Table 1 the generation time of sub-covering arrays for *Flex*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	43	27	30	37	52	50	1	6	14	28	63	200
round-2	30	27	32	37	49	58	1	6	12	39	63	83
round-3	31	26	32	39	50	49	1	6	13	28	58	85

Table 2 the generation time of sub-covering arrays for *Grep(SIR)*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	2077	3197	3920	3406	4949	4668	3	22	50	40	56	5074
round-2	2056	3149	3544	4474	4117	6521	2	23	64	48	69	6409
round-3	2065	3177	3188	3379	5263	5435	2	17	47	38	53	6383

Table 3 the generation time of sub-covering arrays for *Gzip*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	201893	111757	110528	152779	141150	140736	1	27	163	312	515	112424
round-2	109549	111664	111536	110882	110055	108880	2	27	150	309	497	110898
round-3	114860	108398	109510	112461	112060	110385	3	28	149	306	493	110065

Table 4 the generation time of sub-covering arrays for *Make*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	42	27	27	33	43	57	0	2	6	22	63	105
round-2	29	25	29	34	43	62	0	1	5	21	64	101
round-3	27	34	27	32	43	59	0	2	7	21	63	87

Table 5 the generation time of sub-covering arrays for *Sed*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	4116	3852	4816	4356	5714	6363	6	50	115	160	157	9178
round-2	4279	3846	4323	4066	4571	5829	6	49	116	160	170	9077
round-3	4103	4315	4349	3774	5134	5871	9	48	121	176	156	6313

Table 6 the generation time of sub-covering arrays for *NanoXML*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	101	26	30	28	28	29	1	1	5	3	4	49
round-2	32	25	25	30	31	30	1	1	3	2	4	30
round-3	29	29	29	29	38	30	1	1	3	2	4	31

Table 7 the generation time of sub-covering arrays for *Siena*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	35	38	53	134	257	527	1	11	45	51	72	911
round-2	40	36	55	128	273	681	1	10	47	51	71	795
round-3	46	48	73	188	395	826	1	7	45	53	72	823

Table 8 the generation time of sub-covering arrays for *Findutils*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	45	36	151	1375	9307	35532	3	36	301	1685	7419	59461
round-2	122	37	152	1346	8939	35276	2	38	313	1707	7342	59337
round-3	45	36	153	1357	8901	35198	3	39	320	1744	7377	59493

Table 9 the generation time of sub-covering arrays for *Grep(CoRE)*

	Bottom-up						Top-down					
Round	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise	2-wise	3-wise	4-wise	5-wise	6-wise	7-wise
round-1	28	31	69	467	2990	15505	1	18	185	1164	4558	26865
round-2	36	29	69	456	2963	15446	1	18	185	1145	4639	27279
round-3	42	31	71	456	2991	15488	1	18	179	1131	4626	28106