

7th Framework Programme, Cooperation, SPACE, Partner search or composing of Consortium

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Previous FP experience	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No FP7 beginner's experience. Technology park "LITEPA" owned by Arcus Novus Ltd. as a partner participated in FP7 project BgS (Baltic goes Space)	

Area or Topic of interest	
Call identifier	FP7-SPACE-2010-1
Topic/s (as stated in the Work Programme)	<i>Activity 9.2 Strengthening the foundations of Space science and technology</i> <i>Area 9.2.1: Research to support space science and exploration</i> SPA.2010.2.1-04 Space transportation for space exploration (C) IN-FLIGHT NAVIGATION AND CONTROL

Proposal at a Glance	
Proposal name	Absent. Possible names: HiS-CoTrans, HiSCoTra, HS-Transfom
Subject	High speed Coordinate transformation algorithms for any flight and navigation aims including gyroscopes, rotation wheels, precession, nutation. <u>Main goal of proposal:</u> implementation of newer algorithms with shorter scripts will reduce time of any calculations and will save an energy consumed by CPU's (very valuable in outer space).

Project Description	
Proposal Outline	The proposal is based io a new algorithms invented by the teamwork of Arcus Novus ltd. in cooperation with Institute of Mathematics and Informatics (Lithuania), and with support of Faculty of Rocket and Space Technology at Bauman Moscow State Technical University.

	<p>ArcusNovus Ltd. has great portfolio and skills in FPGA programming (VHDL), in simulations of ASIC for High speed Coordinate transformation of In-Flight objects. Hereinabove described tasks and skills are presented in the first common ESA-EDA-EC list of Critical Technologies for European Strategic Non-Dependence for usage in 2009.</p> <p>The invention consists on a newly recalculated space navigation algorithms. This invention extremely saves the time of calculation of each type of navigation formulas.</p>
Keywords	Adequate control, accurate control, robust control, another planet, celestial body, optimizing parameters, time measurement, newer control algorithms, gyroscope, piezoelectric gyroscope, rotation wheel, precession, nutation, application specific integrated circuit, field programmable gate array, VHDL.

Profile of Partner(s) Searched	
Required skills and expertise	Project coordination skills (for coordinator). Flight control and navigation algorithms programming and implementation skills.
Description of the Work to be Carried Out by the Partner(s) Sought	Coordination of project. Composing of consortium. <u>Notice:</u> possible another solution. That's - Incorporation of described proposal into already existing (or under creation) consortium as a part of Proposal dealing with Flight control and navigation topic.
Type of Partner(s) Sought	<ol style="list-style-type: none"> 1. Coordinator (EU country, preferably F or D, or I). 2. Companies, R&D institutions and Universities from EU, as well as from USA, or RSA, or Japan, or Russia directly dealing with Flight control and navigation.