ocean liner. The site for Canada Place is Pier B-C, a parallelogram 335 metres long and 101 metres wide, at the north foot of Burrard Street.

Although the convention centre will not open until 1987, meetings have already been booked with enquiries about space dating up to 1992.

The Canada Place cruise ship facility is expected to have an impact on tourism in Vancouver. Warren S. Titus, chairman of the Royal Viking Line, recently noted that the number of cruise ship visits in the west coast port had quadrupled over the past decade. In 1983, there will be 194 arrivals accommodating an estimated 180 000 passengers. At Canada Place five cruise ships will be able to dock.

#### Special theatre

Another feature of Canada Place will be an IMAX theatre, which was one of the great crowd-pleasers at the 1982 World's Fair in Knoxville, Tennessee.

IMAX, a Canadian motion picture system, can project images ten times the size of the conventional 35 millimetre movie frame. The eyeball-shaped IMAX theatre positions screen and audience so the image fills 50 to 130 per cent of the viewers' field of vision. This visual impact, combined with audiencesurrounding stereophonic sound, produces "total involvement" cinema, seeming to draw the viewer into the picture.

# Canada's arm in space pulls in a special NASA award

Dave McAninch of the Canadian Department of Supply and Services is the recipient of a special award from the United States National Aeronautics and Space Administration (NASA) for his role in the remote manipulator system project, the product of which, Canada's arm in space, has become an integral subsystem of the US space shuttle program.

As senior science procurement manager (space sciences), Mr. McAninch was a member of the team set up at the National Research Council (NRC) as contract management for the project.

The Certificate of Appreciation given to Mr. McAninch from the Johnson Space Center in Houston, Texas, marks the first time that NASA has presented the award to a non-scientific Canadian government officer.

## Canadian participation

Canada's involvement in the program



Dave McAninch demonstrates a model in the scale of 1:15 of the space arm at the National Research Council.

began in the early 1970s when NRC agreed to design, develop and deliver to NASA the remote manipulator, or space arm. It also agreed to supply test and simulation facilities to be used as a design tool and for astronaut training, spare parts, ground support equipment and engineering support services.

In 1974, a project management team was formed at the NRC comprising NRC scientists, representatives of the DSS Science Branch and the Department of Communications and contracted-out personnel.

"When I joined the group in 1977," says Mr. McAninch, "the contractor was completing the engineering model testing stage and was commencing the fabrication of the qualifications and flight models."

From the project's conception until the final verification of the system in space, contracts awarded to Spar Aerospace Ltd. totalled about \$100 million.

"A project of this size and complexity is not without its problems," said Mr. McAninch. "Improvements and design changes made along the way required constant configuration management and cost control. There were a host of things to be done: reviews, approval of modifications, cost analysis, negotiations and many more."

#### Canadian relief to Lebanon

"In recognition of the valuable and unique role which the International Committee of the Red Cross (ICRC) plays in Lebanon, Canada will further support its activities with a grant of \$300 000," Allan J. MacEachen, Deputy Prime Minister and Secretary of State for External Affairs announced May 25. The funds will be provided to the ICRC through the International Humanitarian Assistance (IHA) program of the Canadian International Development Agency.

The ICRC will use the funds for a variety of activities including such traditional services as the protection of victims of conflict; visits to prisoners and detainees to assure their proper treatment; the tracing of missing persons and the transmission of family messages, as well as for the provision of basic medical and relief assistance to victims of the conflict. Up to \$100 000 of the grant will be specially earmarked for support of a Canadian surgical team at Baalbeck Hospital.

Through the IHA program, Canada has provided \$3.05 million in response to appeals to provide relief: ICRC (\$1 million); UNICEF (\$950 000); the United Nations Relief and Works Agency for Palestinian Refugees (\$950 000); and the World Council of Churches (\$150 000).

## Rental vacancy rate improves

The availability of housing for rent continues to improve in most parts of Canada, according to Canada Mortgage and Housing Corporation.

The national vacancy rate - the proportion of units available to be rented rose to 3.1 in April, the highest level since October 1979, when it stood at 3.2. The rate indicates that slightly more than three units out of every 100 surveyed in April were vacant.

A vacancy rate of about 3 or 4 per cent is generally considered sufficient to allow the market to work normally.

The highest rates in the country are in Calgary (13.4) and Edmonton (8.3), both in Alberta, where vacancies are becoming a problem.

Cities that have improved their rates in the past six months include: Halifax, Nova Scotia (2.6); Saint John, New Brunswick (4.0); Kitchener, Ontario (3.0): the St. Catharines-Niagara area, Ontario (3.0); and Regina, Saskatchewan (2.8).