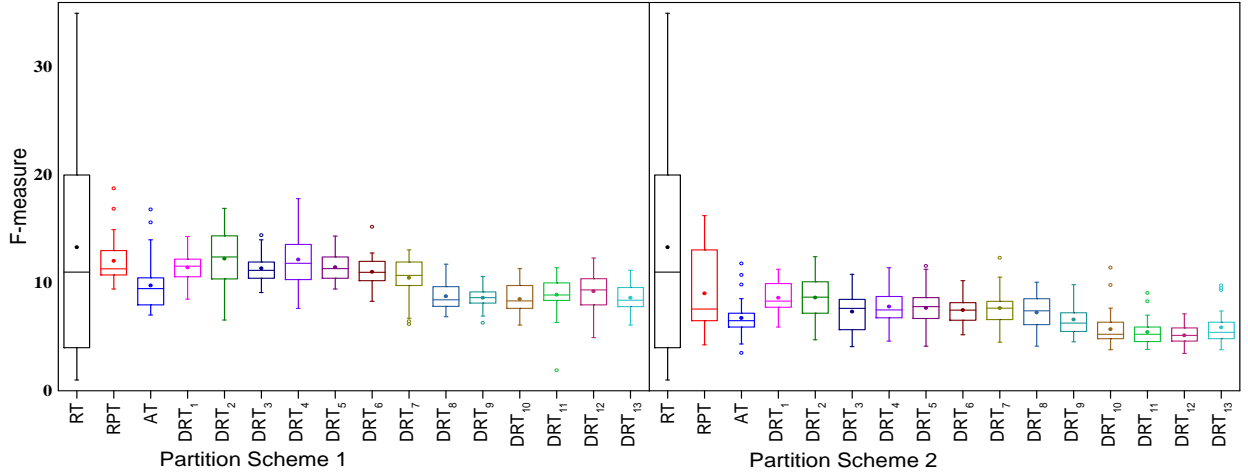
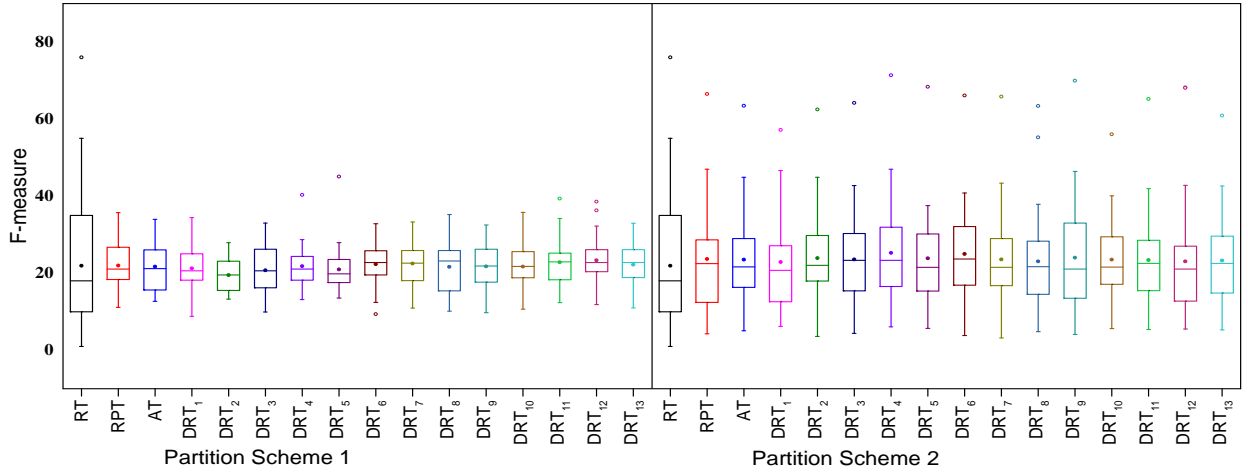


## Appendix B: Experimental Results

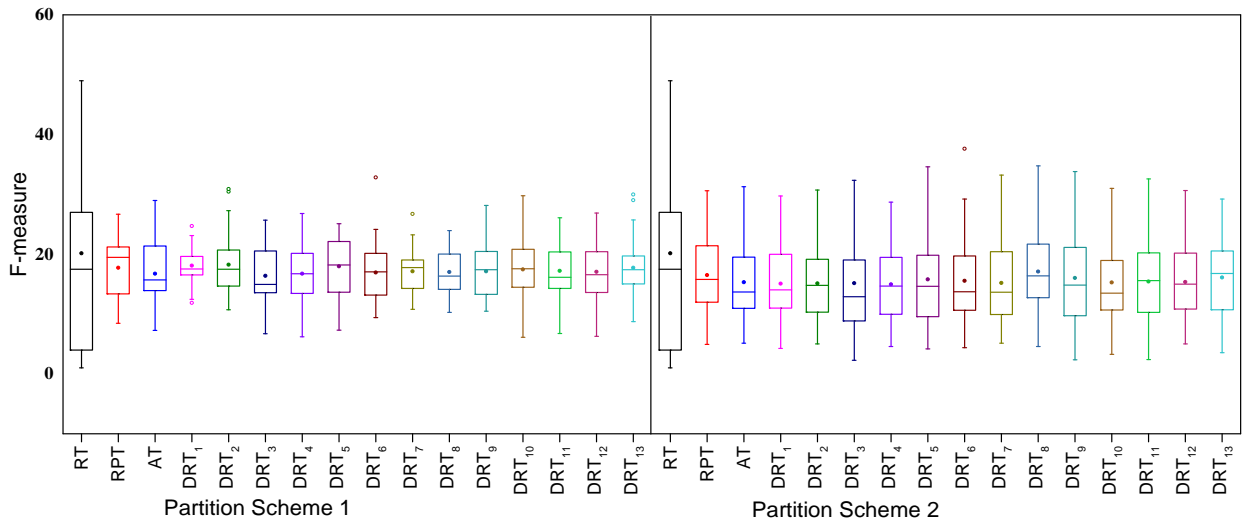
F-, F2-, and T-measure results for each program are displayed using boxplots in Figures 1 to 3, where  $DRT_i$  ( $i = 1, 2, \dots, 13$ ) denotes the DRT with different values of  $\varepsilon$ , as described in Section 4.4.3.



(a) ACMS

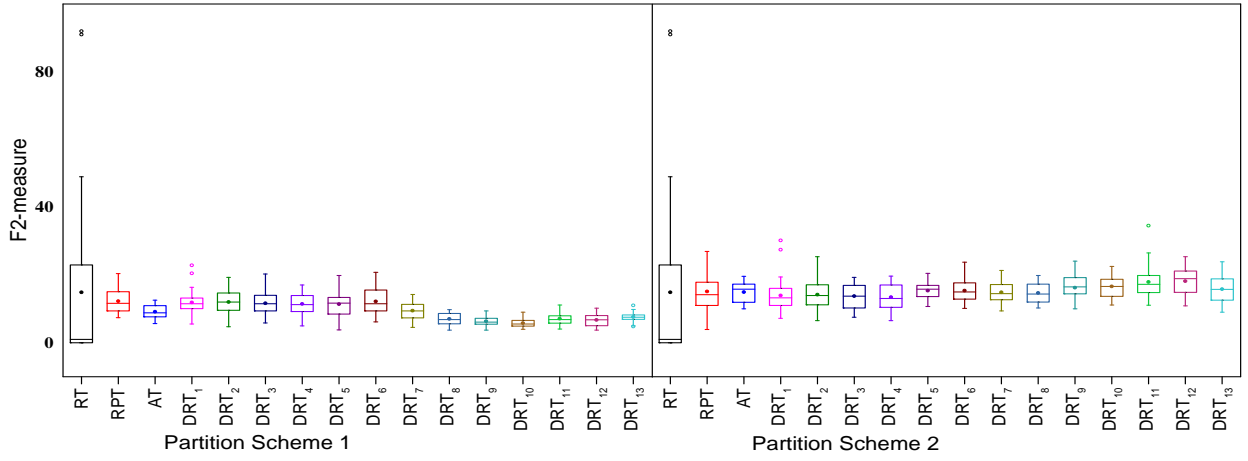


(b) CUBS

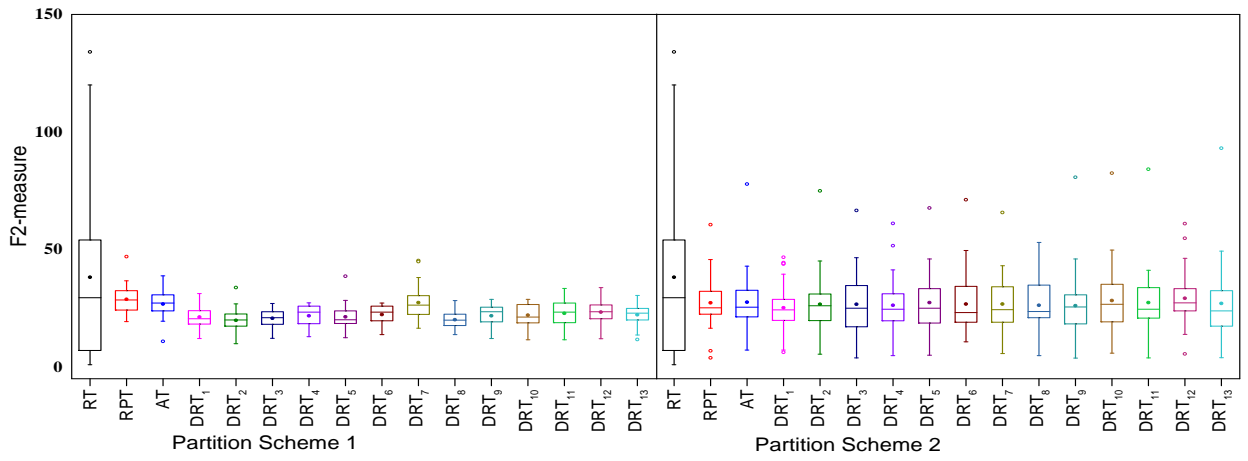


(c) PBS

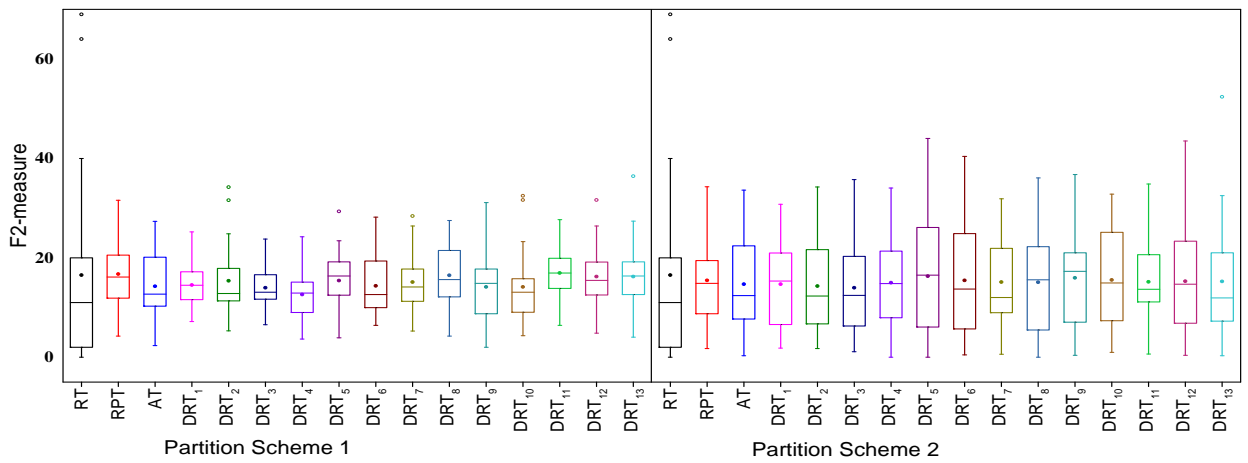
Fig. 1. F-measure boxplots for each web service



(a) ACMS

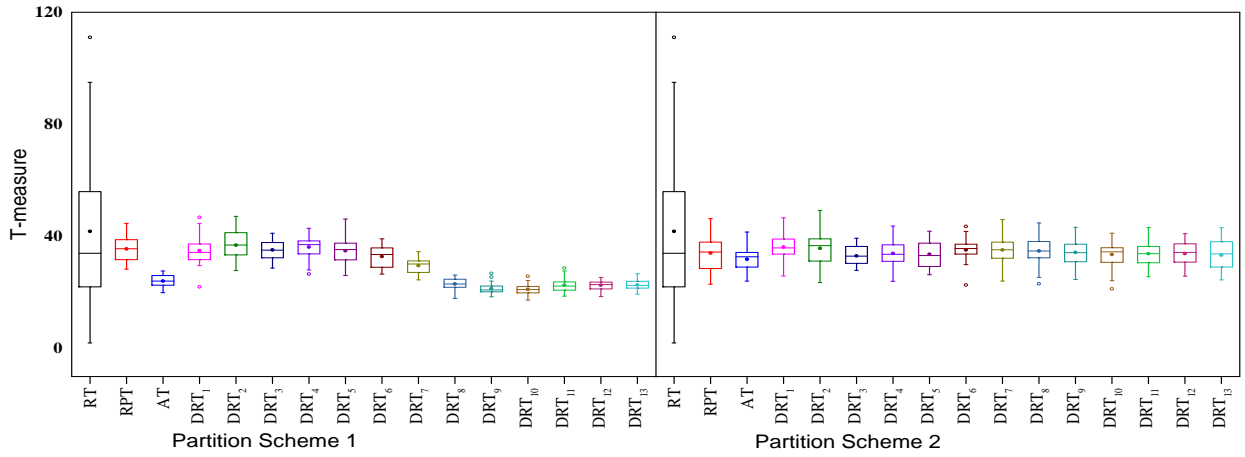


(b) CUBS

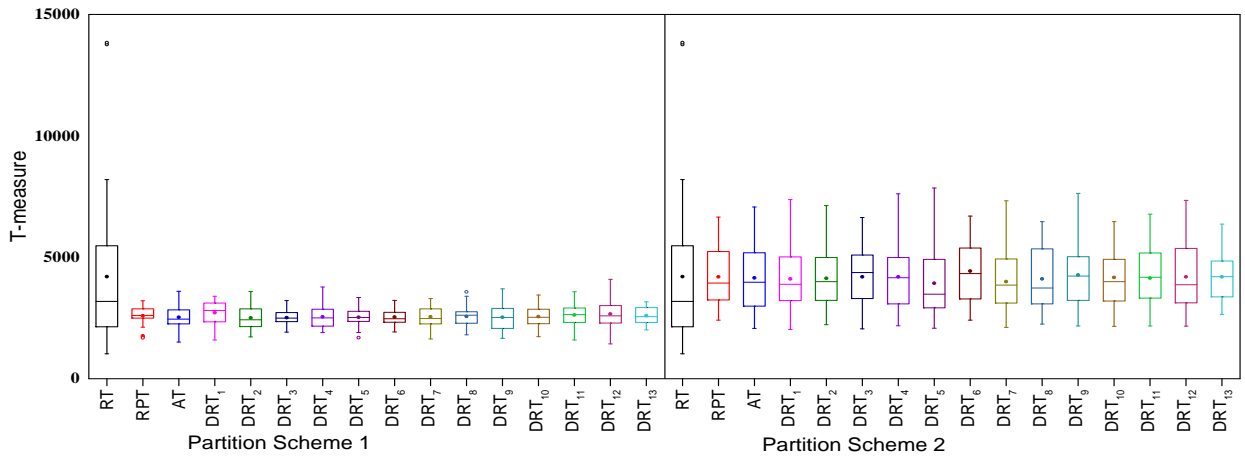


(c) PBS

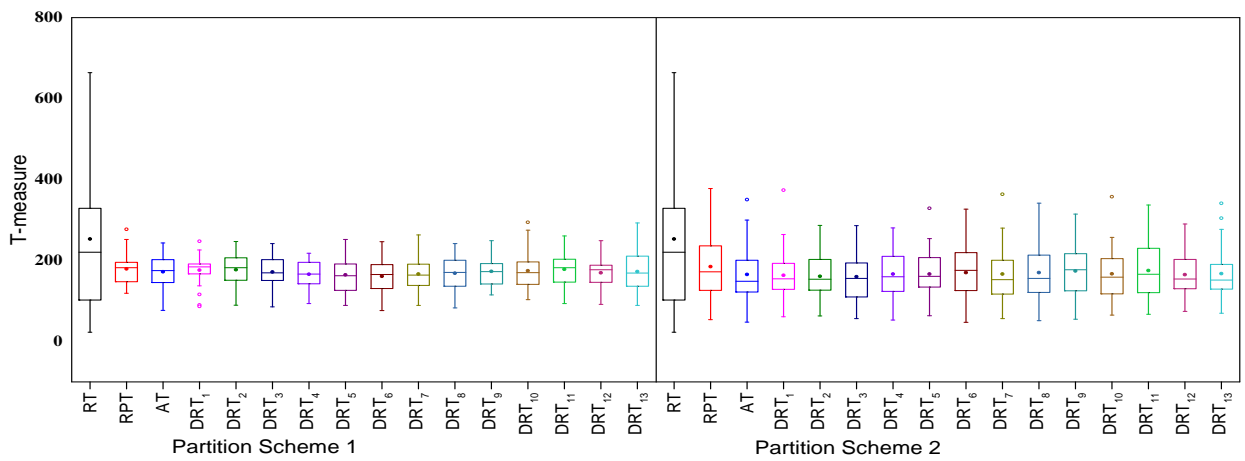
Fig. 2. F2-measure boxplots for each web service



(a) ACMS



(b) CUBS



(c) PBS

Fig. 3. T-measure boxplots for each web service

Tables 1 to 3 summarize the F-, F2-, and T-time results for three subject web services.

TABLE 1  
F-time, F2-time and T-time for Web Service ACMS (in ms)

| Strategy |        | Partition scheme 1 |         |        | Partition scheme 2 |         |        |
|----------|--------|--------------------|---------|--------|--------------------|---------|--------|
|          |        | F-time             | F2-time | T-time | F-time             | F2-time | T-time |
| RT       |        | 0.43               | 0.29    | 0.85   | 0.43               | 0.29    | 0.85   |
| RPT      |        | 0.57               | 0.31    | 1.08   | 0.33               | 0.45    | 0.78   |
| AT       |        | 0.49               | 0.34    | 2.47   | 15.53              | 363.47  | 459.67 |
| DRT      | 1.0E-5 | 0.47               | 0.28    | 0.96   | 0.38               | 0.41    | 0.95   |
|          | 5.0E-5 | 0.35               | 0.21    | 0.78   | 0.30               | 0.27    | 0.71   |
|          | 1.0E-4 | 0.33               | 0.19    | 0.66   | 0.24               | 0.28    | 0.65   |
|          | 5.0E-4 | 0.30               | 0.17    | 0.60   | 0.27               | 0.25    | 0.67   |
|          | 1.0E-3 | 0.29               | 0.19    | 0.61   | 0.22               | 0.24    | 0.60   |
|          | 5.0E-3 | 0.28               | 0.23    | 0.62   | 0.21               | 0.31    | 0.64   |
|          | 1.0E-2 | 0.24               | 0.17    | 0.53   | 0.23               | 0.29    | 0.66   |
|          | 5.0E-2 | 0.28               | 0.13    | 0.49   | 0.23               | 0.35    | 0.71   |
|          | 1.0E-1 | 0.26               | 0.08    | 0.43   | 0.23               | 0.29    | 0.63   |
|          | 2.0E-1 | 0.23               | 0.12    | 0.43   | 0.30               | 0.46    | 0.89   |
|          | 3.0E-1 | 0.24               | 0.11    | 0.45   | 0.18               | 0.40    | 0.69   |
|          | 4.0E-1 | 0.27               | 0.10    | 0.47   | 0.16               | 0.31    | 0.58   |
|          | 5.0E-1 | 0.28               | 0.11    | 0.47   | 0.28               | 0.45    | 0.86   |

TABLE 2  
F-time, F2-time and T-time for Web Service CUBS (in ms)

| Strategy |        | Partition scheme 1 |         |          | Partition scheme 2 |         |         |
|----------|--------|--------------------|---------|----------|--------------------|---------|---------|
|          |        | F-time             | F2-time | T-time   | F-time             | F2-time | T-time  |
| RT       |        | 0.82               | 1.14    | 34.69    | 0.82               | 1.14    | 34.69   |
| RPT      |        | 0.91               | 0.87    | 30.54    | 0.75               | 0.79    | 34.59   |
| AT       |        | 140.13             | 172.27  | 32429.07 | 16.82              | 15.76   | 2666.17 |
| DRT      | 1.0E-5 | 0.91               | 0.87    | 30.14    | 0.87               | 0.83    | 36.49   |
|          | 5.0E-5 | 0.95               | 0.86    | 30.21    | 0.82               | 0.75    | 34.70   |
|          | 1.0E-4 | 0.77               | 0.89    | 29.27    | 0.86               | 0.69    | 35.34   |
|          | 5.0E-4 | 0.79               | 1.00    | 31.05    | 0.87               | 0.90    | 36.85   |
|          | 1.0E-3 | 0.86               | 0.88    | 29.93    | 0.92               | 0.77    | 36.44   |
|          | 5.0E-3 | 0.86               | 0.83    | 30.28    | 0.83               | 0.83    | 36.27   |
|          | 1.0E-2 | 0.95               | 0.88    | 29.33    | 0.84               | 0.72    | 35.23   |
|          | 5.0E-2 | 0.84               | 0.82    | 30.56    | 0.88               | 0.72    | 37.07   |
|          | 1.0E-1 | 0.88               | 0.93    | 29.45    | 0.82               | 0.76    | 37.14   |
|          | 2.0E-1 | 0.83               | 0.83    | 30.16    | 0.86               | 0.73    | 36.79   |
|          | 3.0E-1 | 0.95               | 0.86    | 27.81    | 0.84               | 0.84    | 36.89   |
|          | 4.0E-1 | 0.84               | 0.84    | 28.23    | 0.86               | 0.82    | 35.22   |
|          | 5.0E-1 | 0.87               | 0.84    | 27.91    | 0.90               | 0.86    | 38.21   |

TABLE 3  
F-time, F2-time and T-time for Web Service PBS (in ms)

| Strategy |        | Partition scheme 1 |         |        | Partition scheme 2 |         |        |
|----------|--------|--------------------|---------|--------|--------------------|---------|--------|
|          |        | F-time             | F2-time | T-time | F-time             | F2-time | T-time |
| RT       |        | 0.81               | 0.42    | 4.12   | 0.81               | 0.42    | 4.12   |
| RPT      |        | 0.85               | 0.52    | 3.83   | 0.66               | 0.35    | 2.98   |
| AT       |        | 22.25              | 25.40   | 289.04 | 12.99              | 17.44   | 200.54 |
| DRT      | 1.0E-5 | 0.76               | 0.48    | 3.85   | 1.05               | 0.51    | 3.44   |
|          | 5.0E-5 | 0.73               | 0.35    | 3.02   | 0.91               | 0.52    | 3.79   |
|          | 1.0E-4 | 0.54               | 0.36    | 2.97   | 0.49               | 0.34    | 2.26   |
|          | 5.0E-4 | 0.68               | 0.34    | 3.20   | 0.50               | 0.30    | 2.31   |
|          | 1.0E-3 | 0.62               | 0.38    | 2.87   | 0.52               | 0.38    | 2.42   |
|          | 5.0E-3 | 0.60               | 0.38    | 2.99   | 0.43               | 0.51    | 2.40   |
|          | 1.0E-2 | 0.58               | 0.42    | 2.84   | 0.51               | 0.34    | 2.41   |
|          | 5.0E-2 | 0.64               | 0.44    | 3.27   | 0.59               | 0.36    | 2.49   |
|          | 1.0E-1 | 0.65               | 0.38    | 3.46   | 0.60               | 0.38    | 2.56   |
|          | 2.0E-1 | 0.60               | 0.36    | 3.22   | 0.54               | 0.59    | 2.47   |
|          | 3.0E-1 | 0.59               | 0.44    | 3.24   | 0.57               | 0.46    | 2.57   |
|          | 4.0E-1 | 0.61               | 0.33    | 2.90   | 0.51               | 0.33    | 2.54   |
|          | 5.0E-1 | 0.62               | 0.44    | 3.16   | 0.56               | 0.36    | 2.56   |