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Auto resim documentation

ar_core_spinbox.setMaximu(cpu_count()) – during program initialization checks user pc and set maximum possible core number

ar_core_spinbox.setValue(cpu_count()) – sets value of cpu cores used, by default we want to use all to speed up resimulation process

ar_genCmd – this function generates commands that will be passed to resim executables, in order to perform resimulation we need to provide certain information in certain way:

resim.exe file.dvl -options

.bat files works in the same way, just without options.

genCmd returns those commands as list, last part (1> 2>&1) captures command line output into a txt file for user convenience.

If Full Resim radio button is checked this function creates list with alternately distributed commands. Then list is splitted in order to firstly resimulate all files with radar and then with .bat file. This is done because in order to perform full resim this needs to be done in certain order. This also prevents situation when same file is being resimulated with radar and .bat on different cores.

ar_radar_resim and ar_bat_resim – those functions runs individual commands from list of commands.
ar_pool.apply_async – this line is a equivalent of build in apply() function but allows to work on multiple cores, this improve performance

ar_runResim – function that is connected with Run resim button. Basically initialize whole resim process, takes care of progressbar tracking and calls run on desired arguments.

run – function that is responsible for launching individual processes. Subprocess.Popen and p.wait() assusers that function will wait for process to finish before launching another one. After this it emits signal to increment progressbar.

runbat – equivalent of run, in order to perform full resim we need to be sure that radar resim is done, in order to do this I used progressbar, as a tracker. When all files from radar resim are done program moves to this function. There is no or very little performance deterioration and we obtain certainty that resim will be done properly.

ar_resimDone – function that closes all processes, closes progressbar and join all pool workers (basically clean up asynchronous work distribution)

ar_updateParams – this function puts default values into params window