

The Canadian Institute for Advanced Research (CIAR) has recommended to the Federal Government that the designated funding for the MSS be apportioned as follows:

...about half the program [funding] should be devoted to the production of the Space Station hardware, an eighth ... to the Space Station user development, about a quarter to the technology development program, and the remaining eighth as the seed money for the technology exploitation program.<sup>13</sup>

The CIAR raised another important point when it further recommended that a dramatic increase in the cost of the space hardware should not come at the expense of the other elements of the program. The same concern was expressed to us by Canadian Astronautics Limited, a designated sub-contractor for the MSS and other space projects.<sup>14</sup> The Committee shares their concern. *Based on past experiences with major projects, we doubt that the expenditures for the MSS will be confined to the estimated funding of about \$700 million. Our fear is substantiated by the fact that the initial U.S. estimate for Space Station of \$8 billion (U.S.) has now ballooned to \$14 billion (U.S.). Moreover, Canada's share of annual operating costs for Space Station could be as high as \$30 million.*

A number of witnesses were opposed to Space Station because they felt it was an inappropriate project for Canada to participate in. There is an essential difference between the Space Station Program and previous space projects, such as those dedicated to communications and remote sensing. In those instances, we went into space for a specific purpose, using the space platform (satellite) to achieve a definitive result; e.g. a superior system of communications. In the case of Space Station, the space platform itself is the focus of the activity and the potential uses of the Station are a secondary consideration.

The President of Telesat Canada discussed this point with the Committee, at some length:

I am not an advocate of Canadian involvement in the space station. I think it corners too much of our available financial resource and concentrates it on our hardware development program which is unlikely to have much ongoing benefit for Canada.

Projects such as our involvement in the space station are often sold on the basis that they will produce great technical spinoffs in our economy, but I think we should be dubious of claims of spinoffs from hardware-based space projects. For example, if the real benefit of hardware development in the space station is the boost and spinoff effect it gives to robotics, why do we not spend our money on robotics that work here on earth and can be applied to terrestrial needs where there is an ongoing market; not to a space station which somebody else may or may not build later on?<sup>15</sup>

Several witnesses suggested that a succession of smaller projects with defined goals would be preferable to Space Station.<sup>16</sup>

The Committee is also concerned that Canada lacks sufficient depth in basic scientific research to use effectively the microgravity environment of Space Station. We acknowledge that there is considerable potential to develop useful industrial processes but we believe that this potential has been greatly exaggerated by the more enthusiastic proponents of the project.

<sup>(13)</sup> Canadian Institute for Advanced Research, Issue No. 17, March 9, 1987, p. 17:24.

<sup>(14)</sup> Canadian Astronautics Limited, Issue No. 16, March 4, 1987, p. 16:7.

<sup>(15)</sup> Telesat Canada, Issue No. 30, May 21, 1987, p. 30:7.

<sup>(16)</sup> Canadian Astronautics Limited, Issue No. 16, March 4, 1987, p. 16:6; Bristol Aerospace Limited, Issue No. 32, May 27, 1987, p. 32:87.