The HELP blocks in GPSS

Robert Greer Lavery, P.Eng.
Ryerson Polytechnical Institute
Toronto, Ontario, Canada.

The computational facilities provided in GPSS are quite limited, being restricted to the VARIABLE and FVARIABLE entities and the increment/decrement mode operation of ASSIGN and SAVEVALUE blocks. FUNCTIONS have been designed to simulate (by piecewise linear approximation) the Exponential, Standard Normal and other common probability distributions but these features represent almost the total extent of computational resources within GPSS.

For GPSS simulations which require more computational ability than is directly provided in the language, a set of blocks called the HELP blocks is provided. These 7 blocks permit the modeller to incorporate independent programme modules coded in Assembler Language, FORTRAN or PL/1 into a simulation run of a GPSS model. In addition to providing extended computational ability (e.g., natural logarithm values for a lognormal probability distribution) the HELP blocks, through inclusion of I/O routines, allow user-designed reports to be generated at the end of a simulation run or initial model conditions to be read in from data cards at the beginning of a run.

The operation names of the blocks in this set are HELP, (HELPA, HELPB and HELPC) and (HELPAPL1, HELPBPL1 and HELPCPL1).