

spectrum

09.09



BANDMATES:

Eran Egozy and Alex Rigopulos led the creation of the much anticipated The Beatles; Rock Band video game. COVER STORY

26 THE MAKING OF THE BEATLES: ROCK BAND

How two MIT geeks created a video-game phenomenon that reinvents the Beatles. *By David Kushner*

32 FOR YOUR EYE ONLY

Contact lenses with built-in LEDs and sensors can display images and text in focus, hastening the arrival of bionic eyesight. *By Babak A. Parviz*

38 RADIO'S REGULATORY ROADBLOCKS

If the new wireless technology you're trying to commercialize requires the U.S. Federal Communications Commission to rewrite its rules, be prepared for a long wait. *By Mitchell Lazarus*

42 DATA MONSTER

What do enterprise-class databases have in common with virtual monsters in computer games? Both will be supercharged by graphics-processing units. *By Andrea Di Blas & Tim Kaldewey*

UPDATE

11 FUEL CELLS COULD POWER A STREETCAR REVIVAL

Hydrogen power is one way to untether trolleys. By Willie D. Jones

12 BRITAIN'S DIGITAL RADIO TRANSITION

- 13 FACE-RECOGNITION FAILURES
- 14 A HIGH-TECH OASIS OPENS
- 15 A NEW BREED OF BROWSER
- 16 GRAPHENE MAKES TRANSISTORS TUNABLE
- **18 THE BIG PICTURE** Build your own synthesizer.

OPINION

7 SPECTRAL LINES

The ups and downs of working in an always-on world By Susan Hassler

10 FORUM

Readers do the math on green energy and reconsider broadband over power lines.

25 REFLECTIONS

Can a 95-year-old book still inspire new generations of engineers? By Robert W. Lucky

DEPARTMENTS

4 BACK STORY

A rock musician swaps his drumsticks for a camera.

6 CONTRIBUTORS

20 CAREERS

Who would have thought of blowing into an iPhone to make music? By Tekla S. Perry

21 GEEK LIFE

Technology is magical, and now, more than ever, magic is technological. By Susan Karlin

22 HANDS ON

Adding a motor to your bicycle is fun and rewarding—but it isn't cheap, even when you do it yourself.

By David Schneider

24 TOOLS & TOYS

Windows takes forever to boot, but there are speedups—and more are coming. By Daniel P. Dern

56 THE DATA

Weakened demand for energy could persist for a surprisingly long time. By Steven Cherry

COVER: PHOTO-ILLUSTRATION: SEAN MCCABE; HARMONIX FOUNDERS: JOSHUA DALSIMER THIS PAGE: JOSHUA DALSIMER