

Man Against Machine

Some of the most powerful microcomputers in use today are to be found not in offices or high-tech factories, but in amusement arcades, cafés and bars

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Alien Invaders

'You've got to zap him before he gets to ground zero, or he's going to clone... Watch it! The Mothership's popping her Pod... you'd better use the Smart Bomb...
No, not dialogue from a sci-fi movie, just conversation overheard in an amusement arcade

In 1971 a young man named Nolan Bushnell spent a great deal of time and energy in trying to persuade cafés and bars around Sunnyvale, California, where he lived, to try out a new type of game that he had invented. It was coin-operated, which meant instant money for the subscriber, but involved a totally new concept that we know now as interactive television.

Eventually a bar owner agreed to try it out. Two days later he was on the telephone to Bushnell, complaining that the game had broken down. When Bushnell arrived at the bar, he discovered that the fault was a very simple one — the coin box was full, and the slot jammed. He solved the problem by installing a much larger coin box.

Pong — a derivative of table tennis, or ping-pong — was the precursor of all the exciting and innovative microcomputer-based arcade games that are now to be found all over the world. It is perhaps interesting to note that, while Bushnell was the first to suggest that games like table tennis could be simulated by a computer, he had still not made the essential conceptual breakthrough — his

game required two human players to compete against each other, rather than allowing one player on his own to pit his wits and skills against the machine. It took a surprisingly long time for the next generation of arcade games to come along. It wasn't until 1977 that a Japanese company called Taito arrived on the scene with the hugely successful Space Invaders.

In modern terminology, Space Invaders is known as an 'alien zapping with shields' game. The player moves his firing station along the bottom of the screen, dodging behind shields whenever he feels threatened, and firing at an ever-advancing line of stylised aliens, who fire back at him at random intervals. The rhythm of the aliens' advance is totally predictable, and is accompanied by an appropriate two-tone electronic noise that keeps pace with its slow acceleration. When described thus, it sounds really quite simple, but the overall effect is mesmeric and compelling.

The original Space Invaders used a monochrome television display and raster scan