To: Maxon Motors

Subject: Sponsor ATLAS IV project

Dear Sir:

The ATLAS IV is an autonomous mobile robot that is designed and developed in the Department of Mechanical Engineering in the University of Aveiro [www.mec.ua.pt]. The purpose of this project is to conceive, design and build a robot to obtain the best result possible in the Autonomous Driving Competition of the National Robotics Festival of Portugal to be held in the city of Guimarães in 2006 [www.robotica2006.dei.uminho.pt/robotica2006]. This Festival is held every year and it is the biggest one in that area in our country. Our Department has been participating in this competition of the Festival for the last three years. We have obtained the 4th place overall in 2003 [http://robotica2003.ist.utl.pt], 3rd place in 2004 [www.robotica2004.org], and 2nd overall place in 2005 [http://robotics.dem.uc.pt/web]. The robot uses several state of the art technologies such as vision processing for navigation, shape and color recognition, infrared analog sensors to evaluate distance, Maxon motor and Maxon Motor Controller to provide speed control, mechanical differential at the back and Ackerman system at the front.

Poster used in the 2005 edition

We are going to participate once more in the 2006 edition. We have always used, from our first participation onwards a Maxon Motor model RE40 150W. Since last year we have reached a point where the referred model is not sufficient to propel the robot at a reasonable speed. Therefore, if we want to improve our level of development and the consequent results, it is imperative that we shift to a more powerful motor. Since our experience with our Maxon motor is the best, our intentions were to use a motor with 250W also from Maxon. The model we found that suits our application requires the following parts:

Part Name	Maxon Nº	Other
Maxon Gear Box GP 42 C	203116	Ø42mm, 3 – 15 Nm
Maxon EC Motor EC 45	136210	Ø45mm, 250 watts
Digital Encoder HP HEDL	137959	Ø22mm, 500 counts per turn
Maxon Motor Control 4-Q-EC Servoverstarker	228597	70V/10A

However, this equipment's price is over our budget, which leads to the main issue of this letter:

Do you wish to cooperate with our project, supplying us the referred parts? If that is not at all possible, would you at least make a considerable discount considering the academic perspective of the application as well as the publicity that we would create for Maxon?

Obviously, Maxon would be given its deserved credit in the form of the robot's chassis having a sticker or reference to Maxon Motors in the respective site of the project and the project poster. We are open to discussion on these items and we are even open to any of your suggestions. If you are interested in learning in detail about this project you are welcome to personally visit our Department.

We are looking forward to working in close collaboration with your company.

Yours Sincerely,

Professor Vítor Santos
Eng. Miguel Oliveira [mriem@mec.ua.pt]
Eng. Rui Cancela
Eng. David Gameiro
3rd Year Student Marcos Fernandez
2nd Year Student Remi Sabino
Department of Mechanics
University of Aveiro