9.0 CONCLUSION (Continued)

Within this present study, emphasis has been given to the optical and electronic support measures payload for the Paxsat System Concept spacecraft. Priority of thought had been given to these elements considering the highly diagnostic value of the data sensed by these payload elements. Additionally, it was of the opinion that these systems would drive the resource allocations in the conceptual design of the spacecraft, since it was postulated that the thermal imaging of the unknown spacecraft could be accomplished with a reduced resolution using the optics of the visible imaging system. Further study is recommended on the designing of the thermal imaging system and its implementation impacts on the current spacecraft conceptual design. Additionally, the tertiary sensors comprising of gas analyzers and radiation detectors were not investigated as a priori knowledge of the spacecraft mission operation was not available for the inclusion of these close proximity instruments. It is also recommended that further study on these sensors be conducted to increase the sensing faculties of Paxsat, now that the rendezvous mission scenario has been judged to be feasible.

This study, concentrating on the optical and electronic support measures payload, had determined a payload concept design that is capable of providing the necessary high resolution data within acceptable spacecraft resource demands for the Paxsat System Concept to determine the function of any space object to a high degree of certainty. Furthermore, the technology required to design and manufacture these instruments is concluded to be within the current day state-of-the-art.

Having concluded that observations of an object in space can determine the function of the object for the detection and control of weapons in space, the political/legal implications enabling such observations were analyzed as a response to the second question:

> "Are there one or more political/international agreements or treaty contexts in which these observations could be made?"