

Micro Computers and the Indiana Department of Highways

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- I. Why This Presentation?
 - A. To show that Computer Services is aware of the new technology in data processing.
 - B. To show that Computer Services is aware of the Department of Highways' need for more timely data processing support.
 - C. To show that we are aware that there are alternatives to the traditional mainframe data processing equipment.
- II. Why All This Interest in Micro Computers?
 - A. Computers are becoming more common place in society (the layman has a better perception of how computers can improve their lives.
 - B. Advertising has led people to believe many of their problems can be solved by obtaining a micro computer.
 - C. Process power has become extremely inexpensive.
Analogy: "As solid state technology reduced the physical size of the microprocessor, its computing power increased, and its purchase price plummeted. This amazing increase in the price/performance ratio is unique to the computer industry. In 1980, a successful computer manufacturer printed an interesting analogy stating that if the automobile industry had been able to reduce prices during the 1970's at the same rate at which the computer industry did, a 1980 Ford Mustang would have cost about \$480. Now less than three years later, the analogy is similar, but it is applied to a Rolls Royce. If the same price reduction ratio to computers held, today's Rolls would cost about \$2.50."
- III. What Is a Micro Computer?
 - A. Does not require knowledge of hardware.
 - B. Does not require knowledge of programming languages or programming techniques.
 - C. Has built in operating system or one that is easily loaded from a diskette or cassette tape.
 - D. Provides for almost immediate productive use by user.

- E. A micro computer is not:
 - 1. Solutions to all data processing problems.
 - 2. Always the most desirable means of providing data processing solutions.

IV. Why The Use of Micro Computers By Highway?

- A. Define two types of data processing environments:
 - 1. Traditional Environment
 - a. Provides for data processing services (application and program development) utilizing a staff of system analyst programmers.
 - b. All programs run in mainframe environment (that is data processing thru the use of a centralized computer).
 - 2. Personal Computing Environment
 - a. Self-sufficient utilization of data processing technologies with decreased dependency on data processing personnel.
 - b. The current and most popular use of this environment is thru the use of stand-alone micro computers using user-friendly software products.
 - 3. The traditional environment is more suitable for large complex data processing systems dealing with a large number of transactions effecting a large and/or multiple file data base. This environment is also desirable for systems that share data generated by other systems.
 - 4. The personal environment is more suitable for providing short-term tools that solve an immediate need. These are relatively small programs (less than 64K) that deal with a small amount of input and small (less than 1000) data records, if any.
- B. Reasons for going to a more personal computing environment.
 - 1. Ever increasing backlog of new applications or modifications to existing applications.
 - 2. The limited number of people in the Computer Services staff available to work on new and old applications.
 - 3. The need to off-load computer resources to the user that will give them the ability to solve their own unique data processing situations in a reasonable amount of time. This is especially true in the highly specialized technologies within the highway.
 - 4. In short, to give the user better service, and where practical, more control over some of their data processing applications.

V. Are We Going To Get Micro Computers And What Kind?

- A. What is being done to answer these questions:
 - 1. Highway Data Processing Management Committee authorized Computer Services to determine the need for micros or some type of personal computing environment.

2. As a result, Computer Services developed a Data Processing Needs Survey to be answered by the divisions of the Department of Highways.
 3. After all surveys are complete, they will be analyzed by Computer Services, and a recommendation will be made to the committee.
- B. From this survey, we hope to determine:
1. a) If there is a need for micro computers
 - b) How extensive is this need.
 - c) What type of applications do the divisions want to run on these micros—(accounting, word processing, statistics, etc.)
 - d) Volume of data to be entered and/or stored at the micro
 - e) What software is available to help the divisions become productive as quickly as possible.
 - f) How much customized programming will have been done before the micro can be used and who will do it.
 - g) Do the people who will be using the computer have previous computer experience.
- VI. Who is going to have access to these micros or this personal environment and who will control their use?
- A. Plan will probably be to make micros (or equivalent environment) available to the divisions and let them decide who or what gets priority. However, there will be some control and guidance provided by Computer Services to make sure the micro is not being used for something that should be on the mainframe.
 - B. As far as purchasing hardware and software goes, this will most likely be done by Computer Services. Reasons for this:
 1. Most data processing hardware and software purchase have to be approved by the State DPOC.
 2. Make sure that the hardware to be purchased will support the software required and vice-versa.
 3. Make sure there is not a duplication of purchase.
 4. In short, to make sure there is some degree of control and uniformity in the personal computing environment.
 - C. As for support (installation, education, etc.) of the micros, this will probably be shared by Computer Services personnel and users within each division.
- VII. When Will We Get Them?
- A. Survey's to be turned in by March 21.
 - B. Follow up by Computer Services to be completed by April 21.
 - C. Recommendations to Data Processing Management Committee by first of June.
 - D. Depending on DPMC decision, some kind of pilot program (either micros or alternative) should be started by end of this year.