Table 1 the coverage of 3, 4, 5 and 6-strength interactions of the 2-wise sub-covering arrays
for largest strength 5

Subject	3-wise			4-wise			5-wise			6-wise		
	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve
Flex	84.57%	87.96%	3.39%	61.25%	65.88%	4.63%	39.61%	42.99%	3.38%	24.20%	25.98%	1.77%
Grep(SIR)	80.22%	81.43%	1.21%	58.35%	60.21%	1.86%	40.80%	42.53%	1.73%	28.39%	29.62%	1.23%
Gzip	92.34%	92.53%	0.18%	80.97%	81.33%	0.36%	68.90%	69.32%	0.43%	57.59%	57.96%	0.37%
make	82.10%	82.52%	0.42%	51.45%	52.03%	0.58%	28.47%	28.85%	0.38%	15.07%	15.24%	0.16%
Sed	86.92%	89.09%	2.17%	72.19%	75.65%	3.45%	58.99%	62.63%	3.64%	47.98%	51.14%	3.15%
Nanoxml	76.30%	78.57%	2.27%	51.47%	54.60%	3.13%	33.64%	36.40%	2.76%	21.88%	23.96%	2.08%
Siena	71.60%	71.15%	-0.45%	45.68%	44.93%	-0.75%	28.16%	27.27%	-0.90%	17.35%	16.51%	-0.84%
Findutils	64.21%	68.17%	3.97%	30.69%	33.19%	2.50%	12.35%	13.36%	1.00%	4.65%	5.00%	0.35%
Grep(CoRE)	73.10%	78.27%	5.17%	41.48%	46.63%	5.15%	20.63%	23.72%	3.09%	9.70%	11.25%	1.55%

Table 2 the coverage of 3, 4, 5 and 6-strength interactions of the 2-wise sub-covering arrays for largest strength 6

Subject	3-wise			4-wise			5-wise			6-wise		
	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve
Flex	84.57%	86.17%	1.60%	61.25%	62.87%	1.62%	39.61%	40.48%	0.87%	24.20%	24.53%	0.32%
Grep(SIR)	80.22%	82.25%	2.03%	58.35%	60.95%	2.60%	40.80%	42.94%	2.14%	28.39%	29.79%	1.40%
Gzip	92.34%	92.53%	0.18%	80.97%	81.33%	0.36%	68.90%	69.32%	0.43%	57.59%	57.96%	0.37%
make	82.10%	83.79%	1.69%	51.45%	52.86%	1.42%	28.47%	29.11%	0.64%	15.07%	15.29%	0.22%
Sed	86.92%	88.95%	2.03%	72.19%	75.41%	3.22%	58.99%	62.38%	3.38%	47.98%	50.91%	2.93%
Nanoxml	76.30%	81.17%	4.87%	51.47%	59.38%	7.90%	33.64%	40.63%	6.99%	21.88%	26.74%	4.86%
Siena	71.60%	70.70%	-0.90%	45.68%	45.13%	-0.54%	28.16%	27.89%	-0.28%	17.35%	17.14%	-0.21%
Findutils	64.21%	68.23%	4.03%	30.69%	33.31%	2.62%	12.35%	13.39%	1.04%	4.65%	5.01%	0.35%
Grep(CoRE)	73.10%	79.05%	5.94%	41.48%	46.97%	5.49%	20.63%	23.77%	3.14%	9.70%	11.25%	1.55%

Table 3 the coverage of 3, 4, 5 and 6-strength interactions of the 2-wise sub-covering arrays
for largest strength 7

Subject	3-wise			4-wise			5-wise			6-wise		
	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve	Bottom-up	Top-down	Improve
Flex	84.57%	87.30%	2.73%	61.25%	65.41%	4.16%	39.61%	42.94%	3.33%	24.20%	25.98%	1.77%
Grep(SIR)	80.22%	81.91%	1.68%	58.35%	60.85%	2.50%	40.80%	43.23%	2.43%	28.39%	30.29%	1.89%
Gzip	92.34%	92.53%	0.18%	80.97%	81.33%	0.36%	68.90%	69.32%	0.43%	57.59%	57.96%	0.37%
make	82.10%	78.18%	-3.92%	51.45%	47.72%	-3.73%	28.47%	25.98%	-2.48%	15.07%	13.60%	-1.47%
Sed	86.92%	88.41%	1.50%	72.19%	74.47%	2.28%	58.99%	61.28%	2.29%	47.98%	49.87%	1.89%
Nanoxml	76.30%	78.57%	2.27%	51.47%	54.96%	3.49%	33.64%	36.58%	2.94%	21.88%	23.96%	2.08%
Siena	71.60%	73.11%	1.51%	45.68%	47.42%	1.74%	28.16%	29.41%	1.24%	17.35%	18.08%	0.73%
Findutils	64.21%	68.07%	3.86%	30.69%	33.31%	2.62%	12.35%	13.52%	1.17%	4.65%	5.08%	0.43%
Grep(CoRE)	73.10%	78.93%	5.83%	41.48%	46.83%	5.35%	20.63%	23.70%	3.07%	9.70%	11.22%	1.52%