

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF COMMUNICATIONS OF CANADA AND THE EUROPEAN SPACE RESEARCH ORGANISATION CONCERNING THEIR COOPERATION IN THE FIELD OF ADVANCED SPACE TECHNOLOGY

ESRO/DOC COOPERATION

1. The Department of Communications of Canada (hereafter referred to as DOC) and the European Space Research Organisation (hereafter referred to as ESRO) consider it desirable to establish cooperation between DOC and the Member States of ESRO, through ESRO, in the field of advanced space technology and affirm their mutual interest in implementing such cooperation within the framework of the joint Canada-U.S. Experimental Communications Technology Satellite Project (hereafter referred to as CTS or as the CTS Project), ESRO acting in respect of this project on behalf of certain Member States of ESRO. Accordingly they wish to enter into a joint cooperative ESRO/DOC Project (hereafter referred to as the Project).

OBJECTIVE OF THE PROJECT

2. The objective of the Project is to develop and flight test components and subsystems of advanced technological content for the benefit of both parties, by incorporating these components and subsystems in the satellite developed under the CTS Project.

ESRO COMMITMENTS

3. ESRO will use its best efforts to provide DOC, at no cost to the latter and in accordance with CTS schedules and specifications, the following:

- (a) appropriate models of a 20 Watt Travelling Wave Tube Amplifier (TWTA) complete with all essential ancillaries, including directly associated thermal interface equipment, the associated power conditioning unit to allow the tube to operate from standard spacecraft supplies, and all necessary spares.
- (b) Appropriate models of a parametric amplifier complete with all essential ancillaries, including directly associated thermal interface equipment, associated power conditioning unit to allow the amplifier to operate from standard spacecraft supplies, and all necessary spares.
- (c) The development of the extendible solar blanket and solar cells, provided DOC agrees to procure the flight model solar blankets from European sources. In addition, ESRO may undertake responsibility for a portion of the manufacturing of the solar array blankets in cooperation with DOC.

The net effect of the foregoing (items (a), (b) and (c)) shall be such that ESRO's participation in the Project does not create any additional cost to the DOC.

Some of the major milestones of the current CTS schedule and the approximate number of models involved, are indicated in the Annex.