Avik Mohan && Konrad Niemiec

We selected three different test cases to take advantage of multiple commands, random data, and pipes. These test cases are included under command1.sh, command2.sh and command3.sh, with their execline components under the appropriate *_exec.sh file.

Shown here are the average values in seconds obtained after 10 trials of each test case for each shell:

User Time (s)

Shell →	***Bash***	***Simpsh***	***Exceline***
V Test Case V			
1	*0.0012*	***0.0006***	***0.0006***
2	*0.0026*	*0.001*	***0.0008***
3	*0.006*	*0.006*	***0.0012***

Kernel Time (s)

Shell →	***Bash***	***Simpsh***	***Exceline***
V Test Case V			
1	*0.0038*	*0.0046*	***0.0032***
2	*0.011*	*0.009*	***0.0046***
3	*0.0056*	*0.0044*	***0.0026***

In conclusion, it seems that Execline is consistently the quickest shell variant. After that, Simpsh and Bash are similar in times taken, with Simpsh slightly winning in most cases. We are guessing that execline doesn't use fork and thus optimizes its system and and user times.