

## PERSONAL COMPUTING '76

Consumer Trade Fair

Atlantic City NJ

Personal Computing '76 will be the first large industry wide show for the personal computing field. It is being sponsored by the Southern Counties Amateur Radio Association of New Jersey, and will be held August 28 and 29 1976 at the Shelburne Hotel and convention center on the Boardwalk at Atlantic City. For information on exhibit space and the show in general, contact:

John H Dilks III, chairman  
Personal Computing '76  
503 W New Jersey Av  
Somers Point NJ 08244

Phone: (609) 927-6950.

- For reservations, contact:  
Shelburne Hotel/Motel  
Boardwalk & Michigan Av  
PO Box 1138  
Atlantic City NJ 08404
- Manufacturers who provide products for the personal computing marketplace are invited to attend.
- A series of seminars on subjects related to small computer systems is being arranged.
- The show will be almost entirely devoted to computers and related products.
- Admission to the general public will be \$7.50 at the door, \$5 if ordered in advance by individuals. Additional discounts are possible for group purchases by clubs, companies and other organizations.

# Toward a Parallel Interface Standard

## Articles Policy

BYTE is continually seeking quality manuscripts written by individuals who are applying personal systems, or who have knowledge which will prove useful to our readers. Manuscripts should have double spaced typewritten texts with wide margins. Numbering sequences should be maintained separately for figures, tables, photos and listings. Figures and tables should be provided on separate sheets of paper. Photos of technical subjects should be taken with uniform lighting, sharp focus and should be supplied in the form of clear glossy black and white prints (if you do not have access to quality photography, items to be photographed can be shipped to us in many cases). Computer listings should be supplied using the darkest ribbons possible on new (not recycled) blank white computer forms or bond paper. Where possible, we would like authors to supply a short statement about their background and experience.

Articles which are accepted are typically acknowledged with a binder check 4 to 8 weeks after receipt. Honorariums for articles are based upon the technical quality and suitability for BYTE's readership and are typically \$15 to \$30 per typeset magazine page. We recommend that authors record their name and address information redundantly on materials submitted, and that a return envelope with postage be supplied in the event the article is not accepted. ■

The idea of a parallel interface standard which encourages interesting combinations of peripherals and processors from different manufacturers is one which in my opinion should be pursued to help foster the growth of the personal computing marketplace, a growth which will provide a wider range of options for both users and suppliers of products.

## The User's Eye View

The need of a parallel interface standard from the user's point of view is readily perceived. The parallel interface standard will be the personal computing equivalent of what exists in the audio equipment industry: a widely manufactured, readily available physical interconnection with logically and electrically compatible signal definitions. The plug of choice in the audio field is the RCA style phono plug universally used to interconnect low level audio signals via shielded cables. This enables the purchaser of brand X turntable to plug it into a brand Y receiver using shielded cables of brand Z.

The ideal for the parallel interface definition in personal computing is similar. What is needed is a definition which will allow the owner of brand X processor to plug his system physically, logically and electronically into a brand Y music synthesizer or brand

Q graphics display, using brand Z cable assemblies. The interface definition to be created will at a minimum guarantee hardware compatibility. The applications software compatibility can be provided by the peripherals manufacturer in the form of simple relocatable routines with common functional documentation and detail code generation for the various microprocessor instruction sets.

The user will see a much more highly desirable product if it contains provision for the standard interface, since he or she will then be able to interface a wide variety of specialized applications and systems oriented peripherals without the necessity of performing the systems engineering equivalent of reinventing the wheel at the interface level.

## The Manufacturer's Eye View

The manufacturer of a product for the personal computing field has as a goal the maximization of sales, and hopefully as a result, the maximization of profits. This is a simplistic economic analysis which ignores the existence of specialized counter examples, but it is generally valid in most cases.

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# BYTE reader service

To get further information on the products advertised in BYTE, fill out the reader service card with your name and address. Then circle the appropriate numbers for the advertisers you select from this list. Add a 9 cent stamp to the card, then drop it in the mail. Not only do you gain information, but our advertisers are encouraged to use the marketplace provided by BYTE. This helps us bring you a bigger BYTE.

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## BOMB: BYTE's Ongoing Monitor Box

BYTE would like to know how readers evaluate the efforts of the authors whose blood, sweat, twisted typewriter keys, smoking ICs and esoteric software abstractions are reflected in these pages. BYTE will pay a \$50 bonus to the author who receives the most points in this survey each month.

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### March BOMB Winner

Winner of the \$50 prize for the most popular article in the March 1976 BYTE is Jack Hemenway's "The COMPLEAT Tape Cassette Interface." A close second was Don Lancaster's "Build the BIT BOFFER." In third place was William Manly's "Magnetic Recording for Computers." The deadline for receipt of June BOMB evaluations is July 16, 1976. ■

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Given this goal of maximizing sales, what better way to do that than to maximize the utility of the product to its users by engineering it to possess the greatest generality? For the main frame kit manufacturers, this means that providing the standards capability allows the customer to interface a wide range of specialized applications oriented peripherals with a minimum of trouble. For the peripherals manufacturer, this allows the product to be sold to the owners of all the central processors which provide the standard interface, thus ensuring the widest possible market.

### The Standard — A Summary

As the goal of parallel interface standards activities, there are three major technical points to consider:

**Logical Definitions:** The standard should define the data, control and addressing lines which are part of the interface. This definition would also include recommended sequences for such common operations as input data transfer, output data transfer, interrupt handshaking, etc.

**Electronic Definitions:** The standard should specify the physical parameters of the interface: logic level voltages, drive capacity, etc.

**Physical Definitions:** The logical definitions should be associated with the pinouts of one or more "recommended" connectors. Connector choices specified in the standard will help make it a more usable definition by limiting the number of possible alternatives.

An important point to remember is that the purpose of the standard is to create a definition which is widely publicized and can be used as a reference point by engineers and users of the equipment. With a standard, variations from its definition can be fully documented without ambiguity. (I owe this point to Calvin Moers of Rockford Research Inc in conversation at the March 1976 New England Computer Society meeting.)

To help encourage work on standards for the personal computing field, BYTE is organizing a technical session to be held at the Personal Computing '76 show in Atlantic City NJ August 28 and 29. A full page description of the standards session activity is found on page 5 of this issue. The parallel interface standard activities will form one of three areas of technical discussion identified at the time of this writing (March 26 1976). ■

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