Briefings

edited by CONSTANCE HOLDEN

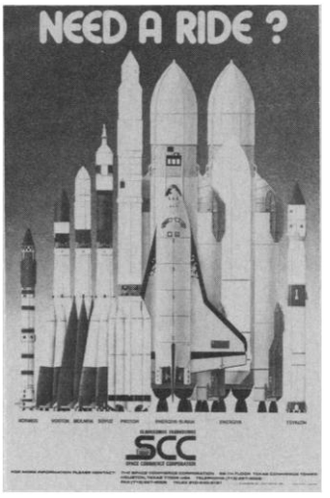
Outside SSC Funding Is Limited

The federal government may end up spending an extra $2 billion for the Superconducting Supercollider (SSC), according to Department of Energy Deputy Secretary Henson Moore. As might be expected, this news wasn't warmly welcomed in Congress. But it is particularly galling to many scientists who already blame the SSC for what they view as niggardly increases—5 to 6% a year—in funding for a host of basic research programs at DOE.

Major design changes (see *Science*, 12 January, p. 152) and revised construction estimates for the massive new particle accelerator are expected to drive the price from $5.9 billion to as much as $8 billion. But, says Moore, the federal government's partners in this venture are not expected to increase their contributions.

Officials from Texas, which has pledged to provide $1 billion to help build the collider in Waxahachie, have told Moore they will not provide additional support. Nor are foreign contributions likely to exceed the anticipated $1 billion in hardware and services.

So the additional money for the 54-mile proton-proton collider will have to come from the federal treasury. At a 9 March meeting, top Administration officials reaffirmed the Administration's commitment to the SSC whatever the cost. Moore says that the DOE stands by its long-stated promise not to allow the SSC to undercut other energy research programs. But many in the scientific community won't believe him.



Slick Soviet ads. *First McDonalds comes to Moscow; now it's Madison Avenue. The Soviet Union is demonstrating that it is just as capable of using capitalist techniques to sell its space launch services as Martin Marietta and other U.S. companies that retain pricey firms to develop marketing campaigns. This is one of a series of artsy messages prepared in Leningrad for the Texas-based Space Commerce Corporation. The 4-year-old joint Soviet–U.S. firm is trying to break into the market for commercial satellite launches. It is also offering to rent out laboratory space in the Mir space station.*

Say What?

It's not exactly what President Bush had in mind when he said "Read my lips," but in an effort to make better speech recognition machines, a young Johns Hopkins University researcher has now taught a computer to do just that.

"Lip reading is not just for the deaf; it's something that people do all the time," explains Ben P. Yuhas, whose work has just earned him a Ph.D. in electrical and computer engineering. In a crowded cocktail party, for example, it's difficult to understand what people are saying unless you watch their mouths. Since speech recognition machines can't do that—yet—they're almost useless in noisy environments such as a factory or an aircraft cockpit. So Yuhas set out to do better.

The heart of his lip reader is a densely connected web of processors known as a neural network. By feeding in video images of a man's mouth pronouncing various vowels, he trained the network to make good estimates of what each vowel must be, based on mouth shape and the positions of the lips, teeth, and tongue. When he then combined these estimates with the acoustic signal of the man talking, the system's ability to identify the vowels proved to be better than that of existing speech recognizers.

Yuhas cautions that his system is still far too slow and limited for practical applications. But by improving the hardware and then combining the neural network with conventional speech recognition systems, a practical system might be well within reach.

China Scholar Drops Stanford Suit

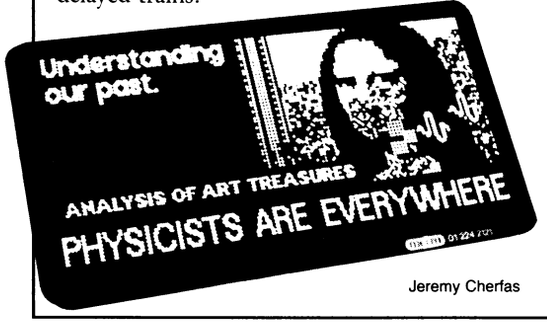
First he was expelled because his university found his research methods questionable; then he fought back, suing the university; and now former Stanford graduate student Steven W. Mosher has abandoned his suit. The reported reason: it was costing too much.

The Stanford anthropology department voted to kick Mosher out in 1983 after deciding that he had engaged in unethical conduct with regard to field research on a Chinese commune.

In 1986, Mosher sued Stanford, claiming the university had responded to political pressures from the Chinese government, which was upset at his descriptions of forced abortions. Now, having abandoned his suit, Mosher will have to turn over to the university all the research material he collected in China. He is currently director of the Asian Studies Center at the Claremont Institute in Montclair, California.

Brits Cool to Physics Ad Blitz

"One never sees the word 'physics' up in lights," mused Brian Davies, public affairs officer for the Institute of Physics, Britain's professional body. So Davies, whose job includes creating "an awareness of physicists and that they are everywhere," had an idea. Inspired by the animated electronics advertising billboards that adorn London's subway stations, he thought: Where better to sing the glories of physics than in full sight of the huddled masses waiting for long-delayed trains?



Jeremy Cherfas

The billboard company, intrigued by the idea, gave Davies a great deal, and for two glorious months (January and February), every 2 minutes around the clock, travelers in London's Victoria Station were exposed to a quick course on the social value of physics. Above the slogan "Physicists Are Everywhere," the billboard showed a remote sensing device captioned "cleaning up our environment." It showed a hand-held eye tester "creating wealth for industry." And it showed the Mona Lisa, tastefully dissolving into scintillating quanta: "Understanding our past. Analysis of art treasures." The final screen exhorted: "For more information about physicists and their work, please telephone 235-6111," an Institute of Physics hotline number.

Did the campaign work? "No, not in terms of what we had hoped for," confessed Davies. The hot line received "fewer than ten" calls. But at least physics was up in lights for a while.