

# Developments in Business Simulation & Experiential Exercises, Volume 9, 1982

## PANEL

### EXPERIENTIAL OPPORTUNITIES WITH MICROCOMPUTERS

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#### ABSTRACT

The impact of microcomputers on the educational scene is beginning to be felt, but it is still in the early development phase. The microcomputer is also beginning to have an impact on business data processing. For members of ABSEL this means that we must consider what effect, if any, this will or should have on the subject of business simulation, in the classroom or in the industrial training sector.

#### PANEL SUMMARY

As with many new arenas of development, the initial period is one of producers striving to obtain market recognition and position. This frequently means product differentiation, and in the area of computers this may mean incompatibilities in software as well as hardware. A manufacturer is tempted to design the product such that "foreign attachments are discouraged, thus enhancing the sales of their own products. This has been a common practice among main-frame manufacturers, and there is some indication that the same approach is being used by some microcomputer designers. Fortunately for the microcomputer users, not all manufacturers are taking this approach. Many of the smaller producers, as well as a few of the larger *firms*, have chosen to follow a somewhat standardized route for the software environment, but few of them have gone as far in standardizing hardware. Because we are still in the early growth period there is still considerable uncertainty, but it appears that the more standardized approach is achieving greater market acceptance as users become more informed of the advantages this offers to them. For simulation developers, this question of standardization can be very important *if* we wish to make the simulation available to a broad base of users.

In addition to the standardization question, the level of sophistication of available software development tools, and also of developed (ready- to-use) software, is improving at a very rapid rate. As developed simulation packages become more readily available these will increase the attractiveness of microcomputers in the educational market. As the software development tools improve, the developed packages should improve. These are complementary activities, and are part of the reason that the acceptance of microcomputers is increasing so rapidly.

Most of the simulations currently available for microcomputers are of the game type, with space ships to shoot down, fighter craft to fly, or strange shaped monsters to avoid. While these may be very good for making money for the developer, and perhaps even for improving eye-hand coordination for the player, they are generally not the ones of interest to ABSEL members in our professional role. With a few notable exceptions, major simulations have not yet appeared on the micro scene. This may be due in part to a simple lag in the availability of adequate software development tools, or it may be that the potential developers are not yet convinced that an adequate audience exists to justify the necessary development time. In either case, this is now changing quite rapidly, so we may expect to see more full fledged business simulations in the micro world soon.

While most microcomputers are used as free-standing, single user computers (and most software is written on this assumption), we also have the beginning of a trend toward combining multiple microcomputers into various clusters and/or networks for the purpose of sharing scarce resources. This may include allowing a single printer to serve several users, sharing large mass storage systems to reduce file redundancy, to provide common data bases, and to simplify the administration of large numbers of microcomputers. The simulation developer needs to be aware of the potential offered by this approach, as well as the limits of the present state-of-the-art.

The microcomputer offers considerable computing power for the money, but it does have some very definite limitations in the presently available implementations. The simulation developer can take advantage of what is working, if the developer is aware of where to look for it. The developer can also avoid frustrating failure if the limitations are understood and allowed for in the design and implementations of the simulation. It is our expectation that this panel should help the microcomputer simulation developer recognize the potential and limitations of this educational tool, and to aid the developer to select and use appropriate hardware and software *for* their simulation development.