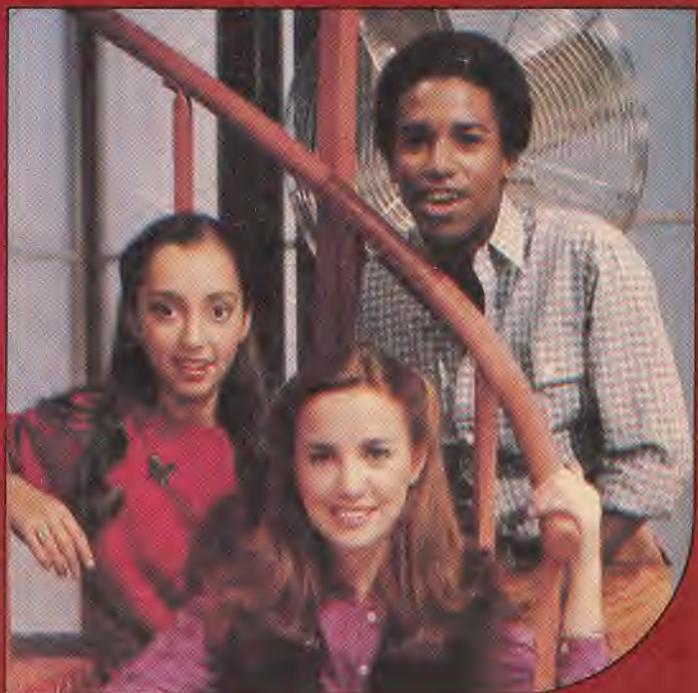
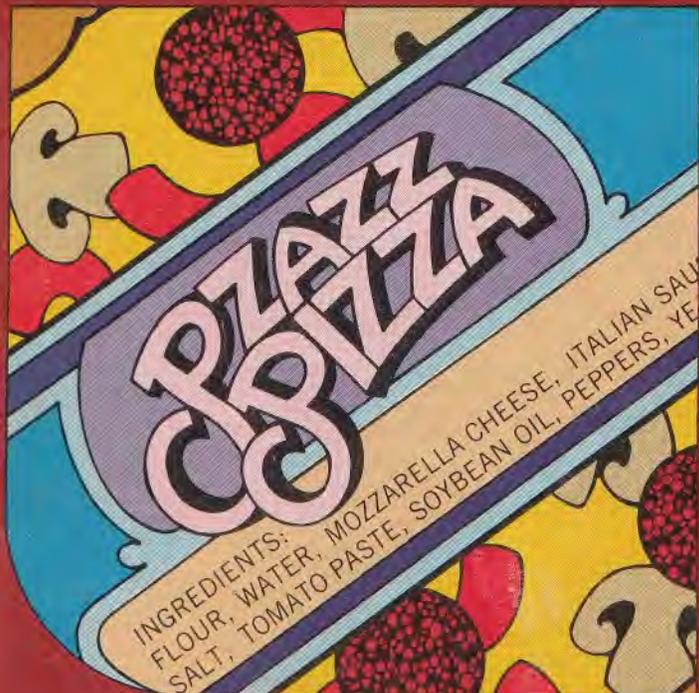
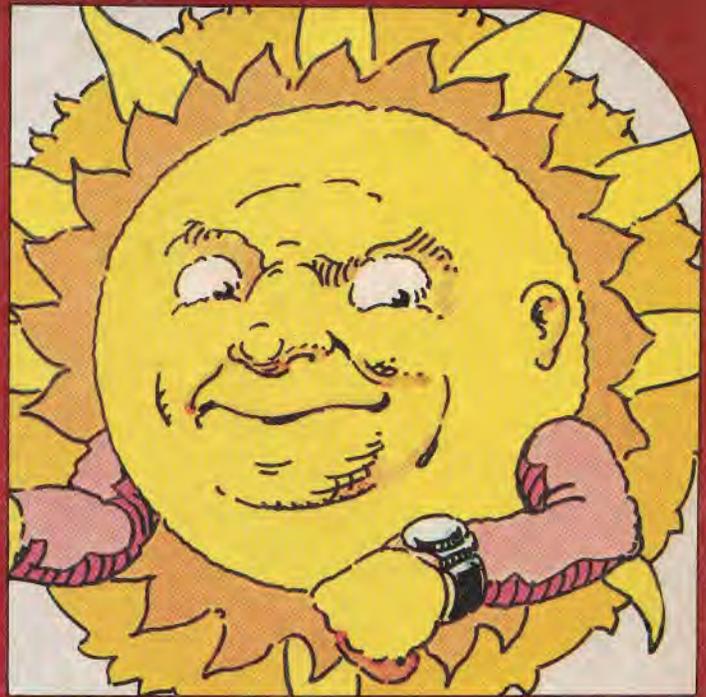


321 CONTACT™

Inside: The Great Game Explosion!



THE GREAT GA

ELECTRONIC TOYS ARE CATCHING ON LIKE WILDFIRE

by Dian G. Smith



Above: Toy inventor Bob Doyle plays his newest game, "Wildfire," with his son Derek. Bob, his wife Holly, and Holly's brother Wendl have invented more than a dozen games and toys.

Right: The Doyle family plays their electronic board game, "Stop Thief!"



m € EXPLOSION



Would you like to have a toy robot that obeys your voice and no one else's? Sounds impossible? It's not.

Amazing new toys are being invented all the time. Many of them use computers. These "electronic brains" make toys more complicated and more exciting than ever before. "We're not that far from building a real R2D2," says toy inventor Bob Doyle.

You may not know Bob's name, but there's a good chance you have seen one of the toys he and his wife invented. The first one was Code Name: Sector, an electronic submarine chase game. Soon after came Merlin, a brainy little game that plays back musical notes and can be a tough partner in tic-tac-toe. The Doyles' newest electronic games are Stop Thief, a board game, and Wildfire, a pinball machine small enough to hold in your hands.

Meet Micro-Cosmos

Six years ago, Bob Doyle started a small company for toy inventions, called Micro-Cosmos. Its headquarters is the third floor of a big red house on a quiet street in Cambridge, Massachusetts. Its staff is only three people: Bob, his wife Holly, and her brother, Wendl Thomis.

On the second floor of the house, the Doyles live with their two sons, Rob, 14, and Derek, seven. Rob and Derek also work for the company. Their job is to test their parents' toys. "We've got almost every electronic game there is," says Holly, "and our kids have played them all. We know we've got to invent a really good game, or the boys won't play ours."

Getting Started

The Doyles worked as scientists before they became toy inventors. Bob and Holly were both astronomers. Wendl was a computer scientist. They used computers in their work. For fun, they played games—like chess—with computers. But these computers weren't toys. They were huge machines that cost thousands of dollars.

In the early 1970s, scientists began making computers in much smaller sizes. As more of them s.



Above: Sitting on Holly Doyle's finger is the tiny "electronic brain" that makes "Merlin" work. It's called a computer chip.

Right: Before Bob and Holly began inventing toys, they worked as astronomers—space scientists!

Below: Rob Doyle, 14, is a computer whiz. Here he is playing a maze game on the family computer.



were made, the price began to come down. By 1975, tiny, low-priced computers were being used in everything from watches to pocket calculators.

That's when Bob, Holly and Wendl first started making electronic toys. They came up with four different models for electronic games, and took their ideas to Parker Brothers, the big game company. At first, Parker Brothers thought electronic games would cost too much. But finally they said yes. Within two years, the Doyles' first game was being sold in stores.

How to Invent an Electronic Toy

Every time the Doyles invent a toy, they have to go through a long process. The first step is brainstorming. "That part's the most fun," says Holly. "We all throw around ideas about different kinds of games." For example, Wendl came up with the idea for Code Name: Sector. When he was in the Navy, officers were trained to chase electronic pictures of submarines on a sonar screen. The officers loved it, and he figured kids would, too. Parker Brothers agreed.

When Micro Cosmos gets a go-ahead on an idea from Parker Brothers, Wendl, Holly and Bob do more brainstorming. Sometimes, they also have to

do extra research. For Wildfire, they went to all the penny arcades in Boston to study how pinball machines work.

When all the research is done, Holly and Wendl program the games on a big computer in their office. Programming means telling the computer what to do in every possible situation, if any button is hit.

The next step is to make a small model of the game. After that, they record the program onto a smaller computer that fits inside each game.

"Then, Parker Brothers makes lots of changes," says Holly. They changed Stop Thief from a spy game to a cops-and-robbers game. They also made Merlin thinner and smaller than the Doyles' original model. Finally, the games are ready to be sold in toy stores.

Top Secret Ideas

What new games are being worked on at Micro-Cosmos? The Doyles say they have a huge file of super-duper ideas. They say there are five or six more games from the original *Merlin* model that didn't fit into the final game. As for the future, anything's possible. "It is only limited," says Holly, "by the imagination of game inventors."

Now that you've read about the Doyles, it's your turn to get into the act. What do you think the toy of the future will be? A racing car that runs across your ceiling? Or will it be something really wild?

The choice is up to you. We want you to send us your drawing of the toy of the future. Be sure to tell us what it does. We'll choose our favorites and award each winner a 3-2-1 CONTACT T-shirt. Send your toy invention, along with your name, age, address and T-shirt size to:

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