# First Lego League - FLL

## Rodrigo Monteiro

### Learning Report

Abstract—In this report, complementing the Activity Report, I am going to describe in further detail the experience I had as a member of the First Lego League team (under Professor Paulo Carreira's orientation), how I became interested in it, what I learned, any difficulties I have come across, and how I have dealt with them and the work I was given, in general.

Index Terms—First Lego League, FLL, documents, translation, robotics, competition, science, computer science,

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#### Introduction

S a member of the First Lego League (FLL) team, I was in charge of the translation of documents relative to the competition that would be given to judges, referees and teams of participants in the competition. Although that's not a task that demands a wide set of skills, it does require good knowledge of the domain, focus and sense of responsibility as an incorrect translation may lead to a bad interpretation of the rules of the competition, the training guidelines and so on.

In the next sections I will explain why I chose this activity and was motivated to do it and what I learned by doing it.

#### 2 BACKGROUND

Ever since a was a kid, I was always interested in technology and, growing up, I had my first contact with the fascinating world of robotics on 8<sup>th</sup> grade(2008) as I was invited by a teacher of mine to join the local robotics club. I was really curious and immediately signed up for

The goal of this club was to build and program an autonomous robot from scratch to

participate in the national competition (Festival Nacional da Robótica). We did not have the resources that other professional schools and independent participants had but we still managed to secure the 1st place in the competition that year and were qualified to Robocup, a world-wide competition that gathers the teams that perform the best in their country's internal competition, where we achieved a top 10 place. But that was only the start, in the next year (2009) I was promoted to team captain and the six following years we kept improving upon our work and managed to win the national championship three more times and be at Robocup five out of six years (competitions held in Suzhou, China; Graz, Austria; Singapore; Istanbul, Turkey and Eindhoven, Netherlands) and we were even crowned World Champions in 2009. [1]

So, that is how my interest in robotics appeared and that is what motivated me to apply for the FLL.



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Figure 1) Nao robots at Robocup 2014, held in Brazil figura objector referida no texto!

(1.0) Excelent	LEARNING					DOCUMENT						
(0.8) Very Good	CONTEXT	SKILLS	REFLECT	S+C	SCORE	Structure	Ortogr.	Gramm.	Format	Title	Filename	SCORE
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#### 3 THE ACTIVITY

### 3.1 My Approach

I have already been a referee myself in a small robotics initiative in my home town (Torres Vedras), so I had the opportunity to understand just how important it is for the referees and judges of such competitions to have access to clear, objective documentation that covers all the possible situations that may occur during the robotics competition or even the event itself. Sometimes the referee's work is not confined to the competition arena and specially when children are involved, one must be really attentive to detect illegal situations in the venue, such as swearing, fighting, adults interfering with the children's work or manipulating it.

With that in mind, I tried to be as thorough as possible in the translations I made so the judges, referees and team members would have no difficulty at all trying to interpret what I had written. Although I am already familiar with most of the rules in this kind of competition, the first thing I did was to read a fair share of documents in order to better understand the spirit of the competition, the importance of its core values and also how important it is for the people responsible to know them and know how to enforce them properly.

Given the importance of the core values in this tournament it seemed only logic that the first documents to translate would be the ones that teach judges how to deal with concerns relative to them, so that is what I did. From then on, I kept that piece of information in my head and used it to make the best interpretation I could of the other documents and I believe that was fundamental for the correct translation of the remaining documents, which were related to judge and referee training manuals, teams certification, competition score sheets, etc.

#### 3.2 **Challenges and Difficulties**

I had my fair share of translation tasks in the past, some of them even in the context of robotics competitions so it was not very hard to adapt to this new challenge, however it is crucial to understand what you are writing about, otherwise you end up with a generic

Not really related with translation that will probably be an even harder challenge for referees, judges and organization members to understand, and that must be avoided, of course.

> The core values of this competition are different from anything I have faced in the past. They have some similarities but their description is much more detailed and there are specific guidelines as to which punishments should be applied in each particular case, as well as the chain of command rules that must be followed in different situations. So, one must first understand how the organization works, who is responsible for what in the competition and whose job is it to enforce a rule or to perform a task in the competition.

> I have gotten around that issue by reading the provided material and getting acquainted with the spirit of the competitions and the guidelines on how to run it smoothly, I can't say it was a very difficult task because when you are gathering information on a theme you like, it comes much easier than if you don't.

#### CONCLUSION

Overall I believe my efforts lead to a positive outcome and I learned what I intended from this activity, which is how a different robotics competition works, the structure that is behind of it from the participants to the head of the competition and the importance of the core values in an event that tries to spread interest in science and technology to kids, and at the same time provide them with social values of respect, fair play, teamwork and responsibility.



Figure 2 John Deere team from USA at an FLL competition. Jigura objectar referida no tunto!

In the type of document (technical), The CONCLUSION should start with a SUMMARY of the subject addressed and them should highlight the results.

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#### **ACKNOWLEDGEMENTS**

I would like to thank all the FLL collaborators (my colleagues) for the work we developed together and Professors Paulo Carreira and Sónia Gil for the opportunity I have been given.

#### **REFERENCES**

[1] K. Masaoka, L. J. López, M. Luk, P. Manns, R. Quatrone, and G. Spina, "Robocup junior rules," 2014.



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