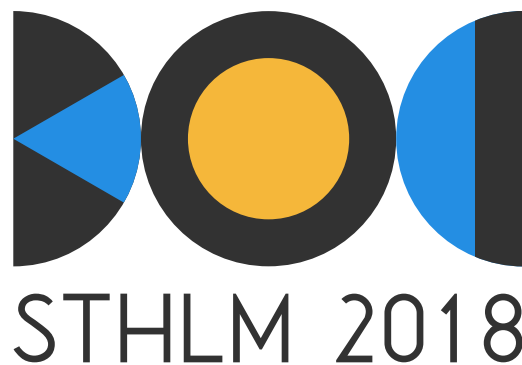


BOI Newsletter



Day 4

2018-04-30

Recap of the competition

The second day of the contest has now passed, with a top 10 looking quite different than after day one. Gediminas Lelešius managed to get an impressive full score, being the only one to fully solve problem A. Two more from the Lithuanian team are not far behind, together with contestants from Finland, Sweden and Denmark that we recognize from Day 1. Team Poland have made a comeback, with three contestants jumping into the top-10.

Interview with Technical Director Anton Grensjö

Technical director - can you elaborate on what your role entails?

The technical committee, which I am the head of, is responsible for ensuring that the technical aspects of the competition run smoothly. This includes, among other things, computer account administration, printing system setup and communication with Kattis for setting up the contests.

3 contests, 60 computers, 180 accounts and 1000s of submissions. How does the work behind all of this look?

A large part of the work has been sending emails to various people. Both coordinating with KTH to get the needed computer accounts and with Kattis to set up the contests and accounts on the judge system. I'd like to thank Joseph for handling the contact with IT at KTH, it's been a great help!

My favorite part, however, was setting up the computer accounts, and figuring out how to deploy various desktop configuration to all accounts. For example changing the set of pinned programs in the Ubuntu dock, disabling the automatic screen lock, and blocking the internet.

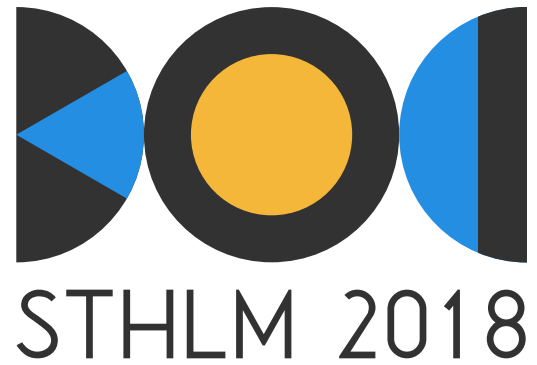
Did you encounter any issues during the preparations that you had to solve?

One issue we encountered on the way was that we only obtained the computer account passwords as a physical printed document—not digitally (which we needed for some administrative tasks, and for creating nice password sheets for you). Simon did an amazing job solving this issue. The first step was to scan the password document and use OCR software to extract the passwords. However, the software could not distinguish similar characters such as the letter O and the digit o. In order to fix this, Simon actually wrote a script that brute-forced over all possible substitutions of similar characters and tried logging in with them to a KTH server. Through this process we managed to obtain a 100% accurate digital password list!

I noticed that you were in the choir that sang during the opening ceremony. Tell us more!

That was about a third of my choir Kongl. Teknologkören, which I have been a part of for almost five years now, since I started studying at KTH. It is the official choir of the student union here, and is only one of many amazing extra-curricular activities available. No matter whether you are interested in music or something entirely different, I strongly encourage you to seek out something like this when you start studying at university. It is a great way to have fun and meet new people!

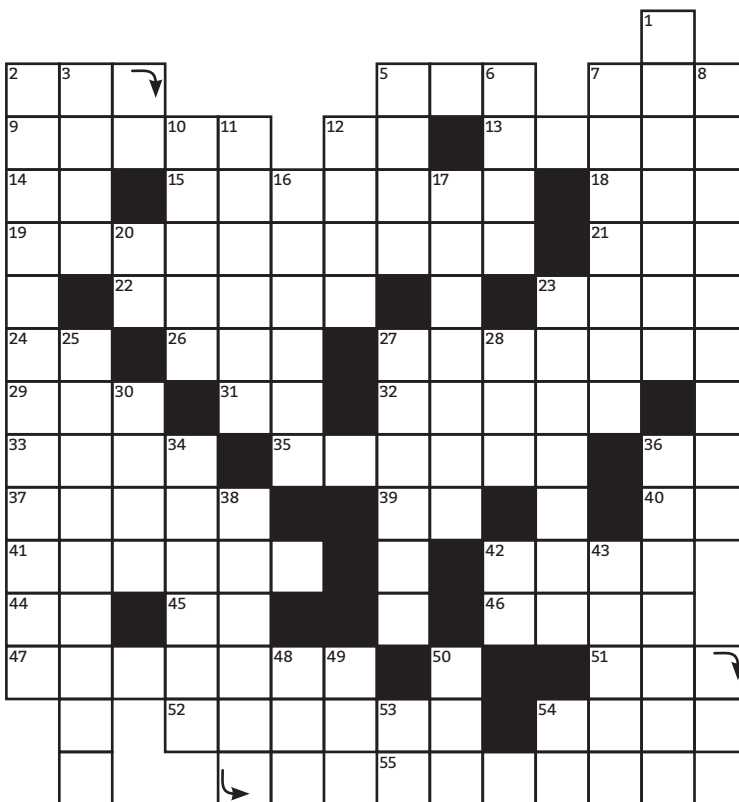
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Day 4

2018-04-30

Johan & Simon's cryptic crossword



Horizontal

- 2 $\text{SiO}_2 \cdot n\text{H}_2\text{O}$
- 5 Very funny
- 7 Gibson
- 9 (word 15)s every 0.1 to 1 million years
- 12 Half-sized skirt
- 13 Apple-branded wizard
- 14 Continuation of (word 12)
- 15 Backtrack
- 18 Can sometimes fly
- 19 Shining with a spectrum
- 21 A pale Indian
- 22 Bob's German engineering
- 23 cin -f
- 24 DNS points to
- 26 Paulo
- 27 Inconvenient
- 29 May contain a real life Sven

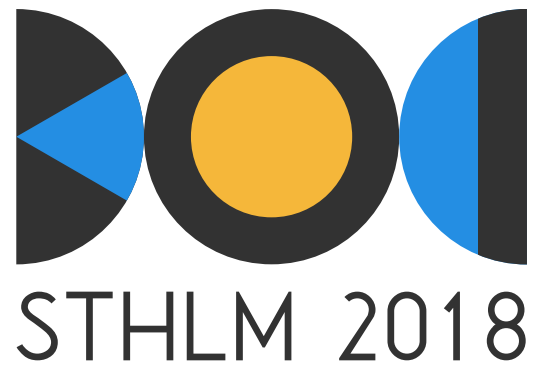
- 31 Changed by cd
- 32 Connect nodes
- 33 Nanoprocessor by Intel
- 35 Widen
- 36 Can patch you up
- 37 Pointy living quarters
- 39 Fixpoint-combined news
- 40 Not your SQL database
- 41 Bonkers
- 42 Of man, but not mice
- 44 Derailing conversation
- 45 Not OT
- 46 Has stunning smithing tool
- 47 The village Awaka lies in this country
- 51 Three-footed police
- 52 Linked cash
- 54 Not lush
- 55 Konglig messenger

Vertical

- 1 Expression, kind of
- 2 Searching for a minimum/maximum
- 3 Stream sounds bad
- 5 Without side effects
- 6 Not Russian
- 7 Shaking rattle
- 8 Amazing foot arity
- 10 Mathematicians have his number
- 11 Playful pendulum
- 12 Neither host nor judge
- 16 Not particularly Sublime
- 17 Leaking, cold cave
- 20 Global education
- 23 Sweet fish
- 25 Possible value for gravity
- 27 Rare medium
- 28 $[\text{sqrt}((T^3 J^5)/(V^5 S))]$
- 30 May cause kernel panic
- 34 Even more average
- 36 The Capital of Oz
- 38 Delegate
- 42 RPN with Texas Instruments
- 43 Subjects should be
- 48 International Physicists' Tournament
- 49 ASCII
- 50 Don't after free!
- 53 Canadian interjection
- 54 Short 'n sheepish sound

There are rumours that if you manage to solve the crossword puzzle you can win a prize! Talk to your guide, maybe they know where you can hand it in.

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Interview with Contest Director Johan Sannemo

What is the background of the candy section in the rules?

Sweden has a long tradition of bringing candy to olympiads in informatics. However, during some IOIs candy have been forbidden to bring into the contest hall. Instead we have resorted to smuggling it in, or declaring it to be our mascot. The candy rule is us taking a clear stance on the importance of candy in programming competitions, in the hope that future IOIs will enact similar rules.

Just how much fika is consumed during a BOI?

Our fika budget was approximately 1200 EUR. We like our fika.

So the BOI seems to have gone very well. What are the challenges organizing such a large event as the BOI?

Trash, trash, and more trash! Something I never noticed as a contestant or leader is the amount of waste produced - all the paper, pizza cartoons, fika boxes....

We had a quite large host committee this year though, who made sure everything went smoothly, fika was always delivered when needed, prepared all the contest rooms and planned the excursions for you. But even with so many great people we have been working on preparing the BOI for over a year!

I hear you and Simon has prepared a crossword for tomorrow (editor's note: today). Can you tell us something about it?

It is a somewhat untraditional crossword, mixing regular clues with Simon's favourite type: cryptic crossword clues. After some beta testing on the guides we found it to be quite a challenge! We are definitely impressed by anyone who manage to solve without help.

Interview with Chief Judge Simon Lindholm

How did you think the contest went?

I think the contest went overall very well! We had no technical issues due to our amazing technical committee lead by Anton, and our jury members ensured no bugs crept into our tasks.

What did you think of the tasks?

My favourite tasks were worm, alternating and polygon. Interactive problems such as worm are always nice. I especially like that there multiple possible solutions and many subtasks. Unfortunately we noticed that the genetics task had some input limits that allowed well-optimized hacks through.

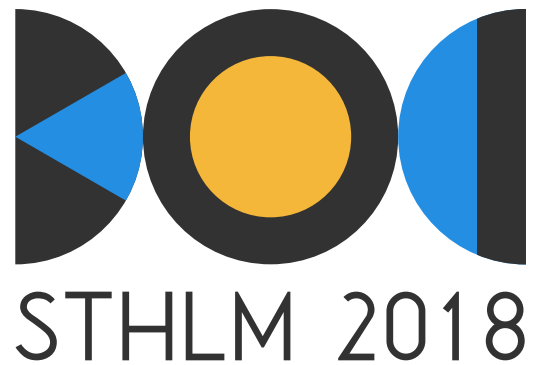
What tips do you have for contestants who wish to help out with their national olympiads?

Be prepared to spend a lot of time! Preparing a programming contest means much work if you want it to keep a high quality. Especially focus in test data generation - that is often the hardest part of preparing a problem.

I noticed Sweden took a gold medal for the 8th year in a row, which is the longest streak currently running. What are your secrets to this great success?

Good routines. A great organization. Many enthusiastic judges who help out making our national olympiad the amazing opportunity for programming youth that it is.

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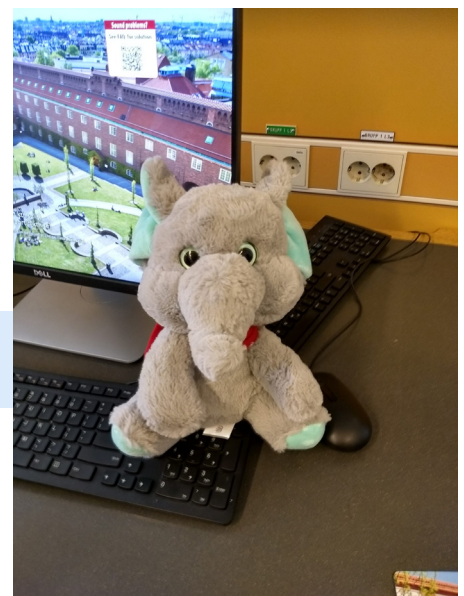
Mascot Showdown - Rounds 1 through 5

Most annoying to attach a post-it note to
Winner: Denmark with the ducks



Most beneficial to productivity
Winner: Denmark with the the coffee brewer. We are not sure if it was used however.

Most penetrating stare
Winner: This thing! Look at it!



Highest prevalence in crossword puzzles
Winner: Sweden with Sven the Polar Bear



Most likely to have a bash compatible shell
Winner: Finland with the turtle

