56
THE GREAT LIGHTBULB CONSPIRACY
How the worldwide alliance known as the Phoebus cartel painstakingly engineered a shorter-lived lightbulb.
BY MARKUS KRAJEWSKI

36
All Smart, No Phone
Why voice calls on your smartphone still sound so lousy, and what carriers are trying to do about it.
BY JEFF HECHT

42
An Even Better Atomic Clock
Optical-lattice clocks, now the world’s most accurate, may one day redefine the second.
BY JÉRÔME LODEWYCK

50
The People’s Cloud
Clever use of peer-to-peer technology could make cloud computing a grassroots affair.
BY OZALP BABAOGLU & MORENO MARZOLLA

On the Cover Illustration for IEEE Spectrum by Serge Bloch
Spectrum.ieee.org

Google’s Driver’s License

In May 2012, Nevada Department of Motor Vehicles officials tested an unusual driver’s license applicant—a car. IEEE Spectrum obtained the records of this first robotic driving test. They show that officials were impressed but also that Google had a big hand in determining the nature of the test.

Opinion

Spectral Lines

At a crucial juncture, a remarkable engineer gave IEEE Spectrum a shove in the right direction.

By Glenn Zorpette

Back Story

Contributors

Technically Speaking: Mapheads and Roadgeeks

By W. Wayt Gibbs

Choosing Remote-Collaboration Software for Engineers

Tools & Toys: Boost Hearing With the Bean

Review: WikiMusical

IEEE Senior Member Dean Aslam has come up with a way to control everyday devices just by thinking about them. By inserting a wireless sensor in something that lies on the forehead, say, a baseball cap, the wearer can transmit a signal produced by brainwaves to another sensor in an object, such as a coffee machine, and turn it on or off.

The IEEE Computer and IEEE Robotics and Automation societies have made hundreds of videos available for free, with thousands more on the way.

When she’s not at her desk parsing lines of code, Member Amy Jones can be found driving large vehicles like excavators and tree-felling machines to test the software she’s developed for them.