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Control Systems
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Abstract

The thesis explains the development of computer program for the students who start studying control system theory and/or control system designers to simulate the time response of control systems. This program is called CSSP which is the acronym for control system simulation package. CSSP is written in Turbo Pascal and is working on the MS WINDOW environment. CSSP uses block diagram representation for the components of the system. Arrows are used to determine the sequential connection of the system. Functions via menu. Maximum number of blocks which can be simulated are 30 blocks. Various modes of calculation can be selected such as: complete calculation is made before plotting or calculation and plotting are made for each step, etc. Four curves can be simultaneously displayed on the same axis for comparison.

Several different problems are tested with CSSP program. The result shows good flexibility and good accuracy. Comparison of CSSP with the available program of similar nature (TUTSIM, ANSIM and DSP) shows that CSSP give comparable performance in terms of time and accuracy. The advantages of CSSP over other programs are easy for beginner and student , shorter preparation time , function and parameter designation is easier with more information given.