From Pong to pow: Video game evolution

Technology
By Kevin Maney

WASHINGTON — The feeling starts as I walk across the floor of a traveling exhibit showing the history of computer games. At first, it's the sounds — the lub-dub of Asteroids and the cartoonish breaking-dishes noise of the crashing cars in Sprint.

I know I'm here for the education and perspective. The exhibit of working video games from the 1970s to today is called Videotopia and was set up here by the Capital Children's Museum. It shows how arcade video games contributed to the current computer boom. Games pioneered the use of read-only memory chips and microprocessors. They spawned entrepreneurs such as Steve Jobs of Apple Computer and Nolan Bushnell of Atari and Commodore. They introduced millions of people to the idea that you could look at a computer screen and enjoy it.

But the heck with this professional-sounding stuff. At Videotopia, the public is welcome to play the games. And toward the back is the one that whisks me to the mid-1970s and the cavernous Footsball Palace in Nags Head, N.C., where I got my video game education on summer vacations. The game is Atari Football. It stands like a table. Its black-and-white screen lies flat on top and is populated by moving X's and O's on a football-like grid.

At each end of the table is a pair of controls. One is a button that chooses the play. The other is a track ball that has the heft of something you'd use in lawn bowling. The track ball controls one of your players, and to make that player "run" quickly, ya gotta stand to the side and wildly spin that baby with two hands.

Used to play it for hours with my brother. Luckily, Al Farber, who works for the museum, used to play it with his brother. For about 20 minutes, you could see two whooping boomers in business clothes pawing at their track balls like dogs racing to unbury a bone.

Then we got back to education and perspective. The fact is, the exhibit isn't just fun. It's fascinating. For one thing, it drives home in a very tangible way how far computers have come in a fairly short time. The newest, cutting-edge games at the exhibit have holographic video images. The oldest are a hoot in their monochromatic simplicity. As Farber says, "It's disturbing that something has become an artifact in my lifetime."

It also shows how far we, the users, have come. Nothing drives that home better than Computer Space, the first commercial video game. Never heard of it? There's a reason.

At the exhibit, Computer Space is a garish red plastic blob that looks like a giant alien eye socket. In the socket is a black-and-white screen. White dots on the black background are stars. A white triangle is your spaceship. Little flying saucers fly around and try to shoot you. You shoot back. You have four controls: thrust, fire, left and right.

The public couldn't handle four controls. They couldn't handle a free-flowing game on a screen. For most people, it was the first time they'd ever seen a computer screen. The game came out in 1971 and bombed.

Computer Space was made by Nutting & Associates. One of its employees was Bushnell. When the game fizzed out, Bushnell left to form his own company. He wanted to call it Syzygy, but a roofing company had the name. He settled on Atari and made a much simpler game with one control: a knob that turned left or right. The game was Pong. This one, the public could handle. Pong was a hit.

From there, the games got better and started bringing pioneering technology to the public. In 1974, Tank was the first video game to use ROM, or read-only memory. ROM added detail to the screen. A year later, Gunfight, in which two line-drawing cowboys face off, was the first to use a microprocessor. Games got more flexible and unpredictable.

In 1976, Jobs, working at Atari, designed Breakout. He was helped by his friend Steve Wozniak. The two used parts that they, ahem, borrowed from the Breakout project to build their pet device, the Apple I computer.

Video games took off, and the most popular from this golden era are at the exhibit: Space Invaders in 1978, Asteroids in 1979, Missile Command in 1980, Frogger in the early 1980s.

After that, I get lost. My video game days ended, and I'm just not familiar with the screeching fighter jets and bloody hand-to-hand combat that came later. But the games have kept breaking barriers, moving into virtual reality, data gloves and holographics, all the while pulling the public along for the ride.

Oddly enough, a few days later I went to a demonstration of some of the most advanced scientific uses of computers on networks. Don Stredney of Ohio Supercomputer Center was showing a system that lets surgeons examine 3-D slices of a model of a patient's brain to look for tumors. He said, "One of the things that drives this will be gaming technologies." I suggested he visit the exhibit. He said he would.

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