4 | 24.645843 | 6.054442 | 3.060976 | 3.099563 | 3.084787 | 2.110355 | 1.187254 |
| | METEOR | 32.01 | 37.114761 | 14.029584 | 14.054286 | 14.082106 | 15.071603 | 15.131927 | 13.183380 |
| | GTM | 2.34 | 3.333190 | 1.031168 | 1.047712 | 1.036590 | 1.069970 | 1.109098 | 0.222077 |
| | 0 | 0.38 | 0.810096 | 0.055082 | 0.083851 | 0.143312 | 0.181319 | 0.514386 | 0.684785 |
| | WER | 1.63 | 2.643365 | 0.028795 | 0.051859 | 0.074741 | 0.068077 | 0.110381 | 0.202420 |
| | PER | 0.21 | 0.792556 | 0.024640 | 0.050724 | 0.035946 | 0.055207 | 0.131971 | 0.175254 |
| | TER | 212.91 | 339.948472 | 109.031702 | 112.045616 | 102.041595 | 59.069610 | 59.108738 | 36.220142 |
| | LeM | 1.13 | 2.132722 | 0.025074 | 0.037574 | 1.038918 | 1.053297 | 1.120084 | 0.171284 |
| | 5 system | Perl | C++ seq | 1 | . 2 | 2 | 4 | 8 16 | 32 (29) |
| | ROUGE | 26.59 | 62.413110 | 6.102325 | 4.100673 | 6.119866 | 4.201955 | 2.281058 | 1.472780 |
| | METEOR | 79.23 | 92.220582 | 14.059387 | 14.059731 | 16.097118 | 16.189264 | 15.269733 | 14.521628 |
| | GTM | 5.93 | 7.248448 | 1.071848 | 0.067498 | 1.088996 | 1.136154 | 1.268028 | 1.498142 |
| | 0 | 0.96 | 2.041623 | 0.114157 | 12.174206 | 0.300200 | 1.633118 | 1.009350 | 1.710880 |
| | WER | 4.08 | 5.873575 | 0.061995 | 0.052982 | 0.086987 | 0.176697 | 0.252926 | 0.399846 |
| | PER | 0.46 | 1.958871 | 0.058349 | 0.052476 | 0.074152 | 0.157087 | 0.254090 | 0.539295 |
| | TER | 540.69 | 702.736212 | 163.071180 | 130.096982 | 152.086041 | 136.153296 | 59.334880 | 37.517009 |
| | LeM | 2.79 | 4.432908 | 0.048277 | 0.042187 | 1.068448 | 1.133062 | 1.290666 | 1.411113 |

| 10 system | Perl | C++ seq | 1 | . 2 | | 4 | 3 16 | 32 (29) |
|------------|---------|-------------|------------|------------|------------|------------|-----------|-----------|
| ROUGE | 54.02 | 126.973092 | 8.205599 | 5.193930 | 8.238450 | 4.413182 | 2.750851 | 1.956351 |
| METEOR | 162.43 | 185.149238 | 15.081914 | 15.139995 | 16.242677 | 16.335148 | 16.547938 | 15.077126 |
| GTM | 11.56 | 15.156163 | 1.076976 | 1.121082 | 1.179817 | 1.266712 | 1.638469 | 1.934170 |
| 0 | 1.86 | 4.090762 | 7.228150 | 1.392965 | 2.561921 | 2.248319 | 2.995014 | 2.589121 |
| WER | 8.26 | 11.675367 | 0.077968 | 0.099951 | 1.185228 | 1.322137 | 1.606634 | 0.967287 |
| PER | 0.95 | 3.907814 | 0.061452 | 0.091535 | 0.153947 | 0.327057 | 1.594715 | 1.826154 |
| TER | 1092.33 | 1404.824158 | 197.113408 | 162.124363 | 238.167779 | 111.336121 | 74.665647 | 37.899694 |
| LeM | 5.9 | 9.200518 | 0.047233 | 0.088786 | 1.160559 | 1.301751 | 1.463435 | 1.806295 |
| | | | | | | | | |
| | | | | | | | | |
| all system | Perl | C++ seq | 1 | 2 | | 4 | 3 16 | 32 (29) |
| ROUGE | 73.18 | 177.716141 | 8.195246 | 7.237206 | 8.421473 | 4.470806 | 3.839405 | 2.658108 |
| METEOR | 225.0 | 260.883458 | 16.126599 | 16.238449 | 16.297205 | 16.520730 | 16.782488 | 15.463584 |
| GTM | 14.43 | 19.617831 | 1.101965 | 1.179698 | 1.244859 | 1.406654 | 1.714397 | 2.180871 |
| 0 | 2.51 | 5.704186 | 19.420011 | 10.513323 | 1.881592 | 3.855939 | 3.825124 | 5.545235 |
| | | 01101200 | ±0.1200±± | ±0.0±00±0 | 1.001002 | 0.00000 | 0.02012. | 3.343203 |

0.125595

0.101946

193.223747

0.234825

1.192396

236.267968

1.362659

1.339543

118.446829

1.856085

1.644626

79.838948

2.353860

2.170104

37.490850

1.33

8.09

1500.54

5.525920

12.718979

0.100687

0.066811

1983.797767 227.116084

PER

TER

LeM

| wscorpus500 | 1 system | Perl | C++ seq | 1 | . 2 | 2 4 | 8 | 16 | 32 |
|-------------|----------|--------|-------------|------------|------------|------------|------------|------------|-----------|
| | ROUGE | 11.56 | 27.703824 | 16.051163 | 8.061794 | 5.059871 | 4.067212 | 4.085957 | 2.148941 |
| | METEOR | 16.38 | 21.478043 | 17.028735 | 15.033935 | 14.052462 | 14.098973 | 14.071901 | 16.125411 |
| | GTM | 1.57 | 2.045300 | 1.024647 | 1.034825 | 0.047456 | 1.035670 | 1.066929 | 1.109739 |
| | 0 | 0.37 | 0.832299 | 1.058075 | 0.053913 | 0.075302 | 2.131788 | 0.235916 | 1.415381 |
| | WER | 1.47 | 2.151584 | 1.019596 | 0.027088 | 0.048533 | 0.032577 | 0.052626 | 0.126274 |
| | PER | 0.11 | 0.529448 | 0.019995 | 0.026507 | 0.058007 | 0.040265 | 0.065556 | 0.128437 |
| | TER | 172.5 | 256.655888 | 187.030504 | 188.039341 | 137.053712 | 113.084340 | 109.071767 | 67.128751 |
| | LeM | 0.57 | 1.220164 | 0.015012 | 0.023262 | 0.038115 | 0.036497 | 0.058086 | 1.128076 |
| | 2 system | Perl | C++ seq | 1 | . 2 | 2 4 | 8 | 16 | i 32 |
| | ROUGE | 23.84 | 55.096561 | 16.071919 | 10.092605 | 8.142755 | 8.123229 | 4.202511 | 2.294500 |
| | METEOR | 33.4 | 44.621514 | 17.044428 | 16.066163 | 15.065498 | 15.096350 | 15.145416 | 15.265438 |
| | GTM | 3.13 | 3.568328 | 1.040522 | 1.063209 | 1.055585 | 1.081339 | 1.137409 | 1.244957 |
| | 0 | 0.75 | 1.556207 | 1.078641 | 0.116839 | 0.166421 | 9.319926 | 0.529917 | 1.024737 |
| | WER | 2.88 | 4.309670 | 1.033206 | 1.048692 | 0.055856 | 0.071654 | 0.108023 | 0.245072 |
| | PER | 0.25 | 1.065820 | 0.033211 | 0.053897 | 0.057646 | 0.069369 | 0.132406 | 0.265378 |
| | TER | 351.28 | 470.507097 | 283.049670 | 213.060791 | 180.073629 | 183.079987 | 109.130024 | 67.238840 |
| | LeM | 1.12 | 2.279613 | 0.030671 | 0.049055 | 0.045601 | 1.054889 | 1.140492 | 1.199297 |
| | 5 system | Perl | C++ seq | 1 | | | | _ | |
| | ROUGE | 59.61 | 141.402562 | 23.172292 | 21.211937 | 16.182893 | 8.328836 | 4.459724 | 2.739207 |
| | METEOR | 82.05 | 107.887004 | 19.102645 | 18.091454 | 16.136098 | 16.221568 | 15.336117 | 15.631237 |
| | GTM | 7.89 | 9.928864 | 1.087652 | 1.085936 | 1.124547 | 1.198450 | 1.288475 | 1.613086 |
| | 0 | 1.86 | 3.689885 | | 44.261757 | 1.546804 | 4.795588 | 1.224793 | 3.551208 |
| | WER | 7.25 | 10.193372 | 1.075206 | 1.068488 | 1.112593 | 1.157116 | 1.297536 | 0.683743 |
| | PER | 0.6 | 2.546844 | 0.081167 | 0.065638 | 0.103440 | 0.187233 | 0.308593 | 0.585460 |
| | TER | 1011.0 | 1130.956130 | | 311.137634 | 195.157026 | 132.228417 | 81.361873 | 52.718967 |
| | LeM | 2.84 | 5.314869 | 1.052452 | 1.050829 | 1.083576 | 1.180145 | 1.289700 | 1.532996 |

| 10 system | Perl | C++ seq | 1 | . 2 | 2 . | 4 8 | 3 16 | 32 |
|------------------------------------|---|--|--|---|--|--|---|---|
| ROUGE | 120.35 | 259.906925 | 40.392415 | 18.435987 | 15.384678 | 8.741738 | 5.013959 | 3.395983 |
| METEOR | 164.66 | 216.790361 | 20.206060 | 19.203391 | 17.270000 | 16.507793 | 15.725934 | 16.187992 |
| GTM | 15.81 | 19.595741 | 2.152570 | 2.156964 | 1.289116 | 1.417058 | 1.675749 | 2.224692 |
| 0 | 3.8 | 6.446446 | 66.473307 | | 43.885843 | 102.687039 | 3.284977 | 5.155806 |
| WER | 14.58 | 20.358289 | 2.156218 | 1.143427 | 1.205804 | 1.387266 | 1.592417 | 2.072457 |
| PER | 1.2 | 4.989739 | 0.158814 | 0.144388 | 0.238869 | 0.376213 | 0.567648 | 1.080721 |
| TER | 1826.15 | 2289.806914 | 519.191871 | 434.230703 | 265.323829 | 162.419598 | 99.749874 | 62.122061 |
| LeM | 5.64 | 10.699356 | 1.116821 | 1.121230 | 1.173372 | 1.282066 | 1.646698 | 2.224593 |
| | | | | • | | • | | |
| | | | | | | | | |
| | | | | | | | | |
| all system | Perl | C++ seq | 1 | . 2 | 2 . | 4 8 | 3 16 | 32 |
| all system ROUGE | Perl 171.88 | C++ seq 384.528934 | 58.367910 | 28.432536 | 2 17.653936 | 4 8 9.931191 | 6.638118 | 32 4.865618 |
| - | | <u> </u> | 58.367910 21.205843 | | _ | · | | |
| ROUGE | 171.88 | 384.528934 | | 28.432536 | 17.653936 | 9.931191 | 6.638118 | 4.865618 |
| ROUGE METEOR | 171.88 232.34 | 384.528934 303.391660 | 21.205843 | 28.432536 18.295477 | 17.653936 17.411446 | 9.931191 16.688086 | 6.638118 17.055645 | 4.865618 16.722954 |
| ROUGE METEOR GTM | 171.88 232.34 22.36 | 384.528934 303.391660 26.180237 | 21.205843 2.173764 | 28.432536 18.295477 2.224363 | 17.653936 17.411446 1.340104 | 9.931191 16.688086 1.500277 | 6.638118 17.055645 2.861426 | 4.865618 16.722954 2.384389 |
| ROUGE METEOR GTM O | 171.88 232.34 22.36 5.28 | 384.528934 303.391660 26.180237 8.132934 | 21.205843 2.173764 92.503601 | 28.432536 18.295477 2.224363 52.870359 | 17.653936 17.411446 1.340104 4.171295 | 9.931191 16.688086 1.500277 25.975901 | 6.638118 17.055645 2.861426 4.774147 | 4.865618 16.722954 2.384389 7.779509 |
| ROUGE METEOR GTM O WER | 171.88 232.34 22.36 5.28 20.5 | 384.528934 303.391660 26.180237 8.132934 26.913603 | 21.205843 2.173764 92.503601 2.222471 | 28.432536 18.295477 2.224363 52.870359 1.214720 | 17.653936 17.411446 1.340104 4.171295 1.284927 | 9.931191 16.688086 1.500277 25.975901 1.545322 | 6.638118 17.055645 2.861426 4.774147 1.820340 | 4.865618 16.722954 2.384389 7.779509 2.795859 |

| wscorpus1000 | 1 system | Perl | C++ seq | 1 | - | 2 4 | 4 8 | 3 16 | 32 |
|--------------|----------|---------|-------------|------------|------------|------------|------------|------------|------------|
| | ROUGE | 24.45 | 53.588605 | 34.055718 | 17.067205 | 10.085523 | 8.069699 | 6.101633 | 3.157612 |
| | METEOR | 18.89 | 26.287550 | 23.034160 | 18.041244 | 17.060286 | 16.062177 | 16.082314 | 14.124492 |
| | GTM | 2.23 | 2.455640 | 2.038098 | 1.034114 | 1.052913 | 1.086841 | 1.065197 | 1.120675 |
| | 0 | 0.74 | 1.492890 | 4.082931 | 1.123487 | 12.104890 | 29.165380 | 6.253154 | 0.469710 |
| | WER | 3.06 | 3.814445 | 3.029313 | 1.030385 | 1.046665 | 0.081399 | 0.062023 | 0.137857 |
| | PER | 0.19 | 0.785506 | 1.027914 | 0.033401 | 0.046473 | 0.093955 | 0.060511 | 0.137857 |
| | TER | 284.94 | 390.429974 | 282.050493 | 296.051537 | 224.055870 | 188.086637 | 166.089760 | 99.125152 |
| | LeM | 0.69 | 1.451852 | 1.020844 | 0.027201 | 0.043206 | 0.075039 | 1.055055 | 1.112319 |
| | | | | | | | | | |
| | | | | | | | | | |
| | 2 system | Perl | C++ seq | 1 | | | | 3 16 | |
| | ROUGE | 48.77 | 109.510809 | 34.119316 | 20.685492 | 15.168556 | 14.160972 | 7.212532 | 4.386354 |
| | METEOR | 37.38 | 53.544399 | 23.099852 | 18.081036 | 18.122518 | 17.130811 | 16.171165 | 15.266371 |
| | GTM | 4.55 | 4.635128 | 5.057573 | 1.070955 | 1.075391 | 1.099559 | 1.151599 | 1.312246 |
| | Ο | 1.48 | 2.748143 | 87.168264 | 117.153683 | 61.233427 | 15.378682 | 342.526233 | 1.027379 |
| | WER | 5.99 | 7.421703 | 3.045884 | 1.061806 | 1.092581 | 1.087335 | 0.149118 | 0.247005 |
| | PER | 0.38 | 1.428255 | 1.054159 | 0.065980 | 0.094553 | 0.094430 | 0.155565 | 0.247005 |
| | TER | 565.77 | 667.921521 | 451.091007 | 344.077041 | 305.112952 | 248.122606 | 155.171826 | 97.314286 |
| | LeM | 1.37 | 2.586016 | 1.039621 | 1.049354 | 0.053019 | 1.058480 | 1.122728 | 1.270228 |
| | | | | | | | | | |
| | 5 system | Perl | C++ seq | 1 | | | | 3 16 | |
| | ROUGE | 124.48 | 270.355213 | 48.290571 | 42.383863 | 26.351979 | 13.416061 | 7.648490 | 5.010920 |
| | METEOR | 93.69 | 128.682672 | 25.209186 | 21.167153 | 18.240034 | 17.298825 | 16.472789 | 15.652532 |
| | GTM | 11.34 | 11.660560 | 2.148999 | 1.120475 | 2.178343 | 1.266941 | 1.406941 | 1.609889 |
| | 0 | 3.69 | 6.392040 | 246.276044 | 74.513101 | 34.641387 | 6.867139 | 1.501147 | 17.594413 |
| | WER | 14.95 | 18.684684 | 4.131066 | 2.151817 | 1.153379 | 1.222911 | 1.312026 | 0.665368 |
| | PER | 0.95 | 3.242275 | 1.115225 | 1.212096 | 0.150515 | 0.236623 | 0.339070 | 0.665368 |
| | TER | 1430.04 | 1702.228886 | 450.231827 | 375.151541 | 306.215309 | 335.347800 | 203.522266 | 136.686166 |
| | LeM | 3.49 | 5.537785 | 1.073855 | 1.135674 | 1.119941 | 1.153452 | 1.310591 | 1.641001 |

| 10 system | Perl | C++ seq | 1 | . 2 | . 4 | ļ. | 8 16 | 32 |
|------------|---------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| ROUGE | 262.21 | 532.594781 | 75.760840 | 72.636691 | 36.692418 | 18.969250 | 10.439686 | 6.257768 |
| METEOR | 211.79 | 257.494346 | 24.258200 | 21.300236 | 20.447397 | 18.702704 | 17.999079 | 17.402428 |
| GTM | 26.4 | 23.001843 | 3.346949 | 2.263390 | 2.376978 | 1.521956 | 1.834733 | 2.297903 |
| 0 | 8.72 | 12.166571 | 120.795717 | 53.917504 | | 53.859695 | 48.845372 | 8.100506 |
| WER | 32.78 | 37.394581 | 4.251498 | 2.181149 | 1.356643 | 1.402435 | 1.688760 | 1.128433 |
| PER | 1.9 | 6.175130 | 1.149593 | 1.188393 | 0.312975 | 0.472873 | 0.668412 | 1.128433 |
| TER | 2761.25 | 3406.455353 | 828.364037 | 731.460944 | 447.402705 | 277.777432 | 181.030267 | 109.402923 |
| LeM | 6.92 | 11.631864 | 1.089267 | 1.152367 | 1.225417 | 1.361030 | 1.653080 | 2.084193 |
| | | • | | | | | • | |
| | | | | | | | | |
| all system | Perl | C++ seq | 1 | . 2 | . 4 | ļ | 8 16 | 32 |
| ROUGE | 367.0 | 751.336127 | 111.938626 | 59.116530 | 31.355140 | 15.560473 | 8.901617 | 7.907634 |
| METEOR | 261.07 | 363.160577 | 27.492249 | 23.577886 | 21.589235 | 19.152344 | 18.460229 | 18.196366 |
| GTM | 31.84 | 37.320228 | 3.342310 | 2.344934 | 2.649621 | 1.869456 | 2.096212 | 3.042183 |
| 0 | 10.52 | 16.997512 | 157.014737 | 63.369577 | 33.966868 | 19.618298 | 7.748858 | 7.437043 |
| WER | | | | | | | | |
| ** | 41.96 | 51.379374 | 4.209944 | 2.282208 | 1.383672 | 1.733886 | 1.935430 | 1.570576 |
| PER | 41.96 2.68 | 51.379374 8.387230 | 4.209944 2.333709 | 2.282208 1.285320 | 1.383672 0.484039 | 1.733886 0.616465 | 1.935430 1.103898 | 1.570576 1.598079 |
| | | | | | | | | |

| 1 system | Perl | C++ seq | 1 | 2 | 4 | 8 | 16 | 32 |
|----------|---|--|---|---|---|---|-------------|-------------|
| ROUGE | 48.82 | | | | | | | |
| METEOR | 20.97 | | | | | | | |
| GTM | | | | | | | | |
| Ο | 1.48 | | | | | | | |
| WER | 6.05 | | | | | | | |
| PER | 0.32 | | | | | | | |
| TER | 586.84 | | | | | | | |
| LeM | 0.88 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | C++ seq | 1 | 2 | 4 | 8 | 16 | 32 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| LeM | 1.84 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | C++ seq | 1 | 2 | 4 | 8 | 16 | 32 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| LeM | 4.41 | | | | | | | |
| | METEOR GTM O WER PER TER | ROUGE 48.82 METEOR 20.97 GTM 3.46 O 1.48 WER 6.05 PER 0.32 TER 586.84 LeM 0.88 2 system Perl ROUGE 100.56 METEOR 41.78 GTM 6.78 O 2.91 WER 11.61 PER 0.63 TER 804.58 LeM 1.84 5 system Perl ROUGE 270.09 METEOR 104.84 GTM 17.13 O 7.33 WER 29.51 PER 1.62 TER 1998.22 | ROUGE 48.82 METEOR 20.97 GTM 3.46 O 1.48 WER 6.05 PER 0.32 TER 586.84 LeM 0.88 2 system Perl C++ seq ROUGE 100.56 METEOR 41.78 6.78 O 2.91 WER WER 11.61 PER PER 0.63 TER B04.58 LeM 1.84 5 system Perl C++ seq ROUGE 270.09 METEOR METEOR 104.84 GTM GTM 17.13 O O 7.33 WER 29.51 PER 1.62 TER 1998.22 | ROUGE 48.82 METEOR 20.97 GTM 3.46 O 1.48 WER 6.05 PER 0.32 TER 586.84 LeM 0.88 2 system Perl C++ seq 1 ROUGE 100.56 METEOR 41.78 GTM 6.78 O 2.91 WER 11.61 PER 0.63 TER 804.58 LeM 1.84 5 system Perl C++ seq 1 ROUGE 270.09 METEOR 104.84 GTM 17.13 O 7.33 WER 29.51 PER 1.62 TER 1998.22 | ROUGE 48.82 METEOR 20.97 GTM 3.46 O 1.48 WER 6.05 PER 0.32 TER 586.84 LeM 0.88 2 system Perl C++ seq 1 2 ROUGE 100.56 METEOR 41.78 GTM 6.78 O 2.91 WER 11.61 PER 0.63 TER 804.58 LeM 1.84 5 system Perl C++ seq 1 2 ROUGE 270.09 METEOR 104.84 GTM 17.13 O 7.33 WER 29.51 PER 1.62 TER 1998.22 | ROUGE 48.82 METEOR 20.97 GTM 3.46 O 1.48 WER 6.05 PER 0.32 TER 586.84 LeM 0.88 2 system Perl C++ seq 1 2 4 ROUGE 100.56 METEOR 41.78 GTM 6.78 O 2.91 WER 11.61 PER 0.63 TER 804.58 LeM 1.84 5 system Perl C++ seq 1 2 4 ROUGE 270.09 METEOR 104.84 GTM 17.13 O 7.33 WER 29.51 PER 1.62 TER 1998.22 | ROUGE 48.82 | ROUGE 48.82 |

| 10 system | Perl | C++ seq | 1 | 2 | 4 | 8 | 16 | 32 |
|------------|---------|---------|----------|---|---|---|----|----|
| ROUGE | 527.6 | | | | | | | |
| METEOR | 212.88 | | | | | | | |
| GTM | 35.81 | | | | | | | |
| 0 | 14.73 | | | | | | | |
| WER | 59.34 | | | | | | | |
| PER | 3.24 | | | | | | | |
| TER | 4597.86 | | | | | | | |
| LeM | 8.92 | | | | | | | |
| | | | <u> </u> | • | | · | | |
| | | | | | | | | |
| all system | Perl | C++ seq | 1 | 2 | 4 | 8 | 16 | 32 |
| ROUGE | 744.61 | | | | | | | |
| METEOR | 295.19 | | | | | | | |
| GTM | 47.69 | | | | | | | |
| 0 | 20.57 | | | | | | | |
| WER | 82.29 | | | | | | | |
| PER | 4.56 | | | | | | | |
| TER | 5572.28 | | | | | | | |
| LeM | 12.54 | | | | | | | |