

Data analysis in seconds

Real time is the key phrase in the analysis of data when seconds count.

When tracking an oil spill from an aircraft, or processing satellite pictures as they come in, electronic signals must be processed fast.

The tasks can be done by Interactive Circuits and Systems Ltd. of Ottawa, which specializes in real-time signal processing. Founded in 1980, and then primarily involved in researching and developing Department of National Defence electronics to the prototype stage, Interactive has doubled its gross sales each year since. Its research and development capabilities include radar, sonar, electronic warfare, navigation, remote sensing and instrumentation.

President Dipak Roy predicts that Interactive's new electronic circuit board will "revolutionize" the electronic signal processing market. The ADF-16 is a high-speed, 16-bit digital FIR filter.

Mr. Roy explains: "It is programmable, which is its great advantage over dedicated filters for a specific function. If you want to convert square waves to sine waves, to determine the composition of an oil spill to spray dispersants, or detect a natural gas pipeline leak from a highspeed aircraft you can program the filter to do it. In real time. Data does not have to be stored on tape for analysis."



Interactive's president Dipak Roy (left) with vice-president Pierre Menard.

The programmable digital filters, which solve many communication and instrumentation problems, particularly in the confined space of aircraft cockpits, were introduced in the spring of 1983.

The future looks bright for Interactive. Engineering Research Associates of Virginia is buying 100 filters for about \$100 000, and a Canadian company has ordered 25. Mr. Roy and Mr. Menard predict total sales of about \$5 million within three years.

(Article from Ontario Business News.)

Longer life batteries with double the power

Moli Energy Ltd. of Vancouver has unveiled plans to manufacture a line of long-life rechargeable lithium batteries that, according to president Irving Hollis, will put the company two years ahead of its Japanese competitors.

The company expects to begin production of the Molicel batteries in 1986 after it completes construction of two new manufacturing plants near Vancouver and Toronto.

Moli, formed in 1977 by chairman N.B. Keevil, who is also chairman of Teck Corp. of Vancouver, plans to spend \$52-million on the plants in the next three years.

Testing by Boeing Aerospace, a division of Boeing Co. of Seattle, Wash., found the

lithium batteries would produce twice the power of a comparable nickel-cadium rechargeable cell and hold a charge for eight years. The batteries kept 80 per cent of their original power after being recharged 150 times.

The lithium process was invented by Rudolf Haering of the University of British Columbia. Three of Dr. Haering's graduate students provided the nucleus for Moli's research and development team.

Although Japanese competitors have recently announced pintype rechargeable lithium batteries for watches, calculators and "smart credit cards", Moli is the first to develop rechargeable lithium cells in the AA, C and D sizes, Mr. Hollis said.

Moli also plans to manufacture rechargeable lithium button cells for use in integrated circuit boards that go into personal computers and portable telephones.

World market

Mr. Hollis said his company expects to capture 2 per cent, or \$100-million, of the world market for rechargeable batteries by 1987. It has sold batteries to more than two dozen original-equipment manufacturers for testing in the United States and Canada.

In addition to the consumer and original-equipment markets, Moli is continuing to develop variations for marine, medical and military applications.

In co-operation with researchers at the Defence Research Establishment in Ottawa, Moli has developed a lithium cell for portable military communications equipment. Moli is also developing other types of rechargeable lithium cells for classified applications by the US military.

Communications technology featured at Eurocast '84

Canadian know-how in communications technology was represented by more than 20 firms at Eurocast '84, the first international exhibition and conference on cable and satellite television held in Europe. The five-day event took place in May in Basel, Switzerland.

"Major developments in European cable and satellite television delivery are expected in the next five years," noted Communications Minister Francis Fox. "Canada is ideally positioned to benefit from rapidly-expanding European markets, thanks to our unique experience in providing high-density cable service to most of our population and to our acknowledged expertise in satellite technology. Our high-profile at Eurocast '84 — Canada had the largest single group of national exhibitors — will increase European awareness of Canadian excellence in cable technology."

Special "Canada Day" activities featured a panel discussion, broadcast in several European countries, in which Canadian experts presented "The Canadian Experience." Topics included the Videoway concept developed by Le Groupe Vidéotron; extension of cable communications services to small communities; the economics of direct broadcast satellite (DBS) service as a supplement to cable distribution; and financing of cable TV development.