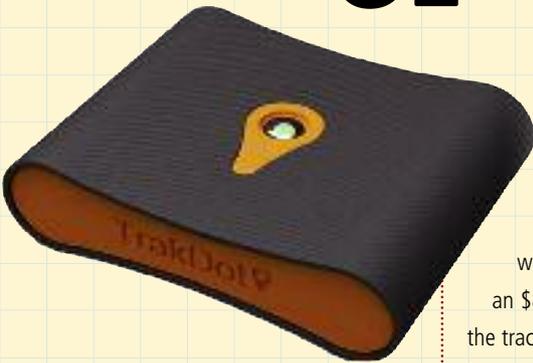


# TOOLS of the TRADE



## TrakDot

One of several products announced at the Consumer Electronics Show (CES) in January, the TrakDot from GlobaTrac is a GSM (Global System for Mobile communication) tracking device for your luggage. Pack it in your suitcase, turn on the device with the button on the front, and it will notify you through your cellphone that the device is on and working. When you and it arrive, hopefully at the same airport, it will send a message or e-mail—you decide which you would prefer. It runs on two AA batteries and is FAA compliant. It shuts down when the plane takes off and then turns back on after landing. It then sends a text message or e-mail to let you know when it's nearby, or you can follow its progress with an app you download onto your iOS or Android device. It will also ping you when it comes within 30 feet of

where you are waiting so you know when it's on the carousel. The TrakDot will retail for \$49.95, with an \$8.99 activation fee for the tracking service and a \$12.99 annual service fee. The company has set April 2013 as the date for release.

[www.trakdot.com](http://www.trakdot.com)

## PowerDock 5

Griffin's PowerDock 5, launched at CES, has a footprint that's equal in size to one iPad resting on the counter. Within its plexi dividers, however, you can stack five iPads or other Apple devices to charge all at the same time. No need to remove the iPads from their covers, and each tablet, iPod, or iPhone has its own input. The illuminated

power status light indicates when the dock is charging.

Cables for each device stow out of the way when not in use, but the cables aren't included with the unit. The charge is 10 watts for each charging bay, and the list of compatible devices includes the original iPad and second, third, and fourth generations, as well as iPad mini; iPod classics, Nano, and iPod Touch two, three, four, and fifth generations; and iPhones 3G, 4, 4S, and 5. Another new charging device is the PowerBlock Universal with ChargeSensor, an AC-to-USB plug-in charger that senses the charging requirements and provides that charge for any device plugged into it. The PowerBlock will accept any AC power source from 100 to 240 volts, converting it to the

right charge for your smartphones and tablets.

[www.griffintechology.com](http://www.griffintechology.com)

## SpareOne Phone

The SpareOne is an emergency cell phone designed for natural disasters like Hurricanes Katrina and Sandy or the Indian Ocean tsunami. The single AA battery will last for up to 15 years, so you can store one of these phones in your emergency supplies for use later, much later. Once you pull the tab to connect the battery contacts, you can use the phone or the flashlight function on the SpareOne—the flashlight will stay on for 24 continuous hours, and the phone will give you 10 hours of talk time with a SIM card installed. Without a SIM, the phone can connect you to emergency services. The AA battery is replaceable. There's no display other than the blinking blue lights, which indicate battery on and connection established, but the sounds provide all the guidance you need for the functions. You can preset nine phone numbers, and the lock but-



# TECH FORUM

## Accelerating Intelligence at Google

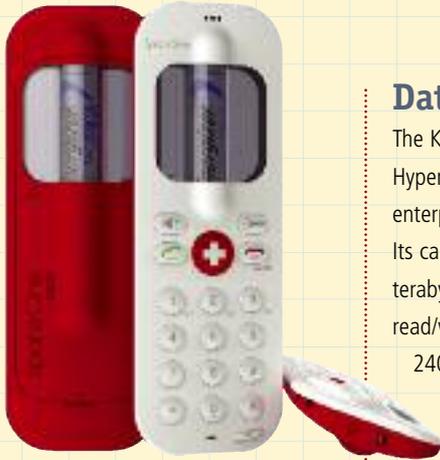
By Michael Castelluccio, Editor

According to the latest numbers on Google's 2012 Financial Tables page, the company has 53,546 employees. In December, one of the new hires on that list attracted a lot of attention: Raymond Kurzweil, inventor, futurist, and the man called the "restless genius" by *The Wall Street Journal*, joined the Mountain View company as a director of engineering "to work on new projects that involve machine learning and language processing."

Kurzweil's AI (Artificial Intelligence) credentials are world class, and his experience goes well beyond the theoretical. He builds the things he thinks up. Founder of a number of companies—Kurzweil Computer Products, Kurzweil Applied Intelligence, Kurzweil Music Systems, and the Medical Learning Company—he has been inducted into the National Inventors Hall of Fame and was awarded the prestigious MIT Lemelson Prize for innovation. His inventions include the Kurzweil Reading Machine for the blind and a line of Kurzweil Music Synthesizers. His most recent project was Blio, an e-reader software platform. His website, [www.KurzweilAI.org](http://www.KurzweilAI.org), covers AI and general technology, but for Kurzweil, the AI has come to stand for Accelerating Intelligence, not Artificial Intelligence.

Now that he's moving from Cambridge, Mass., to Mountain View, Calif., the question resonating on both coasts is "What's he going to do at the Googleplex?" Although the Google Voice platform seems a reasonable place for him to land, somehow that doesn't cover all the speculation surrounding the move. Ray Kurzweil is days away from turning 65 years old, and restless geniuses aren't likely to move cross-country just to incrementally add to what they have already done with text-to-speech language recognition and AI. When you factor in the likelihood that a company like Google has more than a few projects they might want to keep close for the time being, and that Google is wildly diverse in its interests—

*continued on next page*



### DataTraveler

The Kingston DataTraveler HyperX Predator 3.0 is an enterprise-size USB flash drive. Its capacity is an amazing one terabyte (1TB), and the read/write speeds are up to 240MB per second read and 160MB per second write. This is the world's largest-capacity USB

3.0 flash drive. The 1TB model is to begin shipping in first quarter 2013, with the 512GB version already being delivered. The casing is a zinc alloy for durability and shock resistance, and it comes with a custom Kingston key ring and a HyperX valet keychain. Both capacity drives are backwards compatible with USB 2.0. Both drives offer the convenience of size at about 1" × 2.8" without a key ring and 1" × 3.8" with the ring. Both are very expensive compared to larger portable memory drives with similar capacities. [www.kingston.com](http://www.kingston.com)

ton prevents "pocket calls" that will waste your battery. There are two GSM frequencies available, and you can even purchase a two-pack (two phones), one for each GSM band. SpareOne can serve for international destinations, where you can activate the phone after purchasing a local SIM card with prepaid minutes. Installing the card is as easy as snapping off the back and slipping in the card. The phone includes a waterproof flotation pouch. Check the [www.spareone.com](http://www.spareone.com) website for GSM frequencies and coverage.



everything from cloud offerings to cars that drive themselves to computers you wear like glasses—and the possibilities for a Raymond Kurzweil seem to widen. Add in the main theme of Kurzweil's recent writings (what will happen when computers exceed human intelligence), and you can come up with some really interesting speculations about how he might be used.



Three of Kurzweil's most recent books are *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*, the Amazon best-seller *The Singularity Is Near*, which covers some of the same ground and then builds on it; and, finally, *How to Create a Mind: The Secret of Human Thought Revealed*. Of that work, Rafael Reif, president of MIT, says, "Ray has a way of tackling seemingly overwhelming challenges with an army of reason, in the end convincing the reader that it is within our reach to create nonbiological intelligence that will soar past our own. This is a visionary work that is also accessible and entertaining." This idea of a nonbiological intelligence has been evolving over the span that produced these three books, and Kurzweil recently has focused in on when we will reach that tipping point.

Evidence of resonance for these same notions at Google has already surfaced. Rick Smolan, the creator of *The Human Face of Big Data*—both the book and the app—had a conversation with his friend Marissa Mayer (current CEO of Yahoo!) back when she was an engineer at Google. They were discussing the reach of big data, and Mayer said, "Rick, it's like our planet is developing a nervous system."

Satellites and fiber networks are already in place and expanding exponentially, so will these systems serve a planetary intelligence that can accept human nodes into its wiring, all of it forming a mega PC (planetary computer)? And will that planetary intelligence be able to be directed?

### KURZWEIL'S JOURNEY

As a futurist, Kurzweil frequently makes predictions about where we're going. Two of his more famous guesses about the positions of human and machine intelligence involve grandmaster chess and the Turing Test.

In the mid-1980s, he predicted that a computer would be able to beat world chess champions by 1998. In 1997, IBM's Big Blue defeated the Russian grandmaster Garry Kasparov in a six-game match. Previously, Kasparov had the highest rating of any player in the history of the game. The defeat

actually moved the grandmaster to abandon the game and to wander off into the wilderness of Russian political life.

An interesting footnote to this prediction is the oft-forgotten second half of Kurzweil's guess. Chess traditionally was seen as the most intellectualized human contest. That was why some very smart people thought a machine would never defeat a human champion. Kurzweil pre-

dicted that once a machine achieved preeminence, the notion of chess as the ultimate intellectual endeavor would be abandoned. He was right.

The Turing Test, in a roundabout way, gets to the question of whether machines will ever be able to think. The game is simple. A human sits in one room communicating with two other beings, hidden from his view in other rooms. One is a person, and the other is a computer. When we reach the point where the human can't tell the difference between the computer and the person, the test is over. Machine and human intelligence at this point will be indistinguishable.

In February 2011, when IBM's Watson defeated the human champions, Ken Jennings and Brad Rutter, in the Jeopardy Challenge, some thought we had witnessed proof sufficient to declare the Turing Test unnecessary. It wasn't because Watson had read 200 million pages of content and remembered it all. It was because it could understand the language of the questions and answers along with the nuanced ironies, puns, and idioms that make English, or any language, a lifelong study.

Kurzweil predicted in his 1998 book *Spiritual Machines* that the Turing Test will be aced by a computer by 2019. That's six years from now, yet meanwhile Watson is being retrained in the vocabulary and knowledge base of medicine in order to teach and to become a marketable diagnostic machine. If the test is passed on or before the 2019 date, it's likely the convergence of the two species of intelligence will be met while Kurzweil is still employed at the center of one the management systems for a great planetary nervous system.

How will Raymond Kurzweil fare at Google? Well, he'll be at a company that's willing to make serious investments in areas of research that stretch the company and take risks many others would avoid. Google has abandoned some rather expensive experiments, and it doesn't seem to have flattened the pioneering spirit there. And Raymond Kurzweil is the kind of restless genius who might comfortably settle in there for a while. **SF**