

Interpreters' Problem

Final Round Mathematics A-lympiad 2003/2004



The European Interpreting and Conference service in numbers

450 permanent interpreters
200 to 300 freelance interpreters per day
2000 accredited freelance interpreters
50 meetings per day
11.500 meetings per year
145.000 days of work per year for interpreters

Total operational cost in 2001: 105.000.000 euro

Cost: 0,28 euro per European citizen per year

After the enlargement the SCIC will need 15 to 40 interpreters per day for each of the new languages. The cost of interpreting will rise by 20-50%.

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Introduction

At this moment in time (March 2004), the European Union (EU) consists of 15 member states. In meetings in the European Parliament every member has the right to speak and listen in their own language. This right is referred to as the heart of democratic legitimacy for the parliament. To realise this right for all members, interpreters are used during meetings.

The 15 member states have a total of 11 official languages. Because on the whole an interpreter does not have a command of all 11 languages, you can see that there is quite a number of interpreters needed. After all: every official language must be spoken, and it must be possible to translate into every official language as well. Once this year's expansion of the European Union with 10 new member states takes place, and the number of official languages increases by 9 to a total of 20, the amount of interpretations required will increase enormously as well.

Some concepts

A distinction is made in interpreting between *active* and *passive* language.

An active language is a language spoken by an interpreter, and which participants can listen to. So this is a language the interpreter is working towards. This can be either the interpreter's mother tongue or a language he or she has perfect command of.

A passive language is a language the interpreter understands, and which is spoken by the participants. This is a language the interpreter has a solid knowledge of and from which he or she interprets towards the active language.

When *retour interpretation* is used, an interpreter translates both from language A to language B, and from language B to language A. This is also called *bi-active* interpretation.

Sometimes *bridging languages*, or *intermediate languages*, can be used. That is the case when a translation doesn't take place directly from language A to language C, but via language B. This is also called *relay interpretation*. That way interpretation from Greek to Swedish can run via two interpreters using English as an intermediate language. First from Greek to English (interpreter 1), and then from English to Swedish (interpreter 2). This requires two rounds of interpretation, and in every round information may be lost.

A first exploration of the problem

In this assignment you investigate what possibilities there are for setting up efficient interpretation structures. To get some grip on the problem and the factors you have or can take into account, you will first examine some less complicated situations. For assignments 1 and 2 the following conditions are in place for interpretation:

- Only retour interpretation is used.
- Every country has one language.

Assignment 1

- a. For three countries, each with their own language, we examine the following options: 1 interpreter who knows all three languages, or 2 interpreters who each know two of the three languages.
Make a comparative assessment – based on an example – of which of these two options you find more favourable and why. Pay attention to the amount of time and the quality of the translation(s) and the language of the ‘speaking’ country; does it matter who is talking?
- b. This time there are 5 countries, again each with their own languages, and a maximum of two interpreters. The number of interpretation rounds varies, depending on how many and which languages these interpreters know. Examine this situation.
- c. A sixth country, with a sixth language, is added to the 5 countries from assignment 1b. This means that more, and different, interpretations are required. So there is an interpretation problem, and you can approach this in different ways. How would you do this? Give at least two different options and provide examples to show how it would work.

Assignment 2

This assignment is based on direct translations only, that is to say: every language is translated straight in every other language by one of the interpreters. So no intermediate language is used this time, to guarantee the best possible translations.

Two extremes can be distinguished:

- a. There are several interpreters, every interpreter speaks only two languages, and only one round of interpretation is needed. How many interpreters do you need, based on the number of countries?
- b. There is only one interpreter, who speaks all languages: how many rounds of interpretation are needed, based on the number of countries?

Assignment 3

In between the two extremes of assignment 2 there is probably – depending on the number of countries – an optimal situation with more than 1 interpreter, but with less than the maximum number, and with several rounds of translation, but again less than the maximum number possible. In such a situation every interpreter knows more than 2 languages, but less than the maximum.

Investigate this for the situations with 3 countries, 4 countries etc., up to at least 8 countries. What do you think of the options, which ones do you think are good and why?

The problem in the EU

As mentioned before, the EU currently has 11 official languages: Danish, German, English, Finnish, French, Greek, Italian, Dutch, Portuguese, Spanish and Swedish. In this situation interpretation is done from each language by several interpreters into their mother tongue. There are 3 interpreters per active language – that is a total of 33 interpreters – who together directly cover as many languages as possible. Return interpretation isn't used, except for Finnish. The interpreters have 1 or 2 active languages (including their mother tongue), and a minimum of 3 passive languages.

The enlargement with 9 new languages in 2004 (Estonian, Hungarian, Latvian, Lithuanian, Maltese, Slovakian, and Czech) will result in a much more complex situation. Many more interpretation combinations are possible. With the current system, that will mean a substantial increase in the number of interpreters, and there will be more interpretations into and from exotic languages. To be able to handle this situation, inventive, more flexible and made-to-measure solutions will be needed.

Assignment 4

Advise on how you think that the problems with interpretation that arise from this enlargement, and any possible future EU enlargements, can best be dealt with. Give a good foundation for this advice. Make use of the results of assignments 1, 2 and 3. Often the use of examples can help to clarify your advice.

Presentation

The presentation takes place in the form of a so-called poster presentation. Every team will make a poster on which the core of the advice (assignment 4) is presented. The texts must be in English.

All posters will be put on display in the room. The visitors of the presentation: members of the committee, teachers, parents and other interested parties will be walking around and asking the teams that are present to explain the advice presented on their poster.

Please note: some of the visitors will be English-speaking!

Each of the visitors will judge a number of the posters presented, paying attention to the criteria of clarity and originality.

The result of this public judgment will play a small part in the final result of this year's mathematics Olympiade final.

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- Read through the entire problem.
- Plan your time well – use a schedule. Do not forget to reserve time for making the poster.
- If you lack any data, you'll have to make logic assumptions yourself and justify them.
- Elaborations may be given in a number of ways: using illustrations and graphs, in words, with calculations, charts etc.
- All assignments will be part of the judgement. The emphasis will be on the elaboration for the advice given in assignment 4.
- The result of assignment 4 must stand on its own, that is to say without referring to the questions in the assignment. You can refer to the results of assignments 1, 2 and 3, which you should then include as appendices.
- If you don't have your own printer, make sure you come and print parts as soon as they are ready. Otherwise there will be a queue on Saturday morning when everybody has to hand in their results.
- Use a black pen or print on A4-pages, so the work is easy to copy. Do not use colours, since they will be lost in copying.
- Be aware that you must hand in your results of the first part of the assignment on saturday morning before 9.00 a.m. You will get your work back almost immediately, so you don't need to make an extra copy.
- Don't forget to number the pages.
- Put the names of the team members, together with the name of your school, on the cover.
- The presentation is a poster presentation; your team will be on hand to answer questions from 'visitors'. This will sometimes be in English.

Lots of fun and good luck!