

## Business

### Computers may soon make 'the three Rs' ancient history

MONTREAL (CP) — Reading, writing and arithmetic are 19th-century skills which may not be necessary in today's world, says an expert in new information technology.

"In a world where words are waved over uniform product codes in supermarkets and where kids have personal computers ... just why are we spending billions to teach arithmetic in the schools?" asked Anthony Oettinger, addressing a conference on new information technologies.

Oettinger, who teaches applied mathematics at Harvard University, is a consultant to U.S. President Ronald Reagan's Foreign Intelligence Advisory Board and a member of the Scientific Advisory Group of the U.S. Defence Communications Agency.

"The notions of the three R's, the notions of literacy that we today regard as graven in tablets are ... the fruit of the technical and political processes of the mid- to late 19th century," he told an audience of about 250 businessmen, academics and government officials.

Oettinger associated reading, writing and arithmetic with "the dark Atlantic mills and the Dickensian counting houses" of the industrial revolution. Such places needed people who could write and do arithmetic — but the modern workplace may not, he suggested.

"Exactly what is the meaning of penmanship when keyboard skills are becoming more important?" he asked. And even keyboard skills could become obsolete once the researchers perfect computers that can understand speech, he said.

Oettinger said that in the Middle Ages, reading and writing were considered to be beneath the dignity of the upper class.

"In 100 educated people talked (and) only menials like clerics wrote; they were hired hands of their liege lord," he said. "So the nobility of writing only began around 1900. Before that snobs only spoke."

"I ask you to think about what

### Wine adulterers are fined

PALERMO, Sicily (Reuters) — A Palermo court fined eight people up to the equivalent of \$77 million Canadian each Monday and sentenced them to prison terms of between one year and four years for adulterating wine.

The fines dwarfed the value of the wine they adulterated, said in court to be \$23 million Canadian.

The eight were found guilty of fraud and of adding sugar and coloring to wine but were cleared of criminal conspiracy. The offences took place in 1981 and 1982 at cellars near Palermo owned by the agricultural company Enosicilia S.R.L.

Alberto Salvo, chairman of Enosicilia and a former president of the European Federation of Wine Co-operatives, belongs to a landowning family being investigated for alleged Mafia links.

He and his son-in-law, Baron Antonio Palizzolo Di Ramione, former technical director of Enosicilia, each received four years' imprisonment and fines of \$77 million Canadian. Police are still seeking Di Ramione.

Fines imposed on the other six defendants totalled \$385 million Canadian. All were also ordered to pay an undisclosed amount of compensation.

### COUNTS SINGLES

Nearly one-fourth of all Americans live in single-person households, says a recent U.S. national survey.



### THE NEW BRUNSWICK ELECTRIC POWER COMMISSION

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Hon. Leslie Hall  
Chairman

happens when snobs no longer write in a beautiful cursive hand but peck away at keyboards or speak into voice recognition devices. What does that mean for the investment we put into schools for teaching skills that are essentially 19th-century skills?"

The conference, sponsored by the Institute for Research on Public Policy and financed by the federal Communications Department, wound up Tuesday.

Lewis Branscomb, chief scientist of International Business Machines, told the conference that IBM researchers have developed a computer which can understand spoken instructions, identifying words from a limited vocabulary with 90 per cent accuracy.

But so far the machine can understand only a single operator, he said, and the operator must speak with a pause between each word.



CHECKING THE FINE PRINT — An engineer at National Semiconductor Corp's Santa Clara, Calif., plant scans the blueprint of a 32-bit microprocessor, with circuit of 70,000 transistors. The entire plan fits onto a "chip" smaller than a telephone pushbutton and will process more than one million instructions per second. (AP Laserphoto)

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