

## CAD That's Child's Play

*Soft Play Inc. relies on its CADD system to design, manufacture and ship playground equipment.*

by Mark Caldwell

There is a McDonald's a few miles from Disney World in Orlando, Fla., with a peculiar problem: parents sometimes cannot maneuver their children past the parking lot and into the lines for Big Macs, Chicken McNuggets and french fries. The reason? An irresistible attraction in front of the restaurant — a striking and hugely popular PLAYPLACE® designed by Soft Play Inc., of Charlotte, N.C. It is a colorful and inviting extravaganza on two levels, with slides, more than 100 feet of twisting, crawl-through polyethylene tubes, heavy mesh nets for climbing, and (for harmless free-for-alls) two pits

filled with soft, hollow, multicolored plastic balls.

Though the McDonald's PLAYPLACE is unusually large, Soft Play has designed hundreds of comparable installations for businesses nationwide — restaurants, hotels, motels, department stores, shopping malls, amusement parks and day care centers. No two need be exactly alike — customers can have the parks built to order, since the designs are modular. Soft Play makes 27 different play components — slides, climbing nets, ball pits, rigid crawl tubes, punching bags and many others. These, in turn, are all anchored to a steel de-

sign grid that comes in four-foot units that can, like a giant Erector set, be laid out in a vast range of shapes and sizes. The result is a near-infinite variety of eye-catching and crowd-building play configurations: the company specializes (for example) in pirate ships, complete with cargo climbs.

Soft Play relies on an advanced CADD system to design, manufacture and ship its PLAYPLACE's with remarkable ease and rapidity. According to Ed Kovacic, the company's Technical Design Manager, Soft Play's system includes Compaq 386 PCs, a logitech mouse, and DataCAD software from CADKEY

Inc., the Connecticut-based developer of advanced design and engineering applications. *DataCAD*'s advantage over comparable programs, Kovacic says, is its uniquely powerful ability to draw in true 3-D. Soft Play's designers, John Bernesser, Bob Riddle and Amy Reinechke simply enter the standard Soft Play components into a database, then call them up and recombine them at will. They can easily present a client with multiple designs, and the system allows the quick production of site plans, perspective drawings, and 3-D walkthroughs (or rather crawl- and climb-throughs).

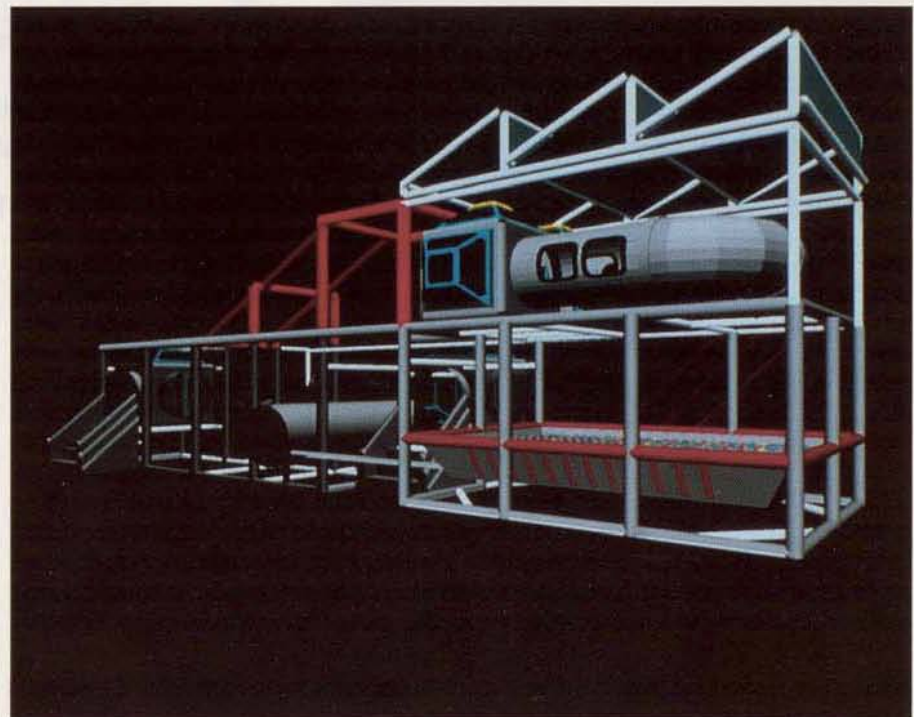
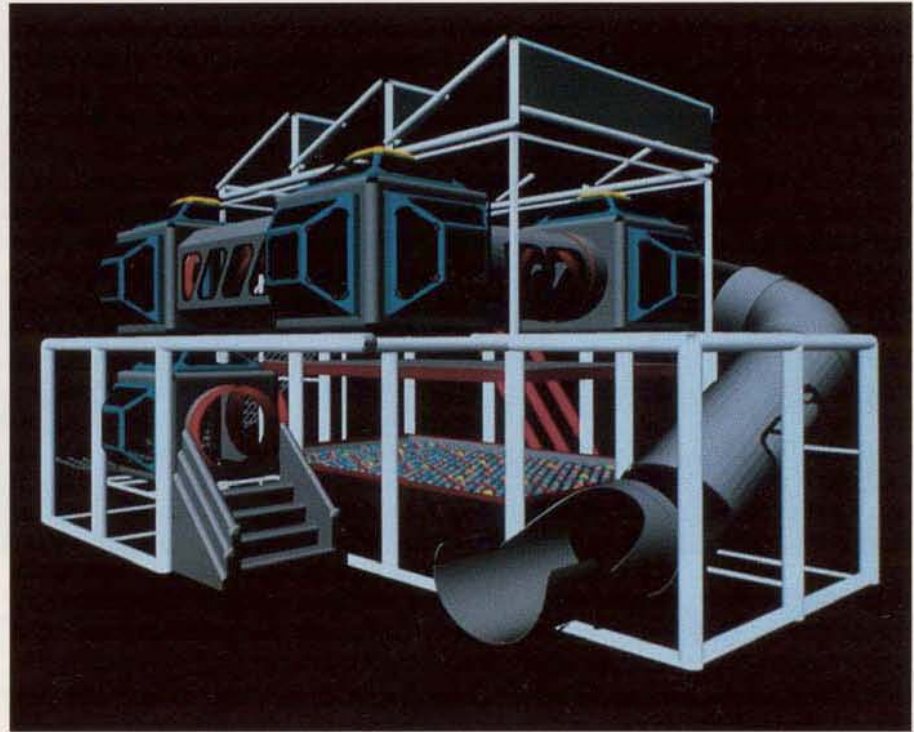
The latter is a particularly useful function, because it allows Riddle and Bernesser to catch design flaws early on. "We don't work with straight lines," Kovacic says; the parks are full of curves, slopes, junctions and angles. Thus *DataCAD*'s ability to furnish full, true 3-D visualizations from various angles can nip potential construction problems in the bud. "Something can look fine in one view," Bernesser says, "but then, when you switch to another, oops — you suddenly see that two crawl-through tubes you thought were connected are really three feet apart."

And that, in turn, makes it easier for the firm to satisfy its primary obsession, safety. The parks need to be attractive and fun for small gymnasts; but they also have to be absolutely hazard-free. "Our safety record is outstanding," Kovacic says, "but when you're dealing with kids, guarantying safety is a difficult proposition." Are the angles of incline on slides steep enough to afford thrills, but gentle enough to be harmless? Curves and angles have to be scrutinized; projecting and potentially dangerous parts have to be eliminated. The result, Kovacic says, is that "we take more advantage of *DataCAD*'s 3-D than 90 percent of its users." The designers do not release a plan until they have scrutinized every component from every angle, and (at least on the computer screen) crawled through every tube and zoomed down every slide.

In recent months, Soft Play has expanded its use of the software; Bernesser and Riddle now use it not only to design play parks for clients, but to engineer brand-new compo-

nents. Prototypes once had to be built in Soft Play's warehouse, a laborious and expensive process; now they can be designed, checked out, tinkered with and improved on the computer screen. And they now use *Velocity*, a new stand-alone modeling application from CADKEY that converts *DataCAD* files into startlingly realistic renderings in 256 colors, with a variety of surface

textures. That, Kovacic says, allows Soft Play to furnish its clients with highly detailed drawings of proposed models. And that is important both to customers, who use the play parks to attract crowds and build business, and to Soft Play's own designers. "Because it doesn't matter what equipment a play park's got," Kovacic says, "if it doesn't look good."



*Detail of a ball pit (left, top) and a tube crawl (left, bottom) using the new Velocity application. Two of Soft Play's newest designs ("Voyager" above and "Explorer" below) are part of the "Fantasy Fleet" series.*