

TECHNOLOGY

Thinking About Tomorrow

How will technology change the way we shop, learn and entertain ourselves? How will it change the way we get news, protect our privacy, connect with friends? We look ahead 10 years, and imagine a whole different world.

January 28, 2008; Page R1

HOW WE PLAY GAMES

Within a decade, videogames will greatly narrow the gap with movies, as consoles and PCs get more computing horsepower and let game companies conjure more-lifelike characters.

Right now, for instance, faces on game characters often look lifeless and unnatural. Companies like Mova LLC of San Francisco are coming up with ways to translate the facial expressions of human actors into photorealistic digital replicas. Mova's method involves covering the actors' faces in phosphorescent makeup and photographing them using specially designed lights and cameras.

Initially, this technology will be practical only for movies, since it's much easier to render realistic expressions in a structured story than in an unpredictable, constantly changing game. But within a decade, game hardware will improve enough to make photorealistic characters possible, predicts Steve Perlman, the founder and president of Mova. And that change, he says, will increasingly blur the lines between games, motion pictures and television.

Mr. Perlman predicts that some movies will have interactive elements in them so that users can switch out of the linear story to play against other characters. If you're watching a "Harry Potter" movie, for example, you might switch out of the story to play a Quidditch match between broom-riding wizards. Games already do something like this today, with cruder graphics, by interspersing cinematic scenes between game play.

The way people play games is likely to change as much as the look of the medium. Nintendo Co. has already abandoned traditional videogame controllers with its Wii console, which uses a motion-sensing wand instead of the familiar buttons and joysticks. But researchers and game companies want to go even further -- and possibly abandon hand-held controls altogether.

For instance, companies like Israel's 3DV Systems Inc. are developing video cameras to precisely measure the movement of players as they stand in front of their television sets. Combined with more-powerful game systems, this technology will soon allow users to control the on-screen action of athletes, superheroes and soldiers with body movements -- no need for a controller at all. Even better: Players may eventually be able to place realistic replicas of their own faces on the characters.

--Nick Wingfield