

Didactic Robot Fish Kit



Sponsor



[ISEP-Instituto Superior de Engenharia do Porto](https://www.isep.ipp.pt/)



Project Summary

The goal is to ...

The project requirements are:

1. Design, develop and build a fish robot for kids to start learning programming. The robot should have one degree-of-freedom and be actuated by a low cost RC servomotor. The controller must be chosen considering the simplicity of programming versus cost. All components must fit inside the robot body and the body is to be built using a 3D printer. The programming “language” should be adequate for kids.
2. Use a minimal number of standard batteries (four 1.5V AA batteries or one 9 V battery)
3. Create the project website to provide all information needed to replicate the robot (drawings, components, source code, etc.) in Portuguese and English, as well as instruction scripts with some basic experiments
4. Low cost hardware solutions
5. Comply with the following EU Directives:
 1. Machine Directive ([2006/42/CE 2006-05-17](#));
 2. Electromagnetic Compatibility Directive ([2004/108/EC 2004 12 15](#));
 3. Low Voltage Directive ([2014/35/EU 2016-04-20](#));
 4. Radio Equipment Directive ([2014/53/EU 2014-04-16](#));
 5. Restriction of Hazardous Substances (ROHS) in Electrical and Electronic Equipment Directive ([2002/95/EC 2003-01-27](#));
6. Mandatory adoption and use of the International System of Units ([The NIST International Guide for the use of the International System of Units](#))
7. Use open source software and technologies.
8. Maximum Budget 50 €

Participants

Institution: Instituto Superior de Engenharia do Porto

Team N.: 3

Students:

- Achim Reinhardt
- Alvaro Chousa Esteban
- Justyna Urbanska
- Martin McPhee
- Terry Greene

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Client:

- ISEP-Instituto Superior de Engenharia do Porto,
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Utilities

- [DokuWiki Syntax](#)
- [Videos on how to use Wikidoku](#)

Acknowledgements

- Sponsor (sponsor)
- Eng.º Vítor Costa Cerqueira, DEE, ISEP (wiki installation and management)
- Prof. João Correia Lopes, DEI, FEUP (wiki template)

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Last update: **2016/06/13 16:44**

