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This conference marks fifteen years since Geoffrey Gordon of IBM introduced GPSS to the world at the 1961 joint computer conference held in Washington¹. For those who feel that GPSS was rather primitive as originally introduced, well there was GPSS II, GPSS III, GPSS/360, and since 1970 GPSS V. Yes GPSS V has been around that long and with relatively few changes. As a result, a new aspect of GPSS has emerged. It is no longer only an IBM language. The past few years have produced considerable activity directed toward making the GPSS V and GPSS/360 languages available on a number of manufacturers systems. Table 1 is a summary of the versions of GPSS and GPSS/360 currently available. These versions are transferable from one computer to another and except for differences in the random number sequence perform the same operations with the same syntax.

TABLE 1

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| 1. | IBM Corp. System 360/370; GPSS V User's manual Form #SH 20 - 0851-1. Technical Contact; Ms. Mary Jean Sortet 415 493 3000 x 1722 |
| 2. | CDC 6000 series and larger GPSS V/6000 (GPSS V) CDC Publication No. 84003900, Technical Contact: Walter Gazdzik Northwestern Univ. 312 492 3696 |
| 3. | Honeywell Information Systems, Inc. GPSS/6000 Series 60 (GPSS V) GPSS/6000 Reference Manual Order No. DC34 Rev 1 Technical Contact: John Sanders 602 249 7358 |
| 4. | Digital Equipment Corp. PDP-10 GPSS10 (GPSS/360) Obtainable from the University of Western Ontario, London Canada. Technical Contact: M. David Martin 519 679 2111 |

The basic standard is GPSS V as available from IBM. This version is the one that has been used to test the other machine's

versions. Moreover, the Navy has developed a series of over sixty test models to check and compare that the other versions do the same things that the IBM version does. Thus, within the limits of the sequence of random numbers there are direct comparisons that each version of GPSS does do the same things. Walter Gazdzik of Northwestern University has even stored the IBM sequence of random numbers so that a direct comparison can be made and the same exact results obtained.

Over the years GPSS has been the most popular simulation language. With the recent increase in availability, it seems probable that the language will continue to be widely used. From another viewpoint, the use of GPSS will be extended by the increase in the number of computer services offering GPSS versions.

The new improvements appear in developments designed to increase the use of man-machine interaction with GPSS models. A number of time sharing services are now offering interactive GPSS systems. These let the user operate the model and interact with the results to control model behavior. As these systems become more widespread the utility of simulation for quick analysis and great flexibility becomes more widespread.

At last year's Simulation Conference Jim Henriksen presented a paper Building a Better GPSS: A 3:1 Performance Enhancement². Since then he has continued his efforts to develop a compiled GPSS and during tests at Michigan with Tom Schriber has shown increases in speed of 5:1 over the GPSS/360 used there.

¹A General Purpose Simulation Program, G. Gordon, Proc. EJCC, Washington, D.C. 87-104, Macmillan, New York, 1961

²Building a Better GPSS: A 3:1 Performance Enhancement, J.O. Henriksen, Proc. of 1975 Winter Simulation Conference, 465-469, AFIPS Press, Montvale, N.J., 1976