

## **Engineering Update #3: Watson, Nano Batteries, 3D Chips, and Mission: Impossible Gets Real**

- "Watson," no, not Sherlock's sidekick, but the famous supercomputer who beat the world's best human at Jeopardy, is going back to school. IBM is sending the Watson system to Rensselaer Polytechnic Institute, so it can improve its "thinking" skills. Because making robots more human always works out just fine.
- A new thumb-sized battery, called the NanoTritium can power microelectronics for over 20 years, and it is now available through City Labs. This battery could make the installation of micro-electronic devices easier, especially in locations that are expensive, dangerous, and hard to reach.
- Until recently, the development of practical 3D microchips has been stifled by the issue of moving data and signals from one layer of circuitry to another, which ultimately results in a lot of heat. Now, physicists at the University of Cambridge have developed a vertically layered spintronic shift register, which allows the information to be passed between layers.
- As military electronics have become less expensive, they can become casualties themselves, making it possible for the secret information they hold to be scavenged by the enemy. Enter DARPA's Vanishing Programmable Resources program, which is currently investigating the use of special electronics designed to self-destruct on command. That's right, Mission: Impossible is becoming a reality.

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