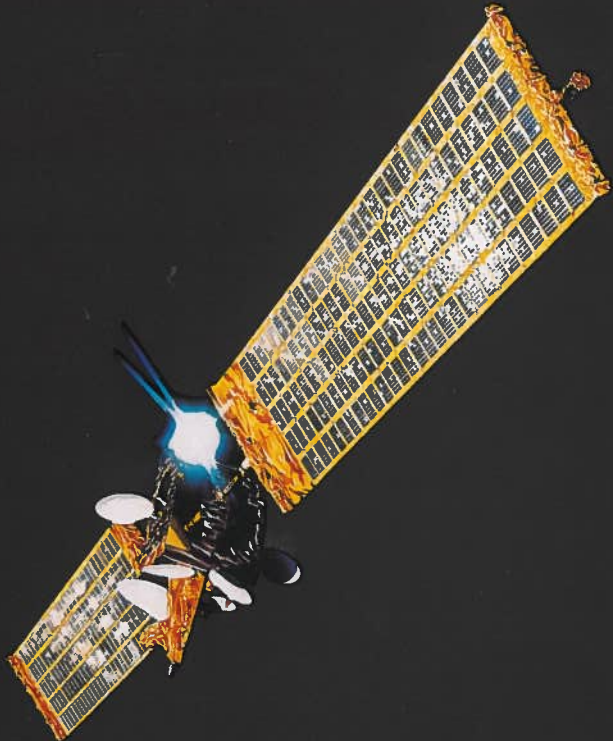


CELLULAR SATELLITES



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Project Olympus. It's your opportunity to test innovative new programs and services in an international marketplace

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Olympus: Launching the Future



Olympus is the largest multi-purpose satellite for civil communications ever launched in the West. It offers the flexibility, convenience and economy of pre-arranged, point-to-point computer or videoconferencing between any pair of cities in its coverage area. As a member of the European Space Agency — the organization that manages Olympus trials — Canada has a significant share of the broadcast and experimental time available on Olympus.

Take advantage of the opportunity to experiment on Olympus, the largest multi-purpose civil communications satellite ever launched in the West. Discover the flexibility, convenience and economy of pre-arranged point-to-point video or computer conferencing between any two points in the area of coverage.



photo: Bernard Pans © Arianspace

Services like videoconferencing ... training seminars and sales missions ... "electronic marketing" ... database consultation: All are ideal candidates for Olympus trials. Professional consultancy, equipment and machinery, education, health, culture and the arts — each has scope for a multitude of new service ideas. Olympus projects could offer remote diagnostics and health counselling — innovations that can give patients access to more specialists and make it possible to perform routine health consultations with astronauts during their long periods aboard a spacecraft.

All kinds of commercial and educational projects are possible, from weather studies to learning a new language. And here's a bonus: because many such projects are computer-based, participants learn to get the most out of a technology that will likely shape their future working environment.

Closer to today's reality, distance training and education is an application Canada is exploring extensively with educational television groups and universities. Experiments have been designed using videoconferencing with Europe to market educational programming. And the flexibility and range of services possible with Olympus are ideal for one of the newest trends in distance education — specialist certification in fields where knowledge overlaps several disciplines. Businesses will also find that Olympus can satisfy one of their most persistent needs — a way to train and upgrade employees without “sending them away to school.”



We've Got the Technology

The Satellite

Olympus is powered by large solar generators, designed and manufactured in Canada. Many of its components are also Canadian-made. The satellite offers very precise antenna accuracy. Spot beams concentrate the signal so it can be picked up by dish antennas small enough to be transported to a site chosen by the user. As a result, highly desirable services become more widely available: live interactive videoconferencing, for instance ... or high-volume data transmission ... or distance training and education.

The Payloads

The Olympus satellite carries four payloads: for broadcasting, for business services, for interactive two-way communications, and for propagation studies.



The precision of Olympus

makes live interactive

videoconferencing,

high-volume data

transmission,

distance education

and remote database

consultation

available to more and

more users.



Canadians will want to look particularly at the 30/20 GHz, or EHF, communications payload. It incorporates two active channels and two antennas that can be steered from horizon to horizon, giving coverage all the way from the Horn of Africa to Windsor, Ontario,

and making possible international co-operative projects in distance education or teleconferencing — projects of great interest to Canada. This payload can customize the transmit/receive locations for each project, allowing Olympus to link South America with Africa, Europe with South America, Africa with Europe, and North America with any of the others.



In addition, Olympus carries a high-power TV broadcast payload for direct-to-home transmission in Europe, a 12/14 GHz payload offering specialized or business services, and a 12/20/30 GHz beacon for studying

propagation conditions and gathering data for future satellite design projects.

The Earth Stations

Three earth stations have been developed by Communications Canada and built at the department's research facility with subsystems produced by Canadian industry for use with Olympus. The first, and largest, of these earth stations is located at the Communications Canada laboratories near Ottawa. The other two are transportable, and can be installed on the user's premises for the duration of a project.

These earth stations incorporate advanced technology and are so versatile they can handle anything from a single voice channel to interactive video and high-volume data transmission. So, while the majority

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of experiments carried on Olympus will feature one-way communication only, the facilities exist to accommodate two-way communication. The technology is ready ...

Wanted: Innovative Ideas

When it comes to program content, Canada is looking for innovative ideas in marketing, database “libraries” and education — both interactive and consultative. For example, a group of related businesses can experiment with “electronic trade missions” — marketing goods and services to Europe via Olympus and Canada’s embassies.

There is room, too, for exciting ideas in university education; lectures via Olympus can bring knowledge in any discipline to any university lab or lecture hall in the satellite's coverage area. Canada is a world leader in agricultural and natural resources management, and has one of the foremost schools of veterinary medicine in the world. This means there is scope for a variety of seminars in agronomy, animal husbandry, forest management and genetics, for example, featuring experts from federal and provincial governments, and universities.

Basically, we ask that projects demonstrate to users the advantages of satellites, and create markets for new applications by testing new systems and demonstrating new services to the public and to potential users. Pilot projects that go beyond the scope of a demonstration and pave the way for viable operational services are especially welcome, as are projects that experimentally extend an existing service to a new



*Electronic marketing of machinery,
equipment, goods and services via
satellite is an exciting new concept.*

*Explore the potential of this new field
— and of electronic access to
catalogues, specifications and service
manuals after you've made the sale.*

area — for example, extending a North American medical satellite network to Europe to test its market potential could qualify for Olympus time.

In the field of data transmission, possibilities abound. Electronic access to a Canadian library — or to library catalogues — would enhance the information resources of universities abroad. Hospitals need medical reference texts, and Canadian dealers of imported machinery and European dealers for Canadian machinery would find ready access to specifications and parts lists a useful service.

And Olympus, with its immense transmitting power, can transfer data in massive quantities — measured in gigabytes. Universities, research institutions and experimental groups could tap into large research and design databases — something that has not been commercially feasible because remote access to them by conventional means is too expensive.

The Costs

To Canadian participants, the experimental time on Olympus is free. Communications Canada can also provide the earth station (occasionally on the user's premises).

There are, however, costs that each user must bear. It is up to the user to develop suitable material for an Olympus project — accessible databases, effective videotapes and the like. In fact, the quality of the material to be broadcast will likely determine the viability of a project. Finally, users must arrange to deliver the signal to the nearest Olympus earth station.

Pilot projects that go beyond demonstration and pave the way for a viable operational service — or experiments that extend an existing service to new locations — are especially suitable for Olympus.



When it comes to innovative ideas, the sky's — quite literally — the limit!

Want to Know More?

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