What will the FUTURE be like?

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The technologies that will transform our lives decades from now are already taking shape in laboratories around the world. Innovative engineers and computer scientists working to create thought-controlled video games, robotic exoskeletons, and virtual reality that seamlessly integrates with the real world, help us to imagine what the Tech page of *The New York Times* might look like ten, twenty, or thirty years from today.

Mind-Reading Machines

Imagine a computer with no joystick, no camera, no keypad—just you, your thoughts, and a cap that reads those thoughts and translates them into action on the screen. Such mind-reading devices already exist and are on the market. How do they work? And how far can this go? *NOVA scienceNOW* meets scientists at the forefront of the mind-machine interface, including researchers who've allowed a paraplegic to control a robotic arm with her mind, and others who are mapping our brains to decipher the secret code of our innermost thoughts.

Humanoid Robots

When you think of the future, you think robots. But before robots can be on hand to rush into burning buildings or even do our laundry, roboticists have to solve a major engineering problem: how do you make a machine walk on two legs without falling over? Walking might be easy for us, but it's a nightmare for a robot. *NOVA scienceNOW* finds out why in interviews with scientists building all kinds of bi-pedal machines from soccer-playing robots, to robotic suits that can be worn by humans to make us stronger or even help the paralyzed walk again.

Augmented Reality / Digital Universe

Augmented reality has gone beyond smart phones and goggles and video games. Today, engineers are developing devices that can project three-dimensional virtual images of objects and even people into the real world. What electronic innovations remain before the *Star Trek* "Holodeck" becomes a reality? And what will our further immersion in a digital universe mean for us as people?

Profile: Adrien Treuille

Is it possible that in the future the combined efforts of half a million video gamers could help cure a disease? That is the idea behind computer scientist Adrien Treuille's groundbreaking games, including Foldit, which turns protein-folding—a task that is difficult for even the most powerful computers—into a puzzle that even a ten-year-old can master in minutes. Treuille plans to use his clever crowd-sourcing approach to tackle the mysteries of another biological powerhouse: RNA.

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