tions system throughout our country. I believe Canadians have reason to be proud of what has been done in this field.

Important as it is to Canada, I think that we have really done more in this area than could have been expected in a short period of time. It was only in 1966 that Canada established the first earth station to pick up the Intelsat communications—the International Communications Network, the first station of which was established at Mill Village, Nova Scotia. It picked up from the international satellite the communications of importance to Canada.

Following on that, we proceeded to a purely Canadian development in the satellite field—not in the communications field, it is true, but nevertheless in the satellite field—and in a very successful way with the first Canadian satellite, Alouette I, which in turn was followed by Alouette II and Isis. Here again Canada achieved a remarkable record. Alouette I is still in orbit, and while it is true that it was taken out of service last fall, on the anniversary of its tenth year in orbit, we should keep in mind that this is a satellite which was designed for one year of service. Nevertheless, after 10 years it was still in service, and could have continued in service if its information had been of further value. I understand it can be put back into service at any time, if desired. This outstanding success led then to further developments in Canada.

Following this, there was a report in 1967 by Mr. John H. Chapman, dealing with upper atmosphere and space programs in Canada. Shortly after that, the Prime Minister's task force on satellites was established. That task force published a report in March 1968, of which I believe all honourable senators have copies. Following this, and at a very rapid pace, the government proceeded to establish a joint enterprise composed of government and the various bodies in Canada concerned with communications. This followed directly on the recommendation of the task force which had stated:

> —a domestic satellite communications system is of vital importance for the growth, prosperity and unity of Canada, and should be established as a matter of priority.

Many of us may sometimes feel that where governments are concerned matters of priority do not seem to be dealt with very quickly. However, I am pleased to say that this one was, and as early as June 1969 the bill incorporating Telesat was introduced in the House of Commons. On September 1, 1969, Telesat started its operations. Within a very few months a contract was signed with Hughes Aircraft to proceed with the development of the Anik satellite.

The Anik satellite is interesting, honourable senators, in that while it is not a Canadian design—it is a Hughes Aircraft design, since they are leaders in the communications field—it has a substantial Canadian content. The agreement made with Hughes provided that there would be substantial Canadian content in the three satellites in the Anik series ordered by Canada, and in addition that if Hughes succeeded in selling any further Anik satellites to other countries, up to a maximum of 15, the Canadian participation would continue to the same extent up to that number. It is interesting to note that to date Hughes Aircraft have been able to sell six of the series to other nations, and there is a likelihood that more will be sold, largely as a result of the highly successful operation of both Anik I and Anik II. So Canadian scientists who, by the way, participated in the re-design of Anik I, have carved out an important segment of economic and scientific activity for Canadians.

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The success of Anik I, which was launched on November 9, 1972, was immediate. It is interesting to note also, by the way, that the whole of the Telesat program was completely on time, in spite of the very narrow timings from September 1, 1969. The projection at that time was to put the first satellite in space in November of 1972, which goal was achieved. The satellite launching was delayed, in fact, because of a small malfunction for two hours, but that was the only delay and Anik I went into space. Anik II, to which Senator Grosart referred, was a back-up for Anik I. It also was launched successfully and both satellites are now in operation. I understand from the experts in the field that once the satellite is launched and it functions on the first day the likelihood is that it will continue to function throughout its life.

The designed life for the Anik series is seven years. The reason for this set timing is that in order to perform its function the Anik series must be in a permanent position. That is, its orbit must be at the same speed as the rotation of the earth so that it maintains a position above the equator. It is interesting, by the way, to note that in the original plans of Telesat it was expected that the location from a longitudinal standpoint would be roughly directly south of Winnipeg. As it turns out, Anik I is directly south of Calgary and Anik II is directly south of Saskatoon, above the equator. In order to maintain their positions, the Aniks must consume fuel which is expected to last for seven years. The purpose of Anik II is really a back-up to Anik I in order to ensure and guarantee to the users that they will have constant use, even if a mulfunction occurs in one of the units.

It is also interesting to note that this is a Canadian first and, in fact, a world first. It is true that there are international communications satellites, but Canada is the first nation to have put into space a domestic satellite. No other nation is anywhere near us in this regard. It is obviously to the credit of the Telesat group that these satellites should function in such a remarkably precise manner, and to the credit of the Canadian scientists involved.

It is with some regret that I agree with Senator Grosart that Canadians have not been made sufficiently aware of this magnificent achievement, something of which we have every reason to be proud and which is so important to many regions of our country.

One needs only to travel through northern Canada to appreciate the importance of good communications. A visit to an isolated community in the Northwest Territories makes one realize how important good, dependable and steady communications are. I recall that during my trips to the North my first expectation was to find that the inhabitants desired access by road, better air service, and so on. The greatest concern I found was for good television, which was much more important to them in many cases because of the long winter nights. Such daily com-