АБУМАТРАН
ABUMATRAN

Abu-MaTran

Automatic building of Machine Translation

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D2.2a. Linguistics Olympiad Year 1

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Executive Summary

This deliverable describes the first edition of the Spanish Chapter of the Linguistics Olympiad. It corresponds to task T.2.3. (*Linguistic Olympiad, Spanish Chapter*) within work package 2 (*Dissemination and outreach*) aiming at the dissemination of the project for different audiences (industrial stakeholders, academia and general public).

This task was carried out at the industrial partner, Prompsit Language Engineering, and it was supported during the secondments of Antonio Toral in Prompsit from January to March 2014.

1 Introduction

The Linguistics Olympiad is a competition in which second level students are challenged to solve problems in the field of linguistics. It should be noted that the students do not need to have any prior knowledge of languages or even linguistics, as the puzzles are expected to be addressed with problem solving techniques such as logic and lateral thinking. Most problems present samples of text in a language that the student does not know and involve finding certain patterns arising in these samples (and probably identifying exceptions too). In this regard, the problems of the Linguistic Olympiad can be considered as closely related to the field of computational linguistics.

The Linguistic Olympiads originated in the 1960s, and were initially run in eastern European countries such as Russia and Bulgaria. Recently the Olympiads have spread to other areas such as Asia, western Europe and North America. Moreover, since 2003 there is an annual International Linguistics Olympiad1 (IOL),[1] which is attended by the winners of the national competitions. The last edition of the IOL was held in Manchester (United Kingdom) with 138 contestants in 35 teams, representing 26 countries. Until now, Spain has not taken part in the IOL (except for an ad-hoc team2 in the 2007 edition).

This deliverable discusses the establishment of a sustainable Linguistics Olympiad in Spain (OLE) as a dissemination activity of the project.

2 Rationale and Objectives

There are two main reasons that encouraged us to carry out this project:

- As mentioned before, there has not been a Linguistics Olympiad in Spain so far. Linguistic Olympiads promote problem solving skills such as logic, lateral thinking, etc. which we deem of paramount importance for students. The fact that the performance by Spanish students in the latest PISA test on problem solving was significantly lower than OCDE's average (477 points vs 500)6 seems to support our hypothesis that more emphasis on problem solving is needed.

- The consortium is in a good position to run this project as one of the partners, Dublin City University (DCU), has extensive experience in the area. In fact, DCU organises the All Ireland Linguistics Olympiad7 annually since 2009. Being one of the focus of the project intersectoral transfer of knowledge, OLE implies the transfer of organisational knowledge from DCU's experience to Prompsit, the industrial partner of the consortium.

The main objectives of the OLE can be summarised as follows:

- Foster the acquisition and mastering of problem solving techniques by the participant students.

- Develop the interest of students in the area of linguistics and in the knowledge of new languages.

- Get students acquainted with the area of computational linguistics and related disciplines such as linguistics, translation and computer science. In this regard, OLE is contributing to the area of computational linguistics in the long term by bringing this area to the next generation of researchers.

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1   http://www.ioling.org/

3 Plan and Implementation

The aim of the Abu-MaTran project with respect to OLE is to set up a sustainable Olympiad in Spain over the course of the project (January 2013 – December 2016). In this respect, the plan is to run three annual Olympiads during the second (2014), third (2015) and final year (2016) of the project as follows:

- First edition (2014). Pilot task, targeting the area of Alacant/Alicante province (1,917,012 inhabitants, 5,816 km2).

- Second edition (2015). The area is extended to the Valencian Community (5,111,706 inhabitants, 23,255 km2).

- Third edition (2016). The area is extended to Spain (46,815,916 inhabitants, 505,992 km2). Starting with 2016 we hope to proceed with that level further on.

This iterative approach allows us to adopt initially the organisative model of AILO for the two first years, since our target area is similar (Valencian Community) or smaller (Alacant/Alicante) to that of AILO, Ireland (6,378,000 inhabitants, 84,421 km2). During these first two years we are gaining experience that will allow us to adapt the model as necessary in order to tackle successfully and efficiently our whole target area, Spain, substantially bigger than that of our initial organisative model.

4 First Edition

We now discuss in more detail the first edition of OLE, carried out from September 2013 to July 2014. The timeline including the phases of this first edition is described in the following subsections.

4.1 April to August 2013

We had two meetings with Cara Greene (main organiser of AILO, based in DCU) as we had visits from project partners Gema Ramírez-Sánchez (secondee from Prompsit) and Mikel Forcada (research visit from UA) in April and August, respectively. The aim of these meetings was to learn more about the organisation of AILO to apply it, where relevant, to OLE.

4.2 September 2013

The first phase consisted on the development of the website of OLE,[2] as well as its corporate image (logo, font, colours, etc) and the relevant materials (e.g. brochure).

The website has been implemented using the open-source software package for blogs Wordpress, with a dedicated plugin to support multilingual content, as the contents of the website are at present in two languages (Spanish and Catalan) and are to be in four (including in addition Basque and Galician) when the relevant areas of the country will be covered.

4.3 October to December 2013

The Spanish academic year for secondary schools starts in late September and goes until late June. Activities to be carried out during the year are decided after the opening weeks.

We contacted all the 237 second level schools that operate in Alacant/Alicante province, both public

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2   http://ole.abumatran.eu

and private, by the beginning of October 2013. The contact was made by e-mail with a invitation to participate and register, a brochure with all the information about the OLE and an invitation to receive a visit from the organisers.

We visited 10 schools in Elche, Alicante and other smaller towns and the rest of the contacts were made by e-mail. We received feedback from both language and maths teachers interested in details about the organisation, how to prepare their students and the problems themselves. At the end of the registration period we had 21 schools registered.

During this period, contacts between the schools and the organisation team were frequent. We prepared two sets of training exercises that the teachers used during the classes. The exercises were sent to the schools and published in the website. We prepared step-by-step solutions to get the explanation of the exercises that were also sent and published after a two-week interval.

We also contacted some potential sponsors to cover some expenses of the organisation of the final round in March. We got positive answers from the two public universities in the area: the University of Alicante and Miguel Hernández University in Elche.

4.4 January-February 2014

At the beginning of January, we prepared the explanation for schools on how the first qualifying round had to be carried out involving them as co-organisers. The first round was carried out remotely in each school that registered to take part in the Olympiad on 30th January 2014.

The tests were prepared by the organisers and sent on the evening before to the contact teachers. They had to inform about the number of students, their names, surnames, IDs and exact time of the exam. Two students along with the teacher had to sign a form with the requested data and send it by fax or e-mail on the day of the test before 3:30 pm. The tests had to be sent also during the 24 hours after the exam date. More than 400 students took part in the first round.

During February, the correction of the exams was carried out and the top 75 students qualified for the second round. The solutions of the first round were published and the schools were informed about the results of their students in the round.

A last training/solutions set, also involving exercises for groups, was prepared and sent along with the call for the second round to the schools.

We started also preparing the venue for the 75 students and their teachers for the final round that took place physically at Miguel Hernández University in Elche.

Media were contacted through press releases and we defined the content for a promotional video and future press releases.

4.5 March-April 2014

The second round, involving the top 75 students from the first round, was carried out at Miguel Hernandez University (Elx) on 21st March 2014. There were two exams to be prepared: one individual and one in groups.

The individual round took place in the morning and the group round in the afternoon, both lasting 3 hours. At the end of the day, all students received a diploma for their participation.

For the second round we had the privilege to count with the assistance of Stanislav Gurevich and Polina Pleshak from the Russian chapter.

Corrections with cross-validation between the Spanish and the Russian team were done and

published. All schools were informed about their students and the top 4 students (from the individual exam) qualified for the international final at IOL.

4.6 June 2014

During June we organised an awards ceremony for the top 2 students of the individual exam, the 4 top students that represented the Spanish team at IOL and the top performing group.

The ceremony was followed by a a training session day for the 4 students that were to attend the IOL final. The training was assisted by Stanislav Gurevich from the Russian chapter and Bruno L'Astorina from the Brazilian chapter along with the Spanish organisers.

Both individual and group tests were prepared for the training day along with some talks for both students and parents.

4.7 July 2014

July was devoted to the organisation of the participation of the Spanish team in the IOL final which were accompanied by one of the Spanish organisers as team leader.

The top 4 students attended the 2014 edition of the IOL final[3] in Beijing, China from 20th to 26th July.

We participated in the various meetings from the IOL organisation and we had meetings with many team leaders from other countries that will help us in the organisation of the next years.

5 Conclusions

The reception of OLE has been already very satisfactory in its first year. 20 schools registered to take part in OLE's first edition. From these schools, over 400 students took part in the first round. As a side effect, we foresee our current work to be useful for other countries looking to start a Linguistic Olympiad.

Looking into the near future, we will face challenges due to the plan to extend the area covered by the Olympiad. In this regard we are looking at how to adapt our organisative model to be able to run the Olympiad while staying within our limits (budget and manpower). On-line tests (used e.g. by the North American chapter of the Olympiad) and a distributed Olympiad (as done e.g. by the Russian chapter), among others, are models that we consider exploring.

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3   http://www.ioling.org/2014/

Annex A. Materials

All the written materials used during the first edition of OLE (brochures, training exercises, 1st and 2nd round exams, etc) are available at the Olympiad's website.