

InfoWorld

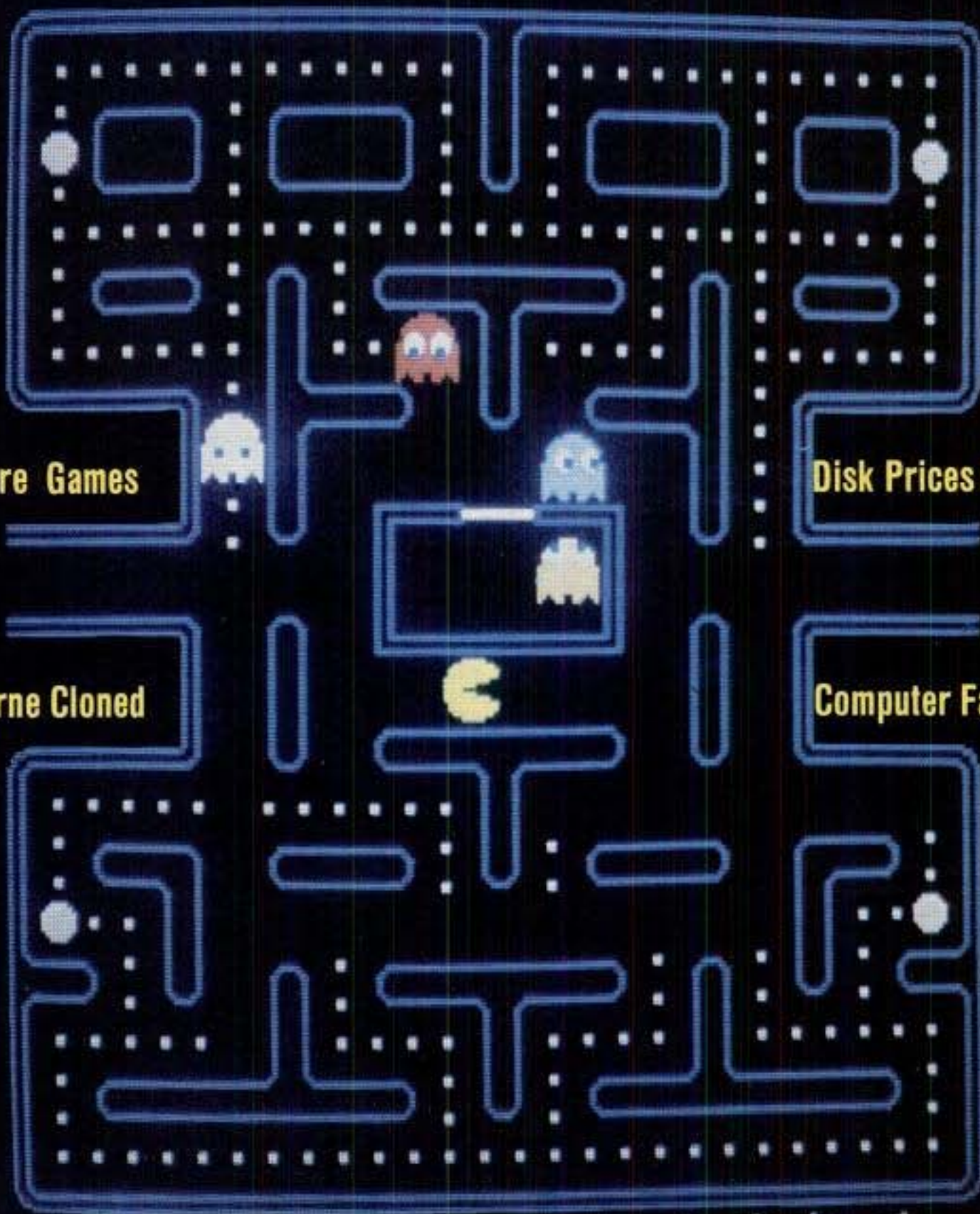
The Newsweekly for Microcomputer Users

April 12, 1982

Volume 4, Number 14

\$1.25

SUPERGAMES



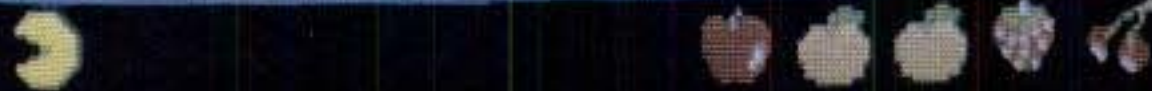
Bizarre Games

Disk Prices Plunge

Osborne Cloned

Computer Faire

NEWSPAPER



Chip set marks difference between arcade and home games

By John C. Dvorak

Playing Galaxian or Space Invaders on an Apple never seems to have the spirit of the arcade game. The controls seem sluggish and the action seems slower. The typical resolution on most popular video games is only 320 × 200. The Apple can display 280 × 192 dots in the high-resolution mode. The difference, then, is not in the display, but in the use of dedicated chip sets and a Z80 to supervise those chips.

One of the leading American companies in arcade-game design is Dave Nutting Associates in Chicago. The firm developed and patented an important custom chip set that is used in

many arcade games. There is a special data-handling chip and a dedicated screen handler. A third chip is a custom I/O chip that deals with joysticks, firing buttons and other player controls.

This three-chip system was developed out of work done to create the famous Bally Arcade game Gunfighter. The original of that game used an 8080 processor. In fact, Taito of Japan used this three-chip set to develop the original Space Invaders.

The early work on these dedicated chips was done by Dave Nutting and Jeff Fredricksen in 1974. The same chip set runs the Bally Home Arcade

system. The only difference is the resolution of the video output.

The newest effort using this system is a new game being released this week called ROTO: A small, round creature creates his own maze by turning into some kind of buzzsaw as he roams the screen trying to save hostages. "We've done marketing surveys on this game and it has the same attraction as Pac Man," said game designer Bob Ogden. "In fact, Pac Man players prefer it."

The games produced at Nutting Associates are written in a FORTH-like language called TERSE. TERSE is described as a FORTH with extensions and special graphics commands.

If ROTO takes some business away from Pac Man, it won't make much difference to Bally Manufacturing—the firm owns the license for Pac Man; it owns Midway Manufacturing, who will release ROTO; and it owns Nutting Associates.

Most of the arcade games on the market are still designed by the Japanese. Recently the major Japanese manufacturers have begun to hint that they may want more royalties than they are currently getting. Since Bally has a domestic-development team working full time, we can assume that there will be plenty of new games to take the place of the old. ■