Model of Canada's arm in space on display

National Research Council

NASA astronaut John Fabian cuts ribbon to launch exhibit featuring copy of Canadarm.

A full-scale model of Canadarm, Canada's contribution to the space shuttle program, was unveiled recently at the National Museum of Science and Technology.

The exhibit, called *Canadarm — A Space Adventure,* was opened by NASA astronaut Colonel John Fabian, who was aboard the seventh space shuttle mission last June and actually operated the arm.

It is a co-operative venture of the National Research Council (NRC) and the museum highlighting space shuttle missions in the past two or three years.

The model of the arm is the only full-scale one in the world and looks just like the real thing, except that it lacks the wiring or computer controls which make the real one work.

The other major difference is the price-tag. The Canadarm cost $100 million; the model, a mere $20 000. Built by Canadian sculptor William Lishman, it is built of cardboard, metal, wood and fabric.

The real Canadarm was designed by scientists from the NRC and Spar Aerospace Ltd., and built in Toronto. It lifts satellites and other cargo in and out of the space shuttles.

Canada-Japan co-operation on new TV dish package

Satellite television signals received by home dishes are among the weakest communications signals, but the satellite TV business is coming on strong, says Roderick Wheeler, president of Norsat International Inc. of Vancouver, British Columbia.

Norsat, a designer and builder of home receivers, is preparing a new product for the mass market it sees developing. The product will be ready in the second quarter of 1984.

The package, made up of an antenna, a low-noise amplifier and an advanced receiver, will probably retail for $995 (US), Mr. Wheeler said. It would be one of the first packages engineered specifically for the home market and it would be priced lower than Norsat's Series 3000 units.

To make the product, Norsat has a link with Japan Radio Co. Ltd. of Japan, one of eight companies in the world with the know-how to build a low-noise amplifier — the most critical component for picture quality.

The package will use Japan Radio's LNA modified by a few suggestions from Norsat. In addition, JRC has started manufacturing a prototype receiver that will incorporate Norsat's Series 3000 technology and add features such as stereo sound, infrared remote control and satellite search.

In contrast to the products of the mostly small North American manufacturers, the receiver will come with a slick Japanese consumer electronics product look. And Japan Radio Co. Ltd. would make it for hundreds of dollars less than it costs Norsat International Inc. to build its Series 3000 units.

Cause of MS inching closer

A native of the Ottawa area is making international medical news for his work in isolating a gene that may play a role in such neurological diseases as multiple sclerosis.

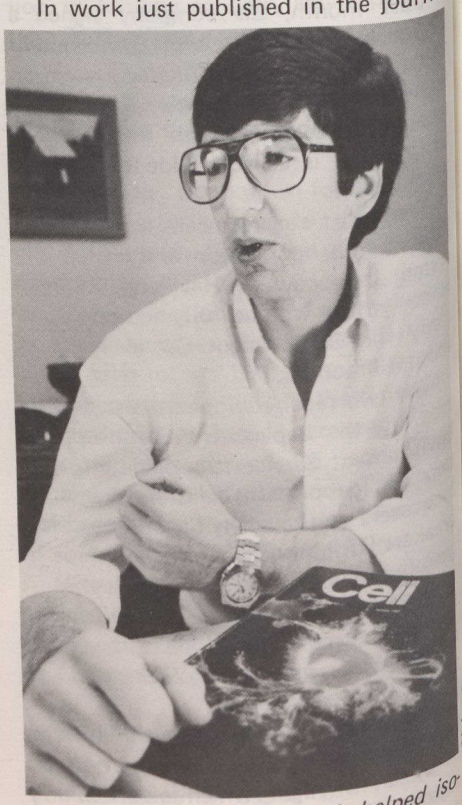
Arthur Roach, who grew up in Greely, near Ottawa, and is still supported by Canadian research funds, is one of a team of California researchers that has just isolated and cloned a gene responsible for the fatty sheath of insulation around nerve fibres, called myelin.

It is the first time the gene has been isolated from the hundreds of thousands in each cell.

Some scientists have speculated that defects in this gene may cause neurological diseases such as multiple sclerosis in which the sheath around nerve fibres is damaged, leading to short-circuiting of nerve impulses. This theory can now be tested for the first time and results are expected within months.

Arthur Roach, a 26-year-old Ph.D. student at California Institute of Technology, says while it is a long-shot, it is possible this work could result in the development of a test to determine if embryos or even adults have multiple sclerosis, long before signs of the degenerative disease show up.

In work just published in the journal



Ph.D. student Arthur Roach helped isolate gene that may help fight MS.