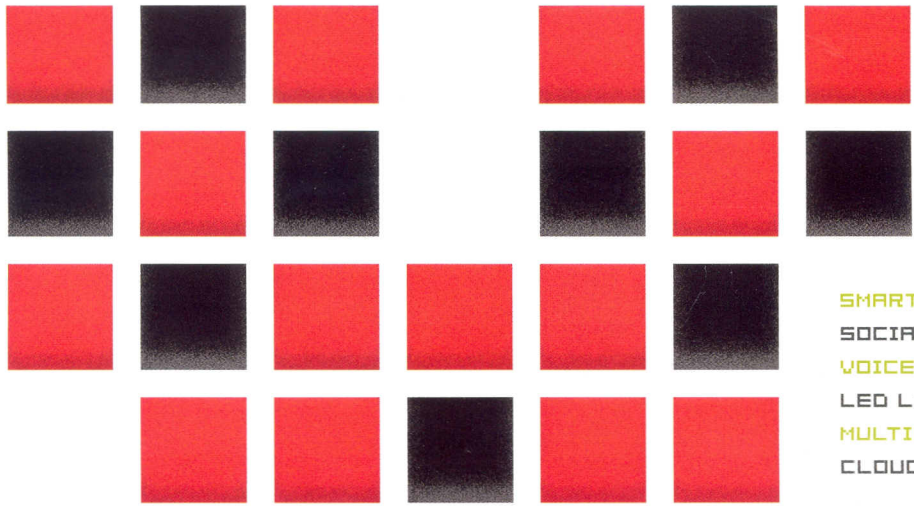


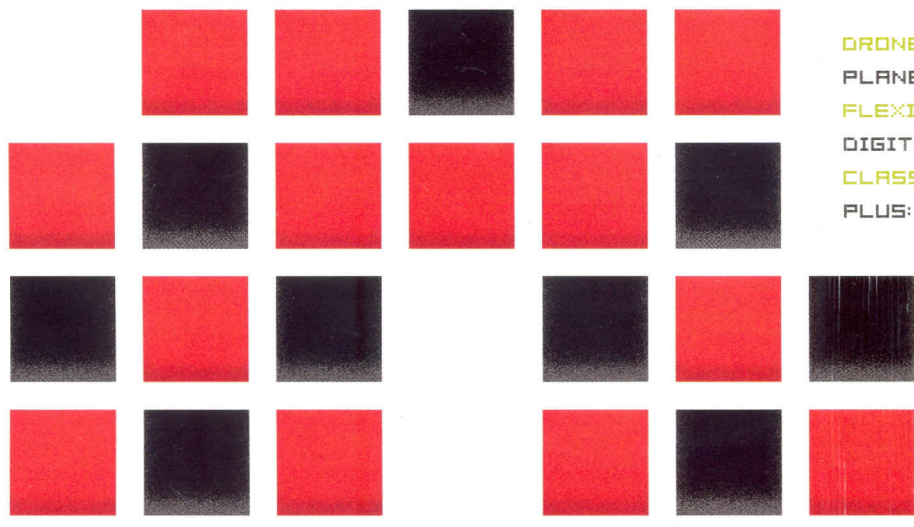
# IEEE Spectrum

THE MAGAZINE OF TECHNOLOGY INSIDERS



SMARTPHONES  
SOCIAL NETWORKING  
VOICE OVER IP  
LED LIGHTING  
MULTICORE CPUs  
CLOUD COMPUTING

## TOP 11 TECHNOLOGIES OF THE DECADE



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Wind power could wane in a warming world. *By Peter Fairley*
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Fortunately, English grammar is harder than hacking. *By Robert W. Lucky*

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- Over the past 15 years, the U.S. electrical grid has gotten far less reliable. *By S. Massoud Amin*

**SPECIAL REPORT** Today's kids will remember when digital technology at last connected our gadgets and ourselves; tomorrow's will be amazed to hear that things had ever been different. *By Phillip E. Ross p. 23*

#### #1 Smartphones

Finally, all pocketable gadgets have converged in a single device that goes everywhere and does everything. *By Joshua J. Romero p. 24*

#### #2 Social Networking

Eavesdropping on friends' private lives has never been so easy. *By Ariel Bleicher p. 27*

#### #3 Voice Over IP

Say good-bye to switching circuits, hello to digital telephony. *By James Middleton p. 30*

#### #4 LED Lighting

Solid-state lighting got white hot only when engineers mastered the blue arts. *By Richard Stevenson p. 34*

#### #5 Multicore CPUs

Processors have gone from having a single core to dozens. Where will it end? *By Samuel K. Moore p. 36*

#### #6 Cloud Computing

Your data can now wander the globe without you. *By Sandra Upson p. 39*

#### #7 Drone Aircraft

Unmanned aerial vehicles have given war fighters remote eyes—and arms. *By David Schneider p. 43*

#### #8 Planetary Rovers

Robotic rovers are expanding our knowledge of the universe by exploring strange new worlds. *By Erico Guizzo p. 47*

#### #9 Flexible AC Transmission

At last, engineers can make alternating current go exactly where they want it. *By Peter Fairley p. 51*

#### #10 Digital Photography

When cameras abandoned film for pixels, they changed the way we communicate. *By Tekla S. Perry p. 55*

#### #11 Class-D Audio

Now you can annoy your neighbors at higher fidelity—and with stunning efficiency. *By Glenn Zorpette p. 58*