The KGB's Views on the News

by K. Graham Bowers

Crime is an ever-present fact in the modern world, and spectacular terrorist crime (hi-jackings, assassinations, bombings, kidnappings, etc.) seems to be a growing aspect of this phenomenon.

Terrorists frequently commit spectacular crimes to obtain media coverage, which publicizes their cause. To help reduce this problem, the media should try to limit their coverage of terrorist acts, although many problems arise over how to do so.

Spectacular crime is not new to this world. History includes such examples as the assassinations of the crown prince of Austria in Sarajevo in 1914, U.S. President Abraham Lincoln in 1865, and Julius Caesar in 44 B.C.

However, spectacular crimes seem to occur more frequently in the modern world. Such actions are newsworthy and receive extensive coverage in the media.

Many people can still recall these incidents which at times dominated their TV screens and their newspapers: the Kennedy assassination, the FLQ kidnapping, the Entebbe hijacking, the Iranian Embassy hostage-taking, the attempted assassination of Pope John Paul II, the Achille Lauro incident, the 1985 hijacking and Nabih Berri's hostage release negotiations.

This fact may be the reason spectacular terrorist crime is on the rise (if it is) and it is certainly at least part of the reason such crime appears to be on the increase.

Without a doubt, a reduction in media coverage would likely result in a corresponding reduction in the frequency and magnitude of these occurences.

Nations which control the media and disallow such coverage, such as the Soviet Union, Eastern Europe, Cuba, Angola, Chile, Argentina, and others, do not appear to have problems with terrorists. It is, of course, possible that the problems do exist although they are not publicized, or that other factors (such as severity of punishment) influence the rate of these crimes, but it is likely that the appearance of a greater level of order is because a greater level of order does in fact exist.

However, in the Western World the media is privately owned and profit oriented and, therefore, make editorial decisions which are in their own interests and not necessarily in the public interest.

Any newspaper or television news program which refused to cover spectacular terrorism would lose its audience to the competition. Because of this, we can not directly control how much news coverage any event will get.

An indirect influence is possible however. If newspaper readers were to refuse to buy such newspapers, and television viewers were to refuse to watch such news programs, then the media would alter its content to satisfy consumer demand.

What is necessary to effect a change in media policy is a change in societal attitudes.

Microelectronics on campus

by Alex Shetsen

Just south of the main university campus and next to the U of A Hospital, in what used to be the Alberta Research Council, is a remarkable research and production facility called the Alberta Microelectronics Institute.

Wholly owned by the University of Alberta, the Institute employs about 20 people in the research, design, development, and production of microelectronic circuits — the very small scale "chips" that are now a part of almost every electronic product manufactured.

"We create generic ASIC products," says Grant Serink, Engineering Manager of the Institute. ASIC stands for Application Specific Integrated Circuits.

A tour of the basement of the Newton Research Institute (the new name of the building) reveals a tangle of high-technology equipment. In the specially ventilated "clean rooms" technicians wearing special hoods, goves, and gowns operate machines that produce the chips in five stages.

The first stage, "metallization", involves the coating of the chip's base material — commonly plastic — with a very thin layer of metal. It is on this metal, which is often gold, that the circuits will later be carved out.

The second stage is the preparation of the chip for what is to follow. Preliminary etching of the metal may be done and the chip is coated with any necessary semiconducting materials.

In the third stage, "oxide deposition", a layer of a metal oxide is depostied onto the metal-coated chip. The layer acts as an insulator of the metal in places which will form the circuit.

The fourth stage is called an "oxide etch". Here, in special furnaces, reactions with various chemicals remove the oxide from those parts of the circuit which will be free from metal.

In the final stage, "lithography", the chip is exposed to electromagnetic radiation, which removes the metal from areas left exposed after the oxide etch. In this way, the proper circuit is formed on the plate, after which the chip is given a protective coating.

The resultant circuits, which are typically about one square centimetre in area, have density of between 1000 and 10,000 "gates". (A gate is essentially a type of switch.)

At every stage in the process, the semi-manufactured circuits are tested for imperfections. Rather than being tested in action, the circuits are visually inspected for imperfections using a microscope.

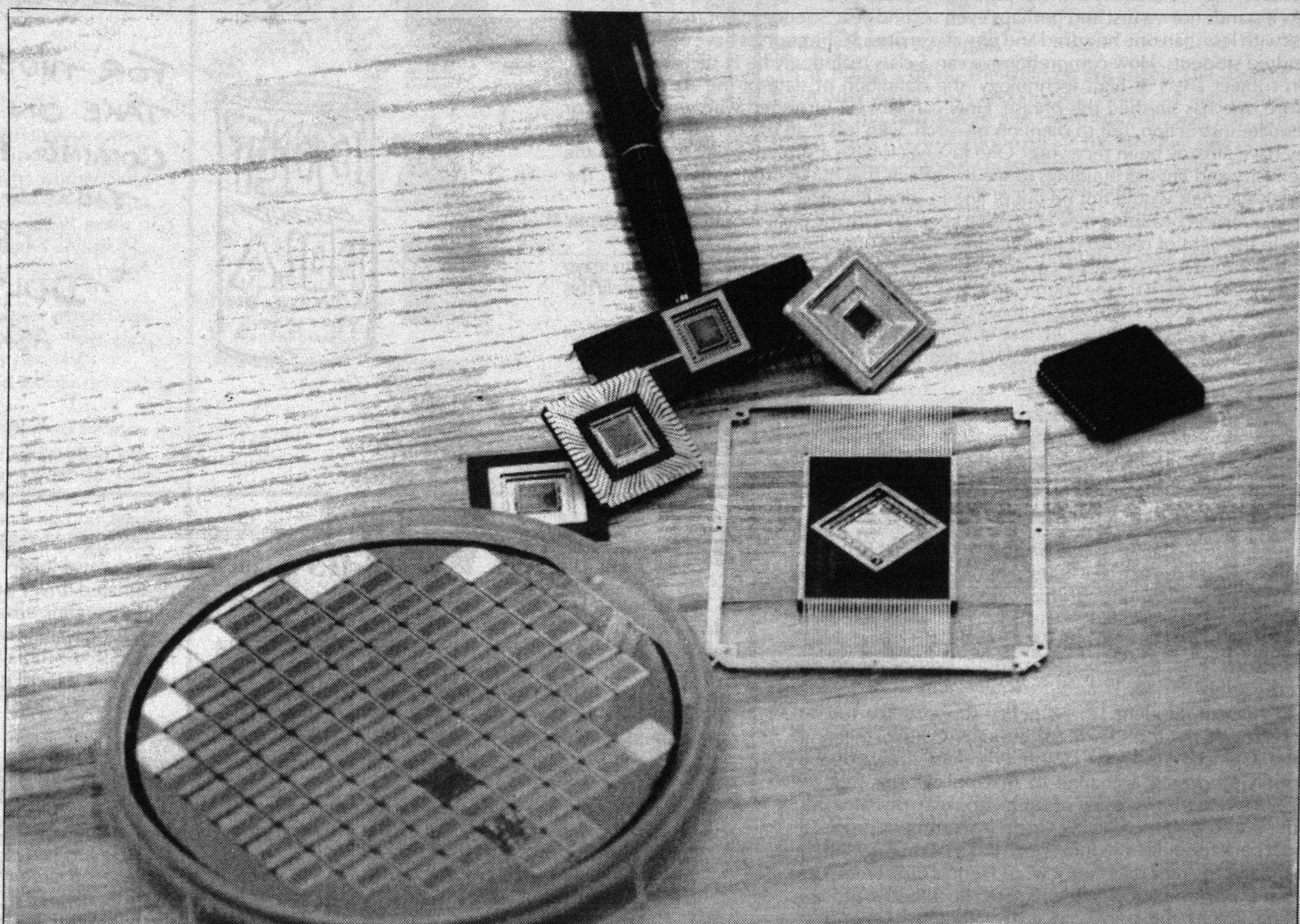
While being manufactured, and at the very end, the chips are cleaned. This is done with chemically pure water the Institute takes from the university's water supply and refines further by passing it through ultraviolet light to kill any bacteria, special filters, and a "reverse osmosis" machine. The purification ensures that the microscopic circuits remain undamaged by any impurities found in the water.

The Institute was formed in 1982 by a special grant from the federal government to promote electronic technology. Five other similar centres were formed in other provinces as part of the same scheme. In 1986, an agreement was reached for the transfer of the Institute's funding wholly to the province of Alberta.

After moving around the U of A campus, the Institute has recently found a permanent home in the Newton Building. Originally the entire operation was in Edmonton; but in the spring of 1986, a separate branch was started in Calgary. This sister facility also employs about 20 people, and is concerned primarily with the design of microelectronic circuits.

The Institute also does consulting, design, and research work for private agencies on a contract basis. It has a technology transfer agreement with LSI Logic Canada, and thus has access to any new products developed there.

"We expect to be helping out small business in putting out electronic products," says Serink.



A display of various types of microelectronic circuits produced at the Institute. photo by Alex Shetsen