

Study relation between push and time and length of string to perform operation

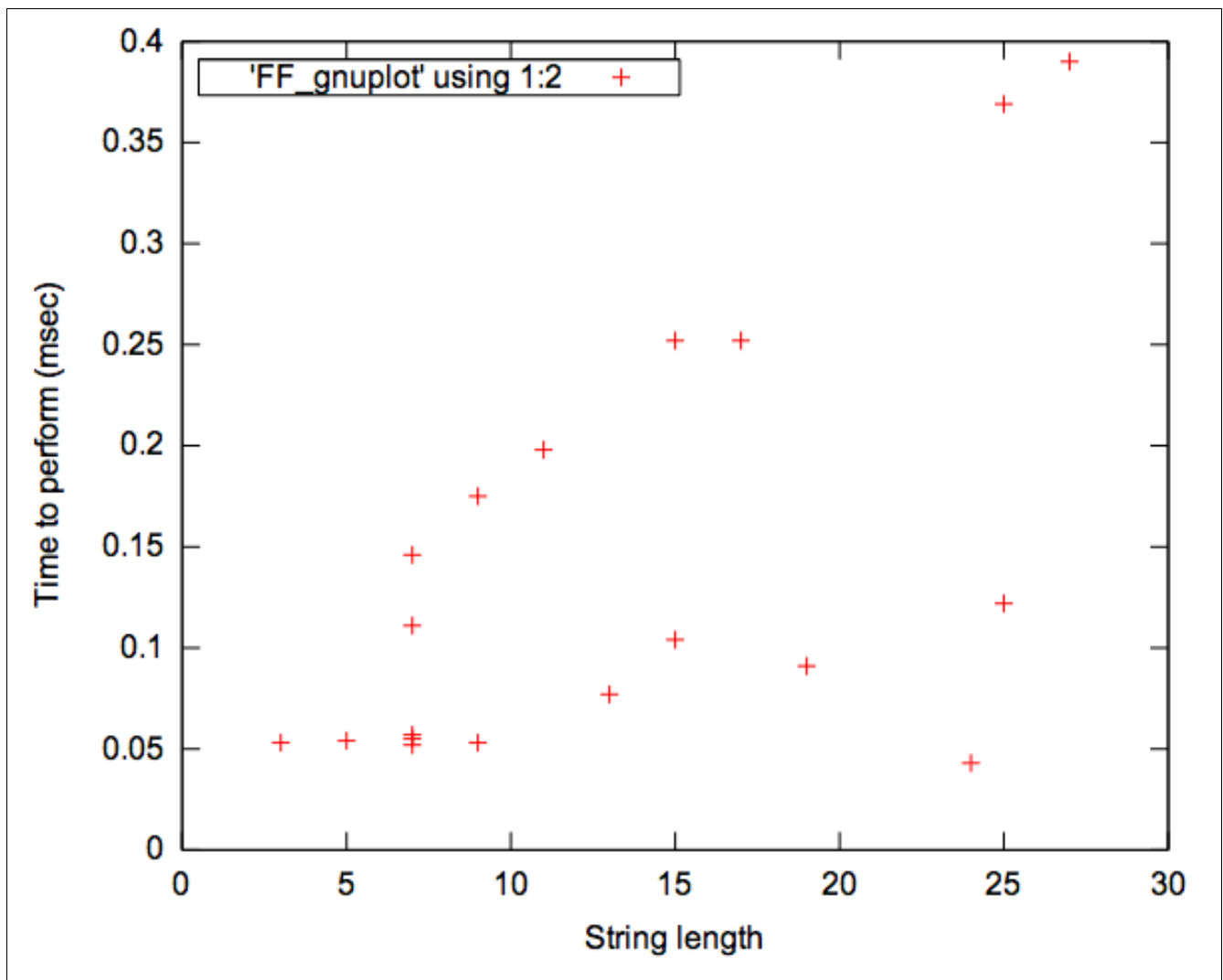
To do this study Perl was used. Gnuplot was necessary to generate graphs, harts,...

Data calculated:

Result	Expected result	Returned result	Expression	length of the string	time	Push/Pop
OK	12	12	3+9	3	0.053	3
OK	12	12	(3+9)	5	0.054	7
BAD	12	ERR	((3+9)(7	0.111	0
OK	12	12	((3+9))	7	0.146	8
OK	12	12	((3+9))	9	0.053	9
OK	12	12	(((((3+9))))))	17	0.252	13
OK	-10	-10	((2-(((3+9))))))	19	0.091	17
OK	-33	-33	((((2-9)*3)-(((3+9))))))	27	0.39	27
OK	-28	-28	1-3*9-2	7	0.055	12
OK	-28	-28	1-(3*9)-2	9	0.175	11
OK	26	26	1+3*9-2	7	0.057	12
OK	-24	-24	1-3*9+2	7	0.052	12
OK	-22	-22	(1-3)*(9+2)	11	0.198	14
OK	-23	-23	(1-3)*(9+2)-1	13	0.077	17
BAD	25	24	3-(1-3)*(9+2)-1	15	0.104	23
BAD	20	-20	3+(1-3)*(9+2)-1	15	0.252	23
OK	-28	-28	3+((1-3)*2)-(4+(9+2)*2)-1	25	0.122	35
BAD	-28	ERR	3+((1-3*2)-(4+(9+2)*2)-1	24	0.043	0
OK	-29	-29	3+((1-3*2)-(4+(9+2)*2)-1	25	0.369	35

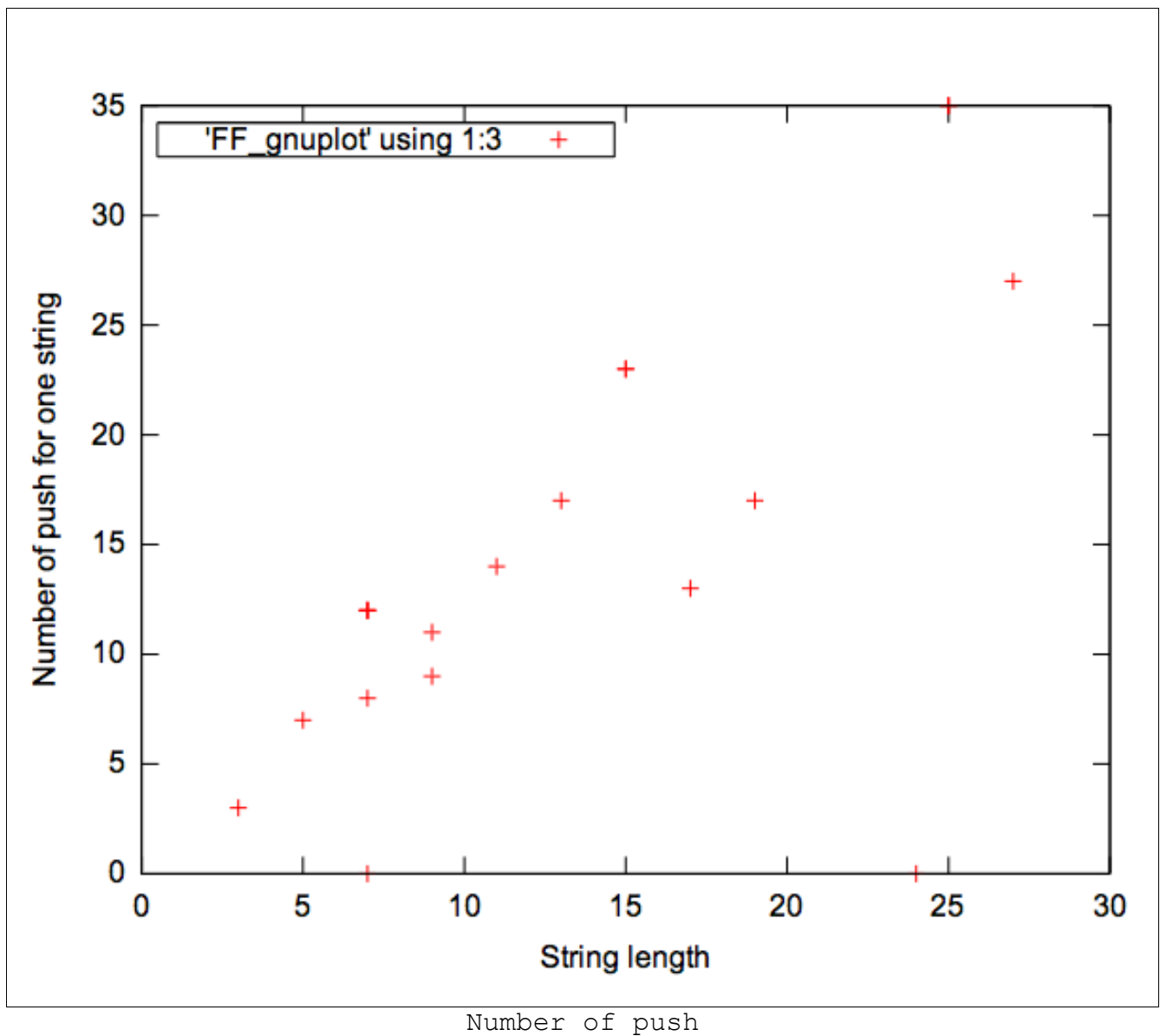
Board that shows data taken for one session

Three columns will be the main subject about this paper. Length of the string (we don't want to know the content of it. Time to perform this operation (one expression can contain different operations). The push and pop that's how the calculus is done for this study.



Time to perform ms

We can see that for one length there are different times. Let's check push and pop to see what's under the tongue...



For the same amount of character we notice that the number of push and pop varying.

String length of 7 characters is interesting for instance. There are 5 sets. A difference in time execution is noticeable. Both expressions have 12 pushes.

Need to check in the algorithm the importance of execution of operation (order in if-else-if-else-endif).

2	5	0.048	7	
3	7	0.135	0	
4	7	0.272	8	
5	7	0.056	12	
6	7	0.052	12	10
7	7	0.155	12	
8	9	0.057	9	Str