



The dotcom bubble may have finally burst but there can be no doubt that the Internet has forever changed the way we communicate, do business and find information of all kinds. *Scientific American* has regularly covered the advances making this transformation possible. And during the past five years alone, many leading researchers and computer scientists have aired their views on the Web in our pages.

In this collection, expert authors discuss a range of topics—from XML and hypersearching the web to filtering information and preserving the Internet in one vast archive. Other articles cover more recent ideas, including ways to make Web content more meaningful to machines and plans to create an operating system that would span the Internet as a whole. --*the Editors*

TABLE OF CONTENTS

- 2  **Filtering Information on the Internet**
BY PAUL RESNICK; SCIENTIFIC AMERICAN, MARCH 1997
Look for the labels to decide if unknown software and World Wide Web sites are safe and interesting.
- 5  **Preserving the Internet**
BY BREWSTER KAHLE; SCIENTIFIC AMERICAN, MARCH 1997
An archive of the Internet may prove to be a vital record for historians, businesses and governments.
- 7  **Searching the Internet**
BY CLIFFORD LYNCH; SCIENTIFIC AMERICAN, MARCH 1997
Combining the skills of the librarian and the computer scientist may help organize the anarchy of the Internet.
- 12  **XML and the Second-Generation Web**
BY JON BOSAK AND TIM BRAY; SCIENTIFIC AMERICAN, MAY 1999
The combination of hypertext and a global Internet started a revolution. A new ingredient, XML, is poised to finish the job.
- 17  **Hypersearching the Web**
BY MEMBERS OF THE "CLEVER" PROJECT; SCIENTIFIC AMERICAN, JUNE 1999
With the volume of on-line information in cyberspace growing at a breakneck pace, more effective search tools are desperately needed. A new technique analyzes how Web pages are linked together.
- 24  **The Semantic Web**
BY TIM BERNERS-LEE, JAMES HENDLER, AND ORA LASSILA; SCIENTIFIC AMERICAN, MAY 2001
A new form of Web content that is meaningful to computers will unleash a revolution of new possibilities.
- 31  **The Worldwide Computer**
BY DAVID P. ANDERSON AND JOHN KUBIATOWICZ; SCIENTIFIC AMERICAN, MARCH 2002
An operating system spanning the Internet would bring the power of millions of the world's Internet-connected PCs to everyone's fingertips.