IBM
PCjr: Will It Sell?

Yes, say forecasters, despite its obvious lack of design innovation

by A. Richard Immel

The man with the aviator-style glasses and the wavy gray hair had been talking about personal computers for some time, about how they're taking off in business and how you can run a petrochemical plant with one, but when he tried to bring them into the home he found himself at a loss. He kept coming back to the question nagging the average person: "What would I use one

PCjr's introduction turned into a media event rivaling NASA's first moon shot.

for? For the life of her, my wife couldn't understand any way at all what *she* would do with a personal computer."

For a moment he thought he had an answer: "Probably the best answer is What do you want to do with it?" He ran through the usual list—checkbook balancing, personal letters, games—but no, they all seemed too trivial to justify the expense. Besides, that created another problem and another question: "How do I learn how to use it?"

Such comments are unremarkable except for the fact that the speaker was Don Estridge, the man who runs International Business Machines' personal computer operations (now called the Entry Systems Division), and his hand-wringing remarks on the problems of justifying home computing were the guts of his keynote address at the PC Faire in San Francisco last August. Estridge concluded he didn't have the answers, but he hoped somebody would come up with some pretty soon. Two months later his division unwrapped the worst-kept secret in the industry: PCjr, IBM's initial foray into the home-computer market.

Junior is now out of the crib and headed for the living room, but the questions Estridge posed at the PC Faire linger on, particularly in light of Junior's somewhat eccentric design. Now the questions go back to IBM: Who's going to buy the PCjr? Will IBM do what Texas Instruments, Commodore, Atari, and Apple have all tried and failed to do: put a computer next to every home TV set? And why did PCjr turn out to be such an odd duck anyway, with its rubber-dome "Chiclet" keys, a space-wars cordless keyboard, and a maybe-it-will, maybe-it-won't kind of compatibility with the best-selling PC "senior"?

We'll know the answers in about a year, but we needn't wait that long to examine IBM's hopes and fears in these matters and perhaps even draw some conclusions about what might have been on Big Blue's mind when it decided to loose its latest computing machine on the public. Along the way we'll touch on such esoterica as price wars, black holes, corporate strategies, and what it takes to become the lowest-cost producer in the world if, in your heart, that's what you really want to be.

A. Richard Immel is a contributing editor of *Popular Computing*.

IBM's Oversold Strategy

It's no secret that IBM was astonished by the success of its firstborn personal computer, the PC. Estridge, who was in charge of that project and whose star at IBM has risen because of it, told the San Francisco audience that the success of the PC has "gone beyond anything we ever expected." He went on to state that "making follow-ons compatible is more of a challenge than producing the original machine. I don't know how I'd be able to drive into my driveway at home if I had to tell my neighbors their software wouldn't work any-

The Adam system—which offers a letter-quality printer and typewriter-style keyboard— will look better to some buyers than PCjr.

The $600 Adam—a lot for the money.

more...we *are* committed to compatibility."

That's a fairly new philosophy for IBM, which may be why Estridge emphasized it. In any case, the second act always seems tougher than the first; there are many who think that while Junior will do well, it isn't going to do as well as its illustrious predecessor.

The PCjr is, of course, a logical follow-on to the original PC, a computer IBM indicated early on it intended to enhance both upward and downward. The XT model with its hard-disk mass storage represents the first upward extension (others are on the way) and the PCjr the downward one. IBM's overall strategy is far more comprehensive than simply spewing a line of personal computers into the marketplace, however. In fact, if you talk to those who pay close attention to IBM, it looks more like a three-pronged strategy dedicated to:

- creating a family of PC machines
- becoming the lowest-cost producer of personal computers in the world
- eating Apples

According to some of the software companies that were approached to work on PCjr program packages, the notion of a follow-on computer for the home market started taking shape at IBM shortly after the introduction of the PC in the fall of 1981. Ken Williams, who with his wife Roberta runs a fast-growing California software company called Sierra On-Line Inc., says the machine

that has recently emerged is very close in concept to the machine IBM first talked about some two years ago.

Speculations on why Junior was delayed coming to the market include the inevitable software bugs that accompany every new machine and certain hardware shortages, including the Intel 8088 microprocessor it uses in common with the PC. Industry analyst Doug Cayne of the Gartner Group in Stamford, Connecticut, has pinpointed some other reasons.

Cayne is one of a small army of marketing and investment analysts who make a living scrutinizing IBM. They develop contacts like CIA agents and make inferences from material you and I would probably throw in the trash can with the junk mail. Cayne believes that IBM let slip its April 1983 announcement date for PCjr because of the price wars that were raging in the home-computer market early in the year. According to Cayne, it wasn't the Timex/Texas Instruments low end where they paid you to take the things out of the store that troubled the IBMers—cheap computers aren't IBM's cup of tea. It was the instability that the wars had introduced to the $600-and-up—mostly up—price range that worried Big Blue. *Fortune* called this $600 to $1200 market a "black hole" because no computer company has been able to keep a product in that price range. The PCjr that existed then "could have been justified" at prewar prices, Cayne says, but after the prices tumbled "they had to redesign it to some extent.
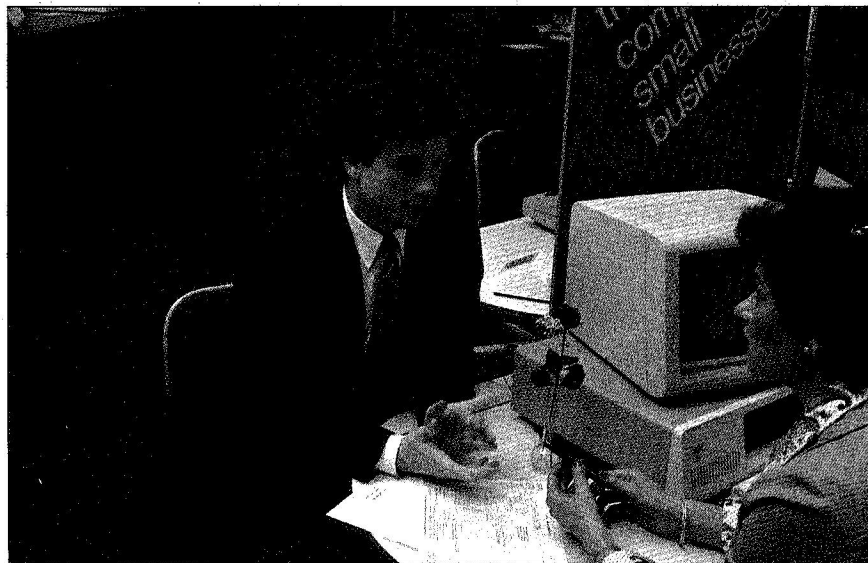
Where Does PCjr Fit In?

Price cutting wasn't the only reason, though, for delaying Junior's debut. IBM had no intention of building a "game" machine, but IBM strategists were increasingly concerned that PCjr might cannibalize sales of the PC itself. In other words, IBM had to make sure the smaller machine was strictly complementary to its bread-and-butter PC so that potential buyers neither would nor could substitute the little one for the big one.

The result is some questionable design features such as limited memory that's difficult to expand, only partial software compatibility with the PC, and a Chiclet-style keyboard (with small rectangular-shaped keys) that is regarded by many as the worst keyboard in the industry. "They had to go out of their way to come up with a keyboard that bad," says Cayne, which, he adds, is exactly what they did do. "IBM intentionally and arbitrarily limited the functions and capabilities so that not one unit ends up in a business," he says.

After another short delay, from October 1 to Novem-

ber 1, IBM finally announced PCjr but decided not to deliver any units until sometime in the first quarter of 1984. The delivery delay was generally laid to a shortage of PC and PC XT models, the result of internal forecasts that kept falling behind stronger than expected market demand. Why shift valuable production re-

IBM's strong marketing and service reputation will surely carry over to the PCjr.

sources to a lower-margin product when you can't make enough of the more expensive versions to satisfy demand? As another analyst puts it, poor IBM was stuck with selling PCs until the first of the year.

Richard Matlack, who probes the crystal ball on IBM matters for Info Corp., a Cupertino, California, market research firm, has a more sinister explanation: "IBM never preannounces," he says. So why did it do so this time? To try to force Apple Computer to cut the price on the Apple IIe, Apple's main source of income. "That machine [PCjr] is clearly targeted to do one thing: go up against the Apple IIe," Matlack says. "There's a corporate strategic battle going on; keep 'em weak and keep 'em off our backs" is the way IBM is trying to knock Apple out of the lead and permanently into the number two slot in the personal computer business.

Who else is IBM going to push around with Junior?

Actually, it's possible nobody will be hurt. Clive Smith of the Boston-based Yankee Group sees the entire market moving upscale in '84 with consumers realizing it is computer *systems* that are useful, not cheap components that add up to a bundle by the time you get everything you really need. Besides, "the big trend in marketing computers is market segmentation," Smith says, which means everyone is going for a different chunk of the market. One of the most important of those chunks that turned up in a Yankee Group survey is what he calls an "elite" consumer market of some two million families. Who are these elite? "People who have sophisticated but not professional needs," he says, such as writing reports and word processing at home. He believes this core market plus an "explosion" of vastly

superior software this year should expand the home-computer market enormously.

What Does IBM Risk?

Estimates on how much risk IBM is taking with Junior range from slight to none. Egil Juliussen of Future Computing, a Richardson, Texas, forecasting firm, thinks that two-thirds to three-fourths of present IBM PC users might buy a PCjr over the next 9 to 12 months. "If you look at it as a stand-alone, it's far too expensive a unit," he says, "but if you look at it as a family member, it's a very well thought out strategy."

"First-year risk is minimal," says Matlack of Info Corp. "With 1.5 million PCs out there, there's plenty of installed base so I think there's no short-term risk whatsoever. I think the market gets muddier downstream, though."

Jr. vs. Adam and the Apple Family

The Gartner Group's Cayne thinks PCjr may provide more of a boost for Coleco's $600 Adam than it does for IBM. "For $699 (PCjr) you get only a CPU (the console) and a keyboard. You still need a TV hookup and joysticks, which means it costs $750 just to play games on ROM cartridges," he says. Indeed, for disk drives, maximum memory (128K bytes), a printer, and hookup cables, the price adds up fast. "You have to sink $2000 into it to really do something," he says. Adam, on the other hand, comes ready to go with a letter-quality printer (IBM offers only a poorer-quality

---

What Has IBM Got Against Computer Keyboards?

First there was the PC with its misplaced shift keys that encourage typing errors; now comes the PCjr's "Chiclet" keyboard that turns word processing, one of the most common uses for a home computer, into an ordeal. It's a puzzlement, indeed, from a company that prides itself on the "human factors" it caters to in building its equipment.

Don Estridge, the head man behind both computers, and other IBMers have vigorously defended the PC keyboard, declaring they have no regrets over its design, although I have yet to hear a convincing argument in its favor. Two years ago I listened to IBM vice president and chief scientist Lewis Branscomb give a speech on how computer companies had to make their equipment easier to use; afterward I asked him how it came to pass that the company that produced the finest electric typewriter keyboard in the world, that of the IBM Selectric,

thermal printer) and 80K bytes of memory (64K for the starter IBM) and "the best keyboard of any home computer" for $600. Even the Atari 1450 at $1000 (including a disk drive) could give the PCjr a run for its money, Cayne says—if Atari decides to stay in the hardware business.

"Adam is at a powerful price point ($600), but IBM has the luxury of waiting for a year," says Info Corp.'s Matlack. In the meantime, "Apple gets attacked; IBM is now going head to head with Apple."

But even Apple might be a slippery target. Clive Smith sees the Apple IIe expanding into an "Apple II family," which will include a portable and perhaps a cheap unit that undercuts PCjr as well as a super Apple II at the top end. This means Apple may not have to cut the price of the Apple IIe. The family would presumably ride on the leverage of Apple's huge base of existing software, which will take even IBM some time to match, particularly in the education field, which IBM has targeted but where Apple has a strong base of proven programs. Somewhere in that basket of Apples you'll also find a revitalized Apple III, which the company has been trying to polish up, and of course the Macintosh (see our preview of Apple's Macintosh on page 80) sitting above it in a class all by itself.

Will IBM Take Over Production?

Regardless of how the battle between Apple and IBM turns out, some observers believe that the home-computer market isn't something IBM really lusts after in the same way it covets the business-computing market. On the other hand, one aspect of the mass market is of increasing interest to Big Blue. It has something to do with IBM's growing fascination with the Japanese.

"If you want to be the low-cost producer in the world, you've got to drive your costs way down," says Doug Cayne. "In terms of volume you need some kind of mass consumer market to do that." The Japanese have been able to dominate the computer monitor business because they've been able to pare production costs by mass-producing cathode-ray tubes for consumer television sets. "Right now IBM doesn't make anything [for its personal computers], but it wants to be in a position to gradually take over production," Cayne says. Once it does that, with disk drives, say, it will be in a position to fulfill all of its companywide needs for that product, reaping substantial cost savings.

For the immediate future, Cayne sees two possible—but not likely—negatives for IBM. One is that consumers simply won't like Junior and won't buy it unless they have to for doing office work at home; the other is the danger that retailers may advise shoppers, "You're out of your head for buying something like this." But even though he thinks PCjr is a bummer, Cayne doesn't doubt that Big Blue will sell millions of them or, at least, will sell "more than they ought to." And he agrees with the consensus that IBM's short-term goal is "to get people with PCs at work to buy a PCjr. These are the only people who have a clear reason to buy a PCjr. For them there's nothing else in the running."

IBM's short-term marketing strategy for the PCjr is to get PC users to buy a Junior to do office work at home. For these people "there's nothing else..."

---

goofed on its first personal computer.

"The keyboard is the central component in any computer system because that's the interface with the user," he explained. "There's only one thing wrong with the PC keyboard: the space between the A and the left shift key. Surprisingly, the decision to do this came from our typewriter people; they made a study of professional typists and found it would be easy for them to adjust to this configuration. But I have trouble with it and my wife does too," he acknowledged. "We're always getting a row of slashes from hitting the wrong key." The next obvious question, which, unfortunately, I failed to ask, is why should anyone have to make such an adjustment in the first place?

Similarly, the tiny "keys" on the PCjr are a severe handicap to anyone who knows how to touch-type and wants to do serious word processing—or *any* kind of word processing, for that matter.

Another feature of Junior's keyboard—the cordless, infrared method of communicating with the main console from across the room (the same principle as in a remote-control TV channel selector)—has many people scratching their heads. Ken Williams, whose On-Line Sierra software company developed the Homeword word-processing package as an authorized IBM PCjr product, says he first tried the cordless keyboard at IBM's PC headquarters in Boca Raton, Florida. "I was sitting on the couch doing word processing on the TV screen 10 feet away," he says. But could he see what he was writing from that distance? "Nope," he says. But there is a silver lining to this; it seems that an annoying Homeword characteristic, its slowness, won't be noticed on the PCjr. Homeword can display text at a maximum rate of 50 words a minute; Williams says it's unlikely anyone can type that fast on the PCjr's tiny keys.

One thing you may be able to do with the keyboard from afar is play games on a big-screen TV— but not if the game requires joysticks; they have to be plugged into the console. "It's not real practical," Williams says of the infrared connection. "I don't know why they did it. IBM is not given to gimmicks."

IBM would like to place a PCjr beside every home TV set.