

Appendix to:

“Robotic Visions to 2020 and beyond – The Strategic Research Agenda for robotics in Europe, 07/2009”

Questionnaire on the Ethical, Legal and Societal Issues of Robotics

Version: 1

Date: 7th July 2009

“Robotic Visions to 2020 and beyond – The Strategic Research Agenda for robotics in Europe, 07/2009” can be obtained from:

EUROP Secretariat
c/o EUnited Robotics
Diamant Building, Bd. A. Reyers 80
1030 Brussels, Belgium

Phone: +32 2706-8222
Fax: +32 2706-8223
Email: info@robotics-platform.eu
Internet: www.robotics-platform.eu

*Supported by the “Coordination Action for
Robotics in Europe”, FP6-IST-045058*

PREAMBLE

This Questionnaire places itself in the frame of the European Project CARE (Coordination Action for Robotics in Europe). CARE, which is funded by the European Commission, aims to set up a common agenda for robotics in Europe (the Strategic Research Agenda for Robotics in Europe, SRA), a concrete vision for the development of the robotics market to 2020 and beyond.

One of the tasks of CARE is to analyze the potential Ethical, Legal, and Societal issues in Robotics from today to the next decade (2020)

Through this Questionnaire we are asking the opinion of a selected group of Experts in Robotics and Humanities regarding the possible trends in the field of Robotics related social issues. Their replies will be analyzed and the feedback results submitted to the European Commission.

Completion of this questionnaire is an important step in the implementation of the SRA 2020.

Some professionals of social surveys have collaborated in the design of this survey, and they will also be taking part in its data processing.

1. QUESTIONNAIRE DIRECTIONS

For your convenience, below you will find the classification employed in the Strategic Research Agenda for Robotics in Europe.

Robots and robotic devices can be grouped into the following main sectors: industrial, professional service, domestic service, security and space robotics. The product visions identified within these different sectors can be classified as belonging to one of six different, sector-overarching application scenarios (see table below).

		2. Robotic Sectors				
		Industrial	Professional Service	Domestic Service	Security	Space
Application Scenarios	Robotic Workers	•	•			•
	Robotic Co-Workers	•	•	•	•	•
	Logistics Robots	•	•	•		
	Robots for Surveillance & Intervention			•	•	
	Robots for Exploration or Inspection		•		•	•
	Edutainment Robots		•	•		

This questionnaire is composed of some questions with closed-ended answers, and some questions with open-ended answers.

In the questions with a closed answer, please insert an X in the corresponding box. In the open-ended questions, please write your opinion in the box below each question. If you feel that you cannot answer, please leave the box blank.

The questionnaire is anonymous. All replies will be treated in the strictest confidence. The information given will only be used for the assessment and for statistical purposes only.

Once completed, please save the document in RTF format and return it to the following email address: operto@scuoladirobotica.it

Your answers are very important for us. Your opinions will enable us to improve the Project knowledge on the topic and they will form the background for further surveys. We thank you for your kind collaboration.

QUESTIONNAIRE

Robotics, ELS issues and regulations

- According to the view of many experts, in the near future some ELS (Ethical, Legal, and Societal) issues will start to arise due to the consequences of the increased introduction of robotics to our daily life. What are the Application Scenarios indicated in the Table above that will be more sensitive? Could you say why?

- Unlike other fields, in the robotics sector, regulations of an ethical nature have not yet been introduced. In your opinion, how urgent is the need to see to the creation of regulative interventions of an ethical nature? Express your evaluation on a scale of 1 to 10, where 1 is not urgent and 10 is absolutely urgent (*tick the corresponding box with an X*)

--	--	--	--	--	--	--	--	--	--

3. In your view, in which of the SRA Application Scenarios (listed below in alphabetical order) would it be important to operate in today with regulative interventions involving Ethical, Legal, and Societal issues? Indicate the first sector where in your opinion it would be important to intervene more urgently, the second, and lastly the third (mark one in each column)

- Edutainment Robots
- Logistics Robots
- Robots for Exploration or Inspection
- Robots for Surveillance & Intervention
- Robotic Co-Workers
- Robotic Workers
- Other (please specify) _____

FIRST	SECOND	THIRD

4. What are, in your opinion, the ethical recommendations you would propose for each Application Scenario?

Regulative interventions to be created in:

Edutainment Robots

Logistics Robots:

Robots for Exploration or Inspection:

Robots for Surveillance & Intervention:

Robotic Co-Workers:

Robotic Workers:

5. In your opinion, in which of the following sectors of Robotics will national governments create the first regulative interventions of an ethical, legal and societal nature created by national governments? Indicate the first sector where in your opinion the first regulative interventions be created, then the second, and lastly the third.

- Edutainment Robots
- Logistics Robots
- Robots for Exploration or Inspection
- Robots for Surveillance & Intervention
- Robotic Co-Workers
- Robotic Workers
- Other (*please specify*) _____

FIRST	SECOND	THIRD

6. In particular, for each sector, which regulative interventions will be effectively created?

Edutainment Robots

Logistics Robots:

Robots for Exploration or Inspection:

Robots for Surveillance & Intervention:

Robotic Co-Workers:

Robotic Workers:

Regulative operations in other sectors of Robotics (*please specify*)

Robotics in our daily life

7. In your opinion in ten years, that is, around 2020, in which sectors of Robotics will the greater advantages for users be seen? And for whom in particular? (e.g. industrial, researchers, citizens).

8. In your opinion, in ten years, that is, around 2020, in which sectors of Robotics will the major ELS issues be seen for the users?

Robotics and Society

9. The spread of robotics from today until 2020 will cause further changes in the daily life of society (students, the elderly, the handicapped, domestic). In your view, thanks to which sectors of Robotics in particular will the main changes for society overall be seen? Indicate the first sector, the one which will cause the greatest changes, the second, and lastly the third.

Edutainment Robots

Logistics Robots

Robots for Exploration or Inspection

Robots for Surveillance & Intervention

Robotic Co-Workers

Robotic Workers

Other (*please specify*) _____

	FIRST	SECOND	THIRD
Edutainment Robots			
Logistics Robots			
Robots for Exploration or Inspection			
Robots for Surveillance & Intervention			
Robotic Co-Workers			
Robotic Workers			
Other (<i>please specify</i>) _____			

10. Which changes? Positive? Negative? For which sector of the population in particular?

11. The spread of Robotics from today until 2020 will cause further changes in the professional sectors (for example, workers, doctors, lawyers, tertiary, etc.) In your opinion, thanks to which sectors of Robotics in particular will the principal changes be seen for the professional activities? Indicate the first sector, the one causing most changes, then the second, and lastly the third.

Edutainment Robots

Logistics Robots

Robots for Exploration or Inspection

Robots for Surveillance & Intervention

Robotic Co-Workers

Robotic Workers

Other (*please specify*) _____

FIRST	SECOND	THIRD

12. Which changes? Positive? Negative? For which professions in particular?

13. One of the specific themes of the effects of the spread of Robotics involves the implications with the listed rights from the Charter of Fundamental Rights of the European Union which asserts the following rights:

Art. 1 states that human dignity is to be respected and protected.

Art. 3 asserts the right to the physical and mental integrity of the person.

Art. 6 asserts the right to liberty and security.

Art. 8 asserts the right to the protection of personal data.

Art. 25 concerns rights of a particular group of people, that is, the right of the elderly to lead a life of dignity and independence and to participate in social and cultural life.

Art. 26 is similarly concerned with the rights of a particular group of persons, insofar as it claims the right to integration of persons with disabilities.

*Most of the articles address both issues of potential **violation** and issues of potential **promotion** of human rights.*

14. Can you indicate in which sectors of robotics the major advantages will be seen, and vice-versa, the main dangers with regard to the human rights indicated in the EU Charter?

3. Sociodemographic data

Gender

M

F

Age

(in years)

Your profession (teacher, scientist, medical doctor, etc.)

Your professional domain (administration, school, engineering, etc.)

4. Country of your professional activity (prevaillingly)

Use the following space for any observations or indications that you consider useful to share:

5. Thank you for your collaboration!