

Propellerhead Studios

Playing with the virtual and making it physical, Shane Dyer takes technology to the playground.

by Michael Bernstein

Fifteen years ago, it was de rigueur to take children's activities and bludge hammer them into computerized form, kids could move furniture around a digital treehouse, collect binrapped stuffed animals for a digital shelf, and even draw crude figures on digital walls. No wonder so many kids went back to actually drawing on real walls.

Shane Dyer, CTO of design firm Propellerhead Studios, has a different philosophy. "We're about finding out what's unique and interesting about virtual worlds and online gaming," says Dyer, "and extracting some of that to put back into physical products." As a young Silicon Valley toymaker, Propellerhead sports a playful attitude that belies serious engineering skill. Take their upcoming product with Mattel's Radica division: IM-Me, a wireless-enabled text-messaging toy for girls. From the outside it looks like a typical toy, sporting deep purple colors and a kid-friendly keyboard. Underneath the faceplate, though, is a full Internet application: wireless chat over your home Internet connection.

IM-Me embodies Propellerhead's design approach, artfully deploying technology to enhance an existing play model. Kids are already using chat worlds, but generally they do

not own their own computers, Dyer explains. Giving children a dedicated chat toy gets them off the family Dell. Other Propellerhead toys that follow this model include a pirate treasure hunt toy sporting a homing beacon-like treasure map.

Propellerhead's other approach is to take compelling online experiences and translate them into hybrid online-offline manifestations. While children are happy to play with, feed, and care for online Tamagotchi-like creatures, Dyer explains, wouldn't it be better if that animal were also alive in your lap? And if petting the dog in your lap could make the digital version happy too?

Technology like wireless networking isn't normally a cheap asset to toss into a child's toy, but Propellerhead believes it is integral to the next generation of toys. Dyer also leads Arraym, Inc., the technology firm that develops the wireless Internet technology for Propellerhead's toys. For the two companies, the Internet is a giant sensor system—one that can extend the interactivity of toys far beyond built-in, generalized patterns. While Tickle Me Elmo has an endearing set of reactions, he laughs the same way whether you're tickling him in Bermuda or Boston. With WiFi-enabling, your toy dog could know whether you led its digital

analogue, the rain means it shouldn't ask to go outside, or even if your best friend's dog misses you.

The main challenge in applying Propellerhead's philosophies lies in the technology: when you're building toys like these, you insert the technology as much as you insert the play experience. Toys like IM-Me require expertise in a number of areas: embedded systems, wireless communication, server technology, and sensor programming. This breadth is Arraym's forte. And the effective cost of creating these technologies for each toy is staggering.

"The reason why things have to be done in a new way," Dyer explains, "is that all this technology was designed for high-powered PCs—thousand-dollar boxes. When you go into toy world, the old ways are just too expensive." Tickle Me Nouveau Tickle Elmo might sell to a small subset of the population, but to truly compete in the marketplace, Dyer must drive the cost of electronics down as low as possible.

The toys of today have come a long way from playing with sticks in the mud. However, technology enabled or not, it still comes down to one simple thing: the toy itself. When the visceral experience has finally been perfected, Dyer explains, "it's a sense of magic."



IM-Me is a wireless-enabled text-messaging toy for girls.

