2.4 Summary of the Space Weapon Environment (Continued)

doubtful effectiveness against a category 4 target because these targets are assumed to be very sophisticated and highly optimized for countermeasures. An additional barrier to long term use of spacebased jammers is the continuing development of new EW technology and hence the need to continually upgrade a jammer's capability.

To take this analysis of the space weapon environment a step further, the population of satellites in Category 1 has been broken down into seven groups in Table 2-8. Studying the most threatened groups serves to focus the Paxsat scenario more clearly.

Bearing in mind that a space wars concept assumes a very short (perhaps only a few hours) and intense conflict, it follows that all targets must be pre-selected and pre-targeted and will (because of the complexities of this process) be only the most crucial targets. To be cost effective, the spacebased weapons will be highly optimized, therefore they must be pre-programmed and pre-positioned. In the space environment of orbiting targets and weapons at various inclinations, and at different points in the orbit cycle, only a limited number of targets can be attacked in a coordinated action occuring within a very short time frame. The indiscriminate widespread, target-of-opportunity, attack of space assets becomes an unlikely scenario. In examining the roles and capabilities of the space population groups, it is concluded that the groups at the high end of the risk scale are the second and third groups, military navigation and military surveillance and reconnaissance groups. These groups include what is often referred to as targeting satellites. At this point in time, some of the military satellites of these types are at considerable risk, they are visible, accessible and vulnerable. It must be assumed that succeeding generations of such space assets would be less vulnerable through hardening, repositioning and redundancy measures.