

## Canadarm underground

Spar Aerospace Limited, the Canadian high-tech firm that developed the robot arm for the National Space Administration Agency (NASA)'s space shuttle, is currently discussing the possibility of developing a robot mining system with a consortium of four Canadian mining companies, led by Inco Limited of Sudbury, Ontario.

The remote manipulation system based on Canadarm technology, could be designed to erect safe underground roofing in tunnels that pose a danger to workers, said Spar chairman Larry Clarke. "The remote arm could go into a shaft and put up a solid roof at the face of a mine automatically," he said. "That's where most of the cave-ins occur so it could be a strong safety feature," he added.

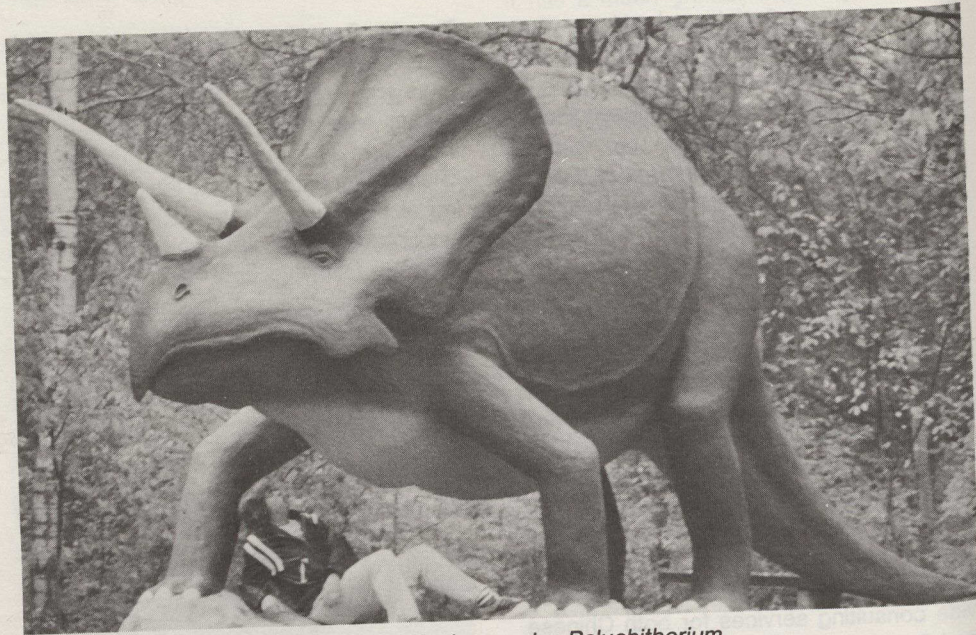
Mr. Clarke also said a remote control system could be developed for open-pit mines that use large drag shovels. Currently in drag mining, an operator is located in a booth that is often a great distance from the actual site of digging.

Spar Aerospace is continually searching for new applications for its remote manipulation division. Last year the company signed a \$35-million contract with Ontario Hydro to repair faulty pressure tubes in the Pickering nuclear reactor site.

A special remote arm, designed with a 6-metre reach and lift capacity of 2 270 kilograms, is used at the face of the nuclear reactors where plant workers are exposed to the highest levels of radiation.

New applications and rapid growth in the telecommunications and defence industries will boost Spar's annual sales to \$250 million in 1985, predicted Mr. Clarke. "The telecommunications market will triple by the end of the decade and we hope to sell about \$45 million in earth satellite stations alone in 1985," he said.

## Monsters from another time populate park



Gisèle Grignon, The Citizen

Morley Seaver of Rockland, Ontario looks up at a Baluchitherium.

Prehistoric World in Morrisburg, Ontario is rapidly becoming the largest park of its kind in the world.

Owners Paul and Serge Dupuis said that in terms of tonnage, with displays of everything from the popular Tyrannosaurus Rex to the frog-like Bradysaurus Bainsi, it may already be the largest.

The tourist park now has 37 lifesize concrete dinosaurs, more than double the number on display when it opened in 1982. This year the owners plan to add a 110-tonne Apatosaurus, commonly known as a brontosaurus, and later, the largest land animal that lived, a Super-Saurus, measuring 15 metres high and weighing 278 tonnes. Within seven years the park expects to show 100 prehistoric or extinct animals, said Mr. Dupuis.

When the Dupuis brothers bought the

53 wooded acres near Upper Canada Village and began to build the huge detailed sculptures, it was the second largest public prehistoric park in Canada after the one in Calgary, Alberta. It took six months to clear the forest and set up nature trails that weave around monsters such as the Iguanodon Bernissartensis, which towers 6 metres above the ground.

The creation of a concrete sculpture takes an average of one month of 14-hour days. The metal skeletons for the larger animals are assembled in pieces, set on a floating cement slab in the park and filled "bucket by bucket" with concrete.

The largest sculptures can require up to 200 bags of cement. The heads and some upper bodies are filled with foam. The cement exterior is then sculpted and finally painted with latex exterior paint.

## Sport exchange agreement between Canada and Korea

Minister of State for Fitness and Amateur Sport Otto Jelinek and Republic of Korea Sports Minister Lee Yong-Ho recently signed a memorandum of understanding on sports exchanges between Canada and Korea.

The signing came at the end of Mr. Jelinek's five-day visit to Seoul, the capital of Korea, which will host the 1988 Summer Olympics.

The exchange — the first of this nature signed between the two countries — will allow athletes to compete and train in each country's Olympic facilities in the years leading up to the 1988 Winter Games in

Calgary and Summer Games in Seoul.

Mr. Jelinek said, however, that the most vital benefits from the agreement will accrue in the long term. "I look at this sports exchange as far more than just a mere exchange of athletes. It goes way beyond that," he said.

One matter discussed between Mr. Jelinek and the South Korean sports minister was the possibility of exporting the Canadian technology currently being employed in the construction of the Olympic facilities in Calgary.

"It can go beyond the construction of

sports facilities," said Mr. Jelinek. "Once we get the Canadian corporations into Korea to start constructing sports facilities, I'm quite certain that they will have the door open to bid on other projects, whether it's transportation systems, subway systems or bridges. It's unlimited," he added.

The Canada-Korea sports exchange was the second such agreement signed in the past two weeks by Mr. Jelinek and the third since he became Minister of State for Fitness and Amateur Sport. He signed a similar agreement earlier in March with the People's Republic of China, as well as another last December with the Union of Soviet Socialist Republics.