

(b) The PAXSAT Concept

The presentation at Spar Aerospace described research undertaken under the auspices of the Department of External Affairs concerning the feasibility of applying commercially available space-based remote sensing technology to arms control verification. Two PAXSAT studies were covered: (1) PAXSAT 'A', which examined whether a space-based observation system could help verify an outer space arms control regime; and (2) PAXSAT 'B', which examined the application of space-based remote sensing for verifying controls on conventional forces in a regional context, using Europe as a case study. Following the presentation there was a discussion period after which participants were given a tour of the SPAR facility.

During the discussion period at Spar, several rough cost estimates were given that depended on a number of assumptions about information distribution and processing of the data. It was clear that the ultimate cost of a PAXSAT system would be several billions of dollars. The hardware would be designed for five years but its actual lifetime would depend on how it would be used and whether it could be refuelled.

A number of queries were raised about the kind of verification regime envisaged in the PAXSAT concept. In response, it was indicated that actual development of the PAXSAT concept was predicated upon the existence of a multilateral treaty requiring verification and it would be difficult to give an estimate as to the timeframe for its establishment or a completely accurate idea as to the cost.

As to tasking of PAXSAT, the study assumed that the tasking would be done by a treaty-specific authority. A long discussion took place on the orientation of the tasking function. The central purpose of the PAXSAT 'A' study was to assess whether, using existing, non-classified technology, it would be possible to determine the function of any satellite. Given the need to optimize both the form of a space vehicle and its orbit, it was concluded that one could, through observation, determine with a high degree of probability the function of a satellite.

In response to a question as to whether a multilateral agreement on ASAT weapons, if signed tomorrow, could be verified, it was stated that the definition of "ASAT" was crucial. For example, would "ASATs" be confined only to objects that have an extended stay in space? It was pointed out that PAXSAT 'A' was not designed to certify that each and every space object was launched for particular purposes. Rather, it was designed for the situation where there was doubt as to the purposes of a particular space