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bargains



# COMPUTER EXPRESS

**BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY**

## AMIGA

- 020 power for A500
- Cheap upgrade
- Back-up cartridge



There is life beyond the keyboard - page 54



Quartet software comes to the Amiga - page 52



Sampling and MIDI for the Spectrum - page 50

## ST

- Protext upgrade
- Ghosts 'n' Goblins
- Low cost memory

## PC

- Big Blue at home
- Soviet PC clone
- Japanese CD-PC

## COMMS

- Micronet clampdown
- Dream modem

## ARCHIMEDES

- New DTP package

**BBC•C64•MSX  
SPEC/SAM•QL  
XE•CPC•PCW**

**SPECIALIST COLUMNS**

# ROBOTS AT HOME: THE RACE IS ON!

**Everybody will have one within three years claims World Robot Olympics organiser**

page 3



**Jumping Jack Son**  
Musical, ridiculous, puzzling and jolly good fun - page 14



**12-YEAR-OLD BOY IN US HACKING FRAUD SCANDAL**

page 2

**JAPANESE VIRUS WRITER 'WAS A HIRED SABOTEUR'**

page 6



## Student solves snowflake mystery

Robert Pless, a 17-year-old high school student from Silver Spring, Maryland, has won a prestigious national American computer competition - by finally answering the question of why no two snowflakes are alike.

SuperQuest 1989, sponsored by Cornell University, IBM and the National Science Foundation, was designed to find the best mathematical model to run on a supercomputer. Pless's project, which shows how natural forces give snowflakes their characteristic six-sided symmetry, required two weeks of computation on his school's workstation - but took only 35 minutes on the supercomputer.

"That allowed me to keep adding additional terms of natural forces to my model." Pless explained, the more information I could

add, the more ways I could find out how natural forces affect snowflakes.

This whole project is about computational science, not computer science. Computer science is the icky stuff of working with computer languages and writing code and all that yucky stuff. Computational science is the fun stuff where you use computers to solve interesting problems.'

Pless, who plans to attend college in the autumn - at Cornell University, naturally - seemed surprised by his win. "I kept in touch with other contestants, so I had some idea of what was going on. I thought it was a neat project but it wasn't something I killed myself over. I didn't put other things aside.'

## Game infected by Japanese disk-trashing program

# STUDENT WAS PAID TO WRITE A VIRUS

A Japanese student has claimed that he was paid 25,000 yen (about £100) to develop a virus that would attack the Sharp X-68000 series of personal computers.

The 17-year-old told a federation of computer clubs in Osaka that he was one of 40 programmers offered money, and that many were working on the viruses.

A man claiming to represent a major electronics maker in Tokyo allegedly contacted the programmers through a PC network in March 1989.

The as-yet-unnamed electronics firm is denying having anyone on its payroll

matching the student's description of the man.

It is speculated that a virus which has found its way on to the game *Far Side Moon* may relate to the boy's claims. Software house Artdinks is said to be keen to retrieve 3,000 copies of the game which have been shipped carrying a virus which installs itself on the Sharp and is set to erase all disk data once a month from July.

It is one of at least two viruses at large which are programmed to trigger during the summer.

The Osaka federation estimates that

about half of the computers shipped so far are infected. Sharp and the Osaka computer federation are distributing vaccines to existing X-68000 owners and dealers.

The Sharp X-68000 has sold over 95,000 in Japan since its launch in March 1987.

• As *Express* goes to press, the tale has taken a mysterious new twist, with the student now reported by wire services to have "implied his previous talk of a paid job for making destructive computer viruses is fictitious". More details next week. •

## Russians hit by virus plague

Software piracy, rife in the USSR, is causing computer chaos as viruses cripple systems for days.

With no legal way of obtaining the software that is needed in the Soviet Union, their only option has been to copy existing programs.

The computer division of the Moscow State building committee spent days 'mopping up' after a virus attacked master booting records. Other computers have been tampered with by nuisance viruses and destructive re-formatters.

As there are currently no laws governing the copyright of software in the Soviet Union, there are no moral or legal problems attached to copying software.

There are moves afoot to protect Western copyrights in the USSR by extending the international copyright agreements, but that is some time off yet.

• Soviet Microsoft distributor Dialogue is trying to take rival Interquadro to court for the illegal distribution of Microsoft products in Russia. •

• Trash: threats of violence on the on-line games.

## Micronet closes chat lines

Micronet users have had their chat lines discontinued for an unlimited period as some callers are under suspicion of having contravened BT regulations.

It is too early to tell whether or not the chat lines, which have now been running for four years, will be re-instituted, as British Telecom has just launched an internal investigation into the matter.

Last Friday BT suspended the service after foul language was found in several messages. Other reports tell of members playing the Shades multi-user game threatening each other with physical violence. Users are up in arms over the fact that the actions of a few have jeopardised the enjoyment of everyone.

A spokesperson for Micronet was unable to confirm why they had been discontinued.

## Soviets launch PC clone

A Soviet PC clone due for introduction in May is based almost entirely on locally patented ideas.

The lack of Western currency prevented the import of standard PC parts, so where possible, the parts were made in the Soviet Union.

This has left the Iskra-4816, an XT clone, with nonstandard connectors - tying users to home-grown peripherals.

Disk drives and colour monitors weren't available in the USSR and have had to be imported, leading the newspaper *Vesha* to surmise that the lack of Western currency may cause a spares shortage."

## Genes on disk

The detailed genetic structure of thousands of people is now freely available to anyone with a PC or Macintosh.

The US National Institute of Health has thrown open the Genetic Sequence Data Bank (Gen Bank), and for the price of a disk can supply information hitherto only in the realms of the scientific and academic world.

Gen Bank was founded to provide a computer database of all known deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) sequences. DNA is a complex molecule produced by cells and viruses and forms the building block of life, and DNA sequences could one day be used in cloning experiments.

For access to the Gen Bank network phone 0101 415 962 7364. •

## Would you stomach it?

A national computerised registration scheme is being created, following the efforts of the Cambridge-based Conservation Research Group, it has come up with a novel way of identifying... tortoises.

Despite the macho image of the Teenage Mutant Ninja Turtles it seems that the humble Mediterranean tortoise is an endangered species (importing them to Britain has been banned since 1984), and even the home-grown ones have been known to go astray. Now the British Chilonsea Group - who represent the interests of Britain's 1,500 lovers of tortoises, turtles and terrapins - has decided to adopt a new identification technique.

Although other animals can be tagged with a microchip implanted beneath the skin, this is not feasible with our carapaced friends. However Drs Oliphant Jackson and Lex Hiby at CRG have discovered that the underside of each tortoise is unique, rather like a fingerprint or retina pattern.

Now a national database can be set up featuring digitised scans of the underside of tortoises, so that Customs and Excise can tell whether they are being illegally imported.