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Charles Van Doren
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Dear Mr. Van Doren:

Following are some observations made at the West Coast
Computer Faire which took place last month in San
Francisco.

The changes in the faire over the last seven years
are an accurate reflection of what has happened in
the area of personal computing over the same time
period. When the event began in 1976 it was largely
a hobbyist convention. Now, while there are still
a number of booths selling electronic parts and other
mysterious items, these booths are few in number and
look vaguely out of place next to the streamlined,
fancy displays associated with major trade shows and
the giant consumer shows such as stereo, photography
and automobiles. On Friday there were 26,000 people
in attendance and while there were many of your basic
17 year-old computer freaks, the vast majority seemed
to be ordinary people, either recently new to computing
or contemplating their first major purchase. As far
as exhibitors go, they seem to be evenly divided between
manufacturers of hardware (computers and/or peripherals)
and publishers of software applications and books. Three
of the biggest manufacturers - Apple, Atari and IBM - did
not take booths at the faire. Rather they let the
peripheral and software manufacturers show off their
computers in the course of demonstrating peripherals
and software. Most of the excitement at this year's
faire was at the software booths.

Move over Apple. Atari and IBM are here

Last year most of the peripheral manufacturers were
demonstrating their products on Apples (and to a
lesser extent on Radio Shack computers). This
year Radio Shack was well in the background and Atari
and IBM seemed to be everywhere - if not equal to
Apple then certainly closing fast. Short of an unforseen
newcomer, I expect these three companies to dominate
the consumer/educational market in the years to

come. In the $500-1500 range, both Radio Shack and
Commodore/Pet seem to have missed the boat with
computers that are incapable of high resolution color
graphics, an absolute necessity in the consumer/education
market. Both of these companies have color computers
in the low end of the market (under $400), but these
machines are not sophisticated enough to run much of the
software that people are excited about, and they are
not capable of being upgraded to any significant extent.
Texas Instruments has a dandy little computer that
sells for around $400 with excellent graphics, sound etc.
but with a "child-size" keyboard which causes people
to vastly underestimate its capabilities. On the market
now for several years, it has never achieved much
popularity.

From the mix of products shown at the Faire (and
from what I know of the three companies) it looks as
though Atari is aimed squarely at the "family" and
school market, IBM at the small business and family-with-need-of
small-business-applications-market, while Apple is
positioned somewhere in between. Apple is currently
ahead in the schools but Atari is aggressively coming up
from behind. Realistically, any software publisher
wanting to reach a significant percentage of the
home/education market will have to publish their programs
so that they are compatible with all three machines.
Going exclusively with either Apple or Atari would be OK
in the short run, but you wouldn't want to have too
restricting an arrangement. That is, even if your
programs were to be exclusively for Apple or Atari at the
beginning, you would want to make them available for
other machines after a reasonable period of time.

LOGO has arrived

The big topic at this year's convention in the area
of software was LOGO, LOGO, and more LOGO. A year ago
LOGO was not available on any microcomputer. This year
there are three LOGO programs for the Apple, one for
Texas Instruments and versions coming for Atari and
undoubtedly IBM. The commercially available LOGO's
are much more sophisticated than the program you and I
saw at MIT. They all support color graphics. I saw
a program written by a six year-old involving
the animation of a street scene that was quite remarkable.
The development of LOGO for the home/school microcomputer
represents the most powerful movement in microcomputing
today. Most significantly it represents a philosophy which
recognizes the importance of understanding how computers
can best be used to promote learning. LOGO supporters
("logoists") have come out sharply against the drill and
practice type of courseware which uses the computer to

"teach at" the student. In its place the "logoists"
suggest that the computer can be far more powerful in
situations where the child or adult determines the pace,
direction and subject matter to be learned and furthermore
that often the student can learn best in the course of
"teaching" the machine, rather than the other way around.
One of the most important aspects of this outlook is its
answer to the question, "Who's in charge here" as it
applies to the relationship between the user and the
computer. The LOGO view is that the computer is
essentially a device for releasing human creativity
while the traditional courseware producers seem
comfortable with the the computer as "super-trainer."
Both approaches may be able to teach addition and
subtraction with equivalent results, but programs based
on the outlook exemplified by LOGO both encourage
creativity in thinking and reinforce an appropriate
sense of human-computer relations. The contradiction
between the "logoists" and the traditionalists was a
strong underlying theme which popped up often. It
is going to be a year or two before we start seeing
learning programs using LOGO or similar languages*, but
when they come, they will undoubtedly transform the
face of educational computing.

    The important thing for EB in this is to recognize
the direction educational software is likely to take
during the next several years. The big publishers
that have begun producing microcomputer software (McGraw
Hill, Scott-Foresman, Random House etc.) are heavily
into drill and practice materials that are mainly an
adaptation of traditional textbooks to an electronic
medium. While at this early stage almost any sort of
software will find a market (and one can safely guess
that there will be "some market" for such unimaginative
efforts for a long while) we are soon going to see a
second generation of educational software based on LOGO
and other languages which both children and adults will
find far more exciting and challenging than what is
being put out today. It seems to me that the last thing
EB should do is to jump on the drill and practice
bandwagon and put out yet another program teaching
"state capitals" and birthdates of presidents. Perhaps
EB could skip this level entirely.

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* Until recently I thought LOGO was mainly for children
and primarily for the generation of graphics. I now
realize that LOGO is a very powerful all-purpose language.
Frequently these days, you hear people talking about LOGO
(or Kay's Smalltalk which is closely related) replacing
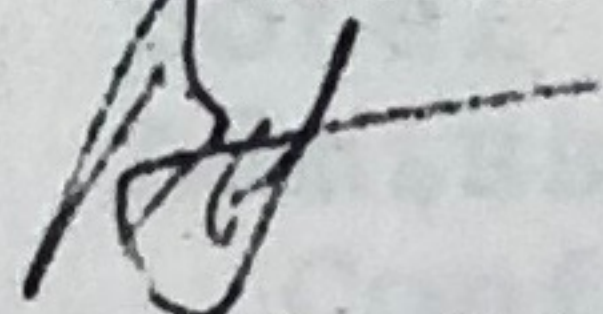BASIC as the most common general language.

market and so it may have been seen as inappropriate at
a consumer oriented event. (Looking at this from the
other direction, it seems quite significant that none
of the major publishers has yet begun to market software
aimed at the burgeoning home market. I think they are
"missing the boat." Either they will catch on, or the
opportunity will be seized by other less myopic companies,
small and large.) Secondly, the market for books about
computing is tremendous. A man from McGraw-Hill claimed
that at this point, even in computer stores, revenues
from book sales are about 1/2 of software sales. This is
especially remarkable when you realize that the average
software package runs anywhere from $30 to $150. It
leads one to think that at this point people are doing
more reading about computing than actually computing.

EB had its usual convention sales booth at the
Faire. It might be interesting to hear what kind of
response they had at an event like this?

I hope some of this is useful, at least as food
for thought.

Sincerely yours,

Bob Stein