

SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication
Volume 145, No. 6, February 5, 1994

Alfred Scott McLaren	Publisher
Patrick Young	Editor
Blair Burns Potter	Managing Editor
Janice Rickerich	Production/Design Director
Greg W. Pearson	Associate Editor
Janet Raloff	Senior Editor
Ron Cowen	Environment/Policy
Bruce Bower	Astronomy
Richard Lipkin	Behavioral Sciences
Richard Monastersky	Chemistry/ Materials Science
Tina Adler	Earth Sciences
Kathy A. Fackelmann,	General Science
Elizabeth Pennisi	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Larry Norland	Editorial Assistant
Cait Anthony	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$39.50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC, 20036. Second-class postage paid at Washington, DC and additional mailing office. POSTMASTER: Send address changes to SCIENCE NEWS, P.O. Box 1925, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1994 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices:
1719 N St., N.W., Washington, DC 20036
(202-785-2255)

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:
P.O. Box 1925, Marion, OH 43305
For new subscriptions only, call 1-800-247-2160.
For customer service, call 1-800-347-6969.

Letters

Computers and the election process

Regarding "Making Votes Count" (SN: 10/30/93, p.282), I'd like to share my experience in the 1992 national election.

In Prince George's County, Maryland, the accountability requirement is satisfied by issuing each voter a computer-printed "white card." The card is handed to an election monitor as the voter enters the voting booth. Voters have four options for registering party affiliation: republican, democratic, libertarian, or none. Because of a computer error, white cards were never printed for libertarians!

While everyone else picked up his or her card, verified his or her identity, signed the registration book, and voted, registered libertarians were shunted to the side to have their eligibility individually verified through a sequence of telephone calls to the central records office and to have a white card improvised. This seems to have added 30 to 60 minutes to the time required for any liber-

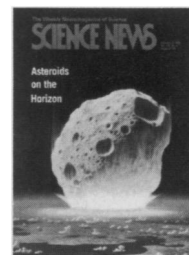
This Week

- 84 Siberian Site Cedes Stone-Age Surprise
- 84 Biodiversity helps keep ecosystems healthy
- 85 Gamma-ray bursts: A distant stretch?
- 86 Mixed news on hair dyes and cancer risk
- 86 Atlantic current gives climate the shakes
- 87 Self-assembly for sodium helixes
- 87 Experts debate merits of radiation studies

Articles

- 88 Rocky Relics

Cover: Even without their potential for colliding with our planet, near-Earth asteroids intrigue planetary scientists. Evidence suggests these rocky bodies, some of which pass by Earth closer than the moon, may provide a link between two other types of solar system debris: comets and meteorites. (Illus: Don Davis)



- 92 Cloning Human Embryos

Departments

- 82 Books
- 83 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

Board of Trustees — *Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Dudley Herschbach; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. Honorary Trustees — Edward Bliss Jr.; Bowen C. Dees; O. W. Riegel; John Troan.

President: Alfred Scott McLaren; Vice President and Business Manager: Donald R. Harless.

tarian to vote — for those with the patience to carry it through.

The "failure" was obvious in this case, and those responsible have been appropriately apologetic. But it should serve as a warning to those who introduce computers into the election process. Just as fraud may be less apparent in local elections, it may also subtly discriminate against minority populations.

*Charles Dorcey
College Park, Md.*

In November 1984, our county computer folks loaded the wrong version of the election program when they went to count the ballots. As a matter of course, our county sends a batch of voting cards to the neighboring county for a double check. The tallies didn't match. When our county reloaded the program and rechecked the ballots, the numbers came out a whole lot different.

Nobody could figure out what was going on at the time, so the big loser in the recount hired

me. As part of this exercise, I got hold of the code and learned a lot of things I wish I hadn't.

The vote count is really in the hands of the folks who supply the code. The code I inspected was the very epitome of "spaghetti code" and had several hooks in it for stopping the count, modifying the count, and generally making the outcome anything you want. A knowledgeable programmer could insert one prepunched card (instead of his own ballot, perhaps) and zero the count at that point.

In our case, the error in the count was honest. But that such an error could be made at all leaves one with uneasy feelings.

The sad thing is that no matter how many times you, I and the New York Times (7/29/85, p.1) raise this issue, everybody (including our county) is still using these programs. It is sobering to learn that in 1984, 60 percent of all voting machines in the United States were being supplied by software from one company.

*Emily Johnston
Westminster, Md.*