

## Computer language

# When to go back to BASICs

*Dartmouth, New Hampshire*

BASIC is being debased, says one of its creators, Professor John Kemeny of Dartmouth College. Kemeny, still at Dartmouth's department of mathematics, where BASIC was developed more than twenty years ago, is now calling for a halt to the development of inferior versions of his never-patented language, saying that they are corrupting its purposes and causing chaos in the computer industry as well.

In 1963, Kemeny and his colleague Tho-

mas Kurtz changed the face of computer science forever by inventing BASIC, now probably the most widely used computer language in the world. Their objective was to create a novel learning tool for students. To begin with, they installed a collection of teleprinters linked with a mainframe in one part of a students' recreation room.

The arrival of the microprocessor made sure that BASIC would not be just a Dartmouth teaching aid. Now, after twenty years, Kemeny reckons that there are more than 100 versions of his language, most of them so inferior that he and Kurtz have become seriously concerned.

Kemeny says that the later versions violate the philosophy of the original. If only users would go back to BASICs, educationalists would have a superior tool, while programs written for one microprocessor would be found to work on others. BASIC (which stands for Beginners' All-purpose Symbolic Instruction Code) began, he says, as a device for giving undergraduates simultaneous access to Dartmouth's GE mainframe computers. With the volume production of microprocessors in the 1970s, however, the language began to be used extensively in various forms. Because the memory of the early machines was limited, programmers were at first compelled to improvise, simplifying BASIC and specializing it to fit the memory of small machines.

Kemeny's frustration is that, even though the microprocessors now available do not have the limitations of those being manufactured 20 years ago, the omissions

from BASIC used by the early programmers have not been reinstated. But, Kemeny says, "these machines are not toys, but very powerful computers. The IBM PC I have at home is not a particularly expensive model, but it is more powerful than the original timesharing machine here at Dartmouth." That is why, Kemeny says, many of the BASIC programs now on offer "just don't live up to what any computer scientist would expect of a good language in 1985".

Two years ago, Kemeny, Kurtz and three other computer experts accordingly set up a company to promote the fundamentals of BASIC languages, and to engineer improvements of software developed by other computer scientists. Inevitably, the company is called True Basic.

Kemeny predicted 20 years ago, when opening the computer centre at Dartmouth College, that every home would have a computer terminal within a quarter of a century. The unexpected arrival of the microprocessor has almost made that prediction a reality, but the lack of a common computer language is still an impediment. So one of the goals of the Kemeny group is to develop the language that will make the vision a reality.

So far, the group has developed compilers for the IBM PC and for the Apple Macintosh that will allow them to respond to TRUE BASIC. Two new microprocessors to be launched onto the Christmas market this year will also have such compilers. According to Kemeny, because the compilers written for the individual models embody the necessary changes, programs written in TRUE BASIC for any of these models will run successfully on any other. **Bill Johnstone**

## India against AIDS

*New Delhi*

ALARMED by reports of AIDS (acquired immune deficiency syndrome) in Pakistan, both India and Bangladesh are taking precautionary steps to keep out the AIDS virus. The Indian Council of Medical Research (ICMR) has set up a task force headed by the ICMR chief Dr V. Ramalingaswami. A similar panel under Professor Nurul Islam, director of the Dhaka Institute of Postgraduate Medicine, has been set up in Bangladesh.

No confirmed case of AIDS has been reported either in India or in Bangladesh. But Professor A.N. Malavya of the All-India Institute of Medical Science in New Delhi and a member of the task force says it is only a matter of time. The major aim of the task force is to educate both the doctors and the public about AIDS without creating a scare and to keep tabs on vulnerable groups including haemophiliacs, homosexuals and a significantly large population of eunuchs besides the prostitutes in ports such as Bombay, Calcutta, Madras and Vishakapatnam.

Cases showing AIDS symptoms will be referred to any of the dozen medical institutions to be designated as reference centres. The National Institute of Virology in Pune is being equipped to screen for AIDS antibodies and viruses in blood samples of suspects. The task force is evolving a detailed questionnaire to be circulated to private and government doctors and an educational campaign is planned. But the Indian government does not want to divert huge funds to an anti-AIDS programme as there is no evidence of AIDS yet.

In Bangladesh, the AIDS committee has been asked to prepare a plan of action for the prevention of AIDS. As well as evolving a programme for surveillance, detection and treatment, the committee intends to propagate Islamic ideals on the evils of promiscuity. People have stopped buying imported second-hand clothes following a rumour that they might be contaminated with AIDS virus, and Bangladesh newspapers have asked the government to screen incoming passengers from the West.

K.S. Jayaraman

## UK laboratory animals

# Debate on legislation ahead

THE British government's Animals (Scientific Procedures) Bill, published last week, will be debated in the House of Lords this month. The bill follows the proposals outlined in two white papers (policy documents), Cmnd 8883 in May 1983 and Cmnd 9521 in May 1985, and is intended to replace the Cruelty to Animals Act of 1876 (see *Nature* 315, 267; 1985).

Attempts to reform existing legislation on laboratory animals have failed in the past because of strong protests from animal rights groups and reluctance of members of parliament (MPs) to become embroiled in the issue. The new bill is supported by the middle-of-the-road animal welfare groups, who advised in drawing it up, but is violently opposed by the extreme animal rights groups who are against any experiments on animals being made legal.

The bill requires that a project licence be obtained before work can begin, con-

trols breeders and suppliers of animals and establishes a committee to provide independent advice to the Home Secretary. All research establishments must appoint a named person to care for animals, there will be heavier penalties for offences and controls on the re-use of animals.

A significant provision is the explicit acknowledgement that pain is caused to animals; licences will be issued only if the Home Secretary is satisfied that the benefits outweigh the adverse effects on the animals and the licence requires that pain, distress and discomfort are minimized.

The bill has wide support from scientists and welfare groups, and its passage through the House of Lords seems assured. But the Commons is very differently reluctant to favour any legislation that makes them seem to be supporting "cruelty" to animals in the eyes of their constituents.

**Maxine Clarke**