



Benelux
Algorithm
Programming
Contest **2017**

PROGRAMME AND INFORMATION

Introduction

Dear participant,

If you are reading this: good luck! It means that you are participating in the Benelux Algorithm Programming Contest 2017. Once again back in the beautiful city of Amsterdam, it sure promises to be a good edition of the contest.

Where some of you are just programming here for fun, others of you hope to secure a place at the NWERC or even higher rounds of the international competition. But no matter your goals or qualities, you are going to show incredible efforts in the upcoming 5 hours.

We have been working very hard on this edition of the BAPC, and we hope you're going to enjoy yourself. For now, I want to send out special thanks to the judges, crew and technical crew who've shown incredible work in setting up this contest. And to you, dear participant, thanks for joining us and the best of luck, may the best team win!

David van Erkelens

Commissioner of Marketing - BAPC 2017



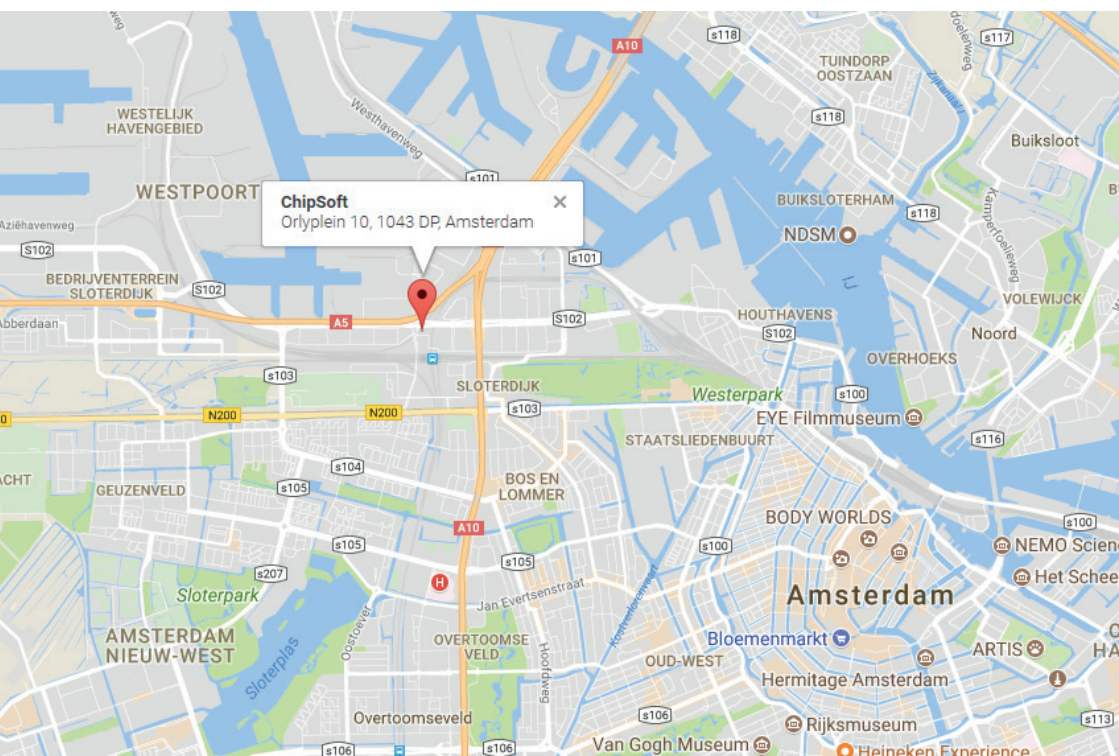
Schedule

09:30 - 10:30	Registration and coffee
10:30 - 11:00	Opening talks
11:00 - 12:00	Test session
12:00 - 13:00	Lunch
13:00 - 18:00	Contest
18:30 - 19:30	Solutions presentation
19:30 - 20:30	Dinner
20:30 - 21:00	Awards ceremony
21:00 - 22:30	Drinks



Location

This year, the BAPC will be hosted by ChipSoft in their main office building, the 'Crystal Tower' (Orlyplein 10, Amsterdam), which is near Amsterdam Sloterdijk station. If you will be travelling by public transportation, you can follow the signage and crew instructions towards the building. If you were planning on coming by car, it is possible to park in the building's private parking garage. You can reach the building by taking the A5 exit towards Luvernes or taking the A10 exit towards IJmuiden.



ChipSoft House Rules

For ChipSoft to be able to host the BAPC 2017 as optimally as possible, ChipSoft kindly asks the visitors and participants of the contest, which takes place on the 7th of October 2017, to take notice of the following house rules:

- Visitors of the Crystal Tower are kindly asked to, at all times, wear the visitor's badge visibly.
- Visitors ought to follow the instructions of the host(ess), for example, in case of an emergency.
- For your safety and our own there are both visible and non-visible security cameras present.
- Smoking is never allowed inside the building and only outside the building on the allocated zones.
- To be able to allow access to all contestants and visitors of the BAPC 2017 to the building, personal information has been requested. For this a non-disclosure agreement has been signed, by the CTO of ChipSoft Bv, which is also in the possession of the BAPC 2017 Commission. In this non-disclosure agreement it is stated, amongst other things, that the personal information will not be shared with third parties.
- If you have any questions regarding the house rules and/or the hosting of the BAPC in the Crystal Tower you are kindly asked to contact Myrthe Sennema or Roos Mous. They can be reached during office hours by phone (020-4939000) or by mail (campusrecruitment@chipsoft.nl).

Official rules

Definitions

BAPC: The Benelux Algorithm Programming Contest 2017. It will take place on October 7nd, 2017 and is hosted by via, the study association for information studies at the University of Amsterdam.

NWERC: The North-Western Europe Regional Contest 2017.

Organisation: The members of the organising committee

Website: The website, maintained by the organisation and available at <https://2017.bapc.eu>.

Jury: The group of people responsible for making the problems and checking the solutions submitted by the participants.

Tech: The group of people responsible for the system.

Runners: Volunteers responsible for delivering print-outs, answering questions and various other tasks.

Crew: Organisation, members of the jury, tech and runners.

Participant: Member of a partic-

ipating team that competes in BAPC.

Run: The submission of a solution by a team.

2. Organisation

2.1 The organisation consists of students, alumni and staff of the University of Amsterdam

2.2 The organisation has formed a jury which consists of students, staff of different universities, and professionals from industry.

2.3 The organisation has formed the tech, a group which consists of students of the University of Amsterdam.

2.4 The organisation will appoint runners who will support the organisation, tech and jury during the contest.

2.5 All crew members will be recognisable by their shirt and/or badge.

3. Participation

3.1 Introduction

3.1.1 Participation is only possible in teams of up to 3 persons.

3.1.2 There are two group stages: one for student teams and one for business teams.

3.1.3 Changing the composition of a team is only possible with the

permission of the organisation and only before the start of the contest.

3.1.4 The organisation decides how many teams from each institution are allowed to compete. The organisation will consider the number of interested contestants from each institution. Teams consisting of 3 team members will get preference over teams with less

3.1.5 The organisation has the right to deny the participation of teams before the start of the contest.

3.2 Student teams

A student team:

3.2.1 may participate for free.

3.2.2 exists of students from the same institution and who are not participating in another team. The institutions must be located in either Belgium, Luxembourg or The Netherlands.

3.2.3 has a coach, which is the contact person of a team. This can be a team member or a student or staff member of the institution.

3.2.4 participates in the student teams pool for the title 'Winner of the Benelux Algorithm Programming Contest 2017' with the cup and the prize money of 1024,- 512,- and 256,- euros for first, second, and third places respectively.

3.2.5 consists of students who

are eligible for the North Western European Programming Contest 2017.

3.3 Business teams

A business team:

3.3.1 pays the registration fee of 600,- euros, before the start of the contest.

3.3.2 consists of persons who are employed by the same company or institution.

3.3.3 participates in the business teams pool for the title 'Winner of the Benelux Algorithm Programming Contest 2017'.

4. The Contest

4.1 Introduction

4.1.1 The language of the Contest is English. All written contest materials will be in English.

4.1.2 The contest lasts for 5 hours.

4.1.3 From the beginning until one hour before the end of the BAPC, the scores are displayed.

4.2 Problems

4.2.1 At least six problems will be posed. So far as possible, problems will avoid dependence on detailed knowledge of a particular applications area or particular contest language.

4.2.2 A contestant may submit a claim of ambiguity or error in a problem statement by submitting a clarification request to a judge.

If the judges agree that an ambiguity or error exists, a clarification will be issued to all contestants.

4.2.3 The jury has the right to change or withdraw problems during the contest. When this happens the jury will inform all teams.

4.3 System

4.3.1 Each team will use a single workstation. The organisation is responsible for determining that teams have reasonably equivalent computing resources.

4.3.2 A solution has to be written in C, C++(14), Python or Java (unless the problem statement explicitly states otherwise). Business teams can request other submission languages, on which the organisation will decide whether it will be made available for submission.

4.3.3 The jury decides per programming language which libraries and function calls are allowed to be used in the solutions. This will be published on website before the contest starts.

4.3.4 All prints made by the teams will be brought by a runner. Participants are not allowed near the printers.

4.3.5 A team is allowed to bring up to 25 A4-sized pages, printed one-sided or up to 12.5 A4-sized pages, printed two-sided, of documentation. Each team member is

allowed one identical copy.

4.3.6 A team is allowed to bring a dictionary; English to their native language.

4.3.7 A team is allowed to bring one non-programmable wired mouse and/or keyboard. The keyboard needs to be checked by the organisation before the testing session.

4.3.8 A team is allowed to bring paper and pens. Where available, the organisation will be providing paper and pens.

4.3.9 All items that are to be used during the contest, have to be handed in during registration to be checked by the organisation.

4.4 Department rules

4.4.1 The house rules apply to everybody inside the building.

4.4.2 Inside computer rooms eating, drinking, smoking and talking in a loud voice is not allowed.

4.4.3 The use of hardware, including all calculators, which is not approved by the organisation is strictly forbidden, with exceptions of simple watches and medical equipment.

4.4.4 Changing of hardware or operating software is strictly forbidden.

4.4.5 During the contest, participants are not to converse with anyone except members of their team and the crew. Systems support staff may advise contestants

on system-related problems such as explaining system error messages.

4.4.6 Participants will follow orders given by the crew.

4.4.7 Participants will wear the shirt and badge provided by the organisation. Company members are allowed to wear a shirt with a clear company logo on it.

4.5 Judgement

4.5.1 Each run is judged as accepted or rejected by a judge, and the team is notified of the results.

4.5.2 For each problem, the jury has a correct solution and test data.

4.5.3 A problem is solved when it is accepted by the judges. The judges are solely responsible for accepting or rejecting runs.

4.5.4 The winner of a pool is decided by (in order):

1. The team with the most correctly solved problems.

2. The team with the least total time. The total time is the sum of the time consumed for each problem solved. The time consumed for a solved problem is the time elapsed from the beginning of the contest to the submittal of the accepted run plus 20 penalty minutes for every rejected run for that problem regardless of submittal time. There is no time consumed for a problem that is not solved.

3. The team that first submit-

ted its last accepted problem is ranked higher. In case a tie still remains, the team that first submitted its second-last accepted problem is ranked higher, and so on. In the event that this does not resolve the tie, the ranks will be determined by chance.

4.5.5 The jury is responsible for everything that has to do with the problem set and can be contacted for this through the 'clarification requests'.

5. Special rules

5.1 A team may be disqualified by the organisation or jury for any activity that jeopardises the contest such as dislodging extension cords, unauthorised modification, using of contest materials, using forbidden function or library calls, or distracting behaviour.

5.2 The organisation has the right to stop the contest, extending the contest time, temporarily block submissions for all teams or change the scores in exceptional conditions.

5.3 In situations to which no rule applies or there is ambiguity about the rules, the organisation decides.

Organisation

Committee

This year, the BAPC is organised by a committee from study association **via**, the study association for computer sciences of the University of Amsterdam. The committee consists of the following people:

Willemijn Beks

Roan de Jong

Boas Kluiving

Danny Dijkzeul

Maico Timmerman

Lorian Coltof

Erik Kooistra

Jan Schutte

Silke Knossen

David van Erkelens

Committee chair

Committee secretary

Jury representation

Commissioner of acquisition

Technical crew

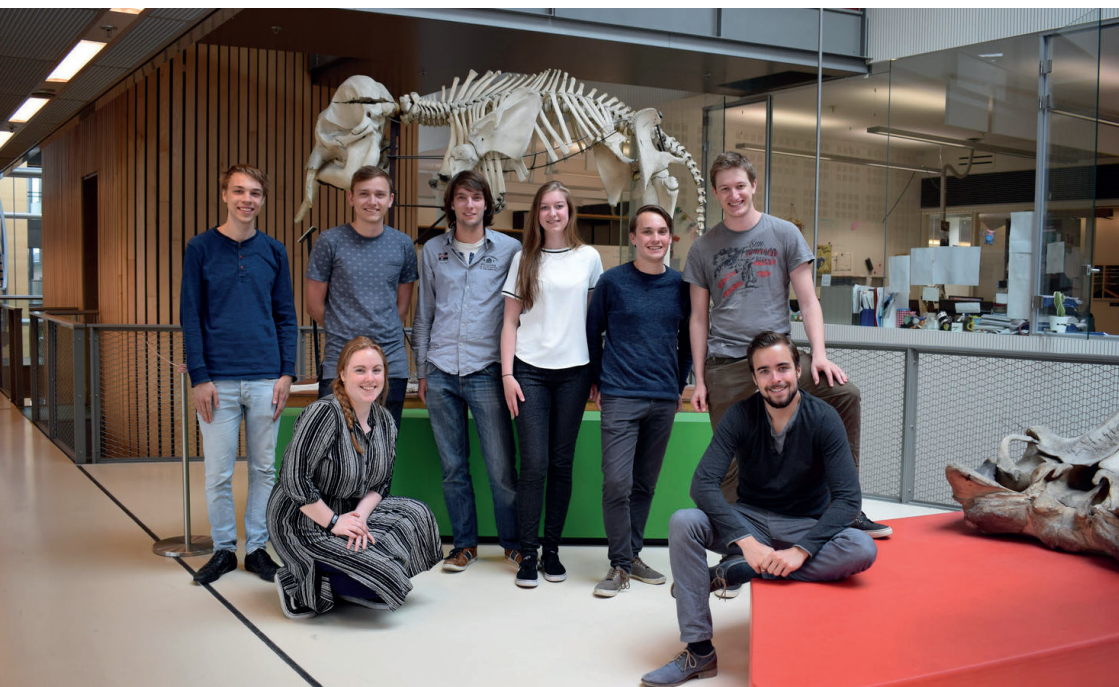
Technical crew

Technical crew

Technical crew

Commissioner of logistics

Commissioner of marketing



Jury

The core jury responsible for the problems of the BAPC consists of the following people:

Timon Knigge
Mees de Vries
Ragnar Groot Koerkamp
Raymond van Bommel
Harry Smit
Joran van Apeldoorn
Boaz Pat-El
Joshua Moerman
Jeroen de Jong
Julian Neeleman
Boas Kluiving
David Martinez
Abe Wits
Paco Criado

Crew

Organising the BAPC would not be possible without the help of our crew, which supports the committee where necessary. The crew consists of the following people:

Jesse Postema
Ghislaine van den Boogerd
Laura Hilhorst
Lotte Bottema
Nienke Duetz
Floris Heringa
Kjeld Oostra
Britt Ruigrok
Josse van Dobben de Bruyn
Stein van Zwoll
Lotte Philippus

via

ChipSoft