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Facsimile

To
Facsimile



From

AEA Technology, Environment

Telephone
Facsimile



Date

19 June 2001

Total number of pages 4

Here follows the completed SMART project appraisal form for Satellite Propulsion Research Ltd. If you have any questions, give me a call.

This work has been undertaken by AEA Technology in accordance with the DTI and AEA Technology Contract for the Provision of Technical Advice in relation to Smart and SPUR Projects, Ref SMT/4/3/00.

RESTRICTED - COMMERCIAL

RATING → HIGH 5 4 3 2 1 LOW	
INNOVATION <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Technically new in world terms; involves T/T from recent research New only to the firm concerned; trivial & low risk technology
<p><i>This proposal is to employ phonic propulsion, relying on light pressure.</i></p> <p><u>Please indicate how the proposal differs from existing technology:</u></p> <p><i>Existing technology employs a chemical reaction to expel propellants. Technology under development employs microwave energy to heat propellants to high temperatures and expel with high specific impulses.</i></p>	
ASSESSMENT OF TECHNICAL RISK <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Clear and realistic technical objectives. Challenging Research Programme Technical objectives unclear or impractical. Little or no technical risk
<p><u>How do you rate the applicant's chances of achieving the technical objectives?</u></p> <p><i>ie. Technical risk very high and research programme very challenging! I cannot rate the applicant's chances of achieving objectives.</i></p>	

RATING → HIGH 5 4 3 2 1 LOW	
COMMERCIAL NEED <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Strong need in world markets Sales depend on stressing technical or other novelty
<p><u>Please explain how the proposed end product differs from what already exists in the market:</u></p> <p><i>The proposal would do away with the requirement for carrying manoeuvring propellant on satellites, greatly cheapening the technology.</i></p>	
ENVIRONMENTAL IMPACT <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	The project will have a beneficial impact on the environment; sustainable technology Potentially adverse environmental impact
<p><u>What will the impact be (if any)?</u></p> <p><i>Reduction in greenhouse gas and pollutant emission from launches of satellites</i></p>	

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RATING → HIGH 5 4 3 2 1 LOW

DESIGN IMPACT

The project shows awareness of good design practice; enhances the applicant's design effectiveness and project value. Design not considered; adds no value to the applicant's project

What will the impact be (if any)?
Design will be crucial, but is not the issue at stake at this stage.

DO YOU KNOW THE APPLICANT? Yes No

↓

If "Yes" please include a view on the competence of the applicant to carry out the project in your comments below

With the information you have, Support Rejection Of the Smart proposal.

See below for provision.

If you have any other comments relevant to the proposal or to your recommendation please add them here:

I am not a specialist in the theory of relativity. However I am very unhappy with the concept of generating thrust with the loss of no reaction mass OR photons from the system. I do strongly recommend that the mathematical basis of the thrust calculations be checked by an appropriately-skilled theoretical physicist. Any competent professor of the subject should suffice.

Please indicate your knowledge or expertise in the subject area

Recognised world/national/sector expert or practitioner

Over 5 years practical knowledge of the subject area

Less than 5 years practical knowledge

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No practical knowledge of the subject, but some policy or related knowledge	<input checked="" type="checkbox"/>
New to the subject area with limited or no knowledge. <u>If you have ticked this category can you suggest an alternative source, if possible:</u> <hr/>	<input type="checkbox"/>

Name of person who completed the form:	
Directorate / Establishment	ENVIROWISE
(Direct) Telephone No:	
We do appreciate the time and effort you have put into this proposal. Do you wish to be kept informed of progress on the application and project if approved?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Please return the form to:	By E-mail: [REDACTED] Or fax or post to: [REDACTED] Innovation and Technology Team 3 rd Floor Bridge House 1 Walnut Tree Close Guildford GU1 4GA [REDACTED]