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The Role of Partnerships Government/Industry/International

Much of Canada's involvement in space activities, particularly in the earlier years, related to its interest in satellite communications as a means to provide equitable access by all Canadians to telecommunications services. It also provided the impetus for Canada signing a cooperative agreement with ESA. There are a number of firsts in satellite communications to which Canada can lay claim. However the environment for space communications systems and services has changed dramatically and continues to change due to factors such as global deregulation, rapid advance of telecommunications technology, industrial consolidation and intense competition.

The use of satellites, which take advantage of new digital technologies, data compressions, and protocols, permits broadband and personal communications services to be extended easily to regions beyond the economic reach of terrestrial systems and to mobile or transportable platforms where seamless national or international roaming is a requirement. Satellites are ubiquitous and global.

Canadian firms are no longer considered by their competitors to be major contenders in the design and manufacture of complete space telecommunications systems. However Canadian firms remain significant players in niche markets, providing subsystems and components to spacecraft manufacturers, mobile and fixed earth terminals and complete ground segments. The national revenue base alone is insufficient to sustain a viable Canadian satellite communications industry, which must thrive on the international markets to remain viable.

Canadian satellite communications industry must remain commercially viable for two major reasons. Firstly, it is recognized that satellite communications is the foundation of the space industry. If Canada is to continue to be among the world's foremost space-faring nations, and not renounce the benefits of three generations in space investment, then government investments are necessary. In its role of prime client and catalyst for public and private R&D endeavors, the government can contribute in reducing market uncertainties that currently plague the satellite communications sector.

Secondly, in recent years there has been recognition at the most senior government levels of the importance an advanced telecommunications infrastructure has in ensuring success in a knowledge-based economy. Canada will only achieve its goal of becoming the most connected nation by exploiting space-based technology. It is not by coincidence that part of this technology is Canadian technology made possible through Canadian Space Agency programs. Canada can continue to lead in connectivity and to derive the social and economic benefits of a most advanced telecommunications infrastructure only through pertinent, timely and effective investments in its indigenous satellite communications industry.

The Canadian Space Plan approved by Cabinet in April 1999 identifies five strategic objectives. Four of these strategic objectives relate specifically to Satellite Communications, namely:

- Enhance development of world-class expertise focused on specific areas of strategic importance to Canada's satellite communications.
- Contribute to the national effort in making Canada the most connected nation in the world and to ensure that Canadians will keep developing and have access to the world's most advanced satellite communications technologies.
- Foster an environment facilitating the industry's capabilities to commercialize innovations and develop new markets.
- Ensure the development of our space industry in all regions of the country, particularly in the rapidly expanding sectors of space communications.

The CSA Satellite Communications program has played a major role over the years in developing satcom technologies in Canada by investing in major programs like Advanced Satcom, which laid the foundation for Anik F2's Ka-band payload. These programs have resulted in considerable financial return to the Canadian economy through significantly increased export sales. This sector will continue to benefit from long-standing cooperation between the Canadian Government, the Canadian Space Industry, and ESA programs in which access is guaranteed to Canada as a Cooperating State.

Examples of cooperative activities on the international and national scene include:

- Canadian Participation in ESA ARTES Projects

and Major Initiatives co-funded in partnership with Canadian Industry:

- Ground Segment Technology & Applications Development;
- Advanced Satcom Program;
- Anik F2 Ka-band Payload Flight Demonstration Program.