

# Bebras contest



## Overview

- Bebras (beaver in Lithuania) is an international initiative whose goal is to promote informatics and computational thinking among teachers and pupils.
- Website: <http://www.bebras.org>.
- In 2013, approximately 750 000 participants from 30 countries.
- There are five age groups: Mini (for grades 2-3), Benjamin (grades 4-5), Cadet (grades 6-7), Junior (grades 8-9) and Senior (grades 10-12).
- In the contest there are 10-18 four-choice or interactive question with a 45 minutes time limit to answer the questions.
- Questions come from different categories: Information comprehension, algorithmic thinking, using computer systems, structures, patterns and arrangements, puzzles, and ICT and society.

## National contest in Finland

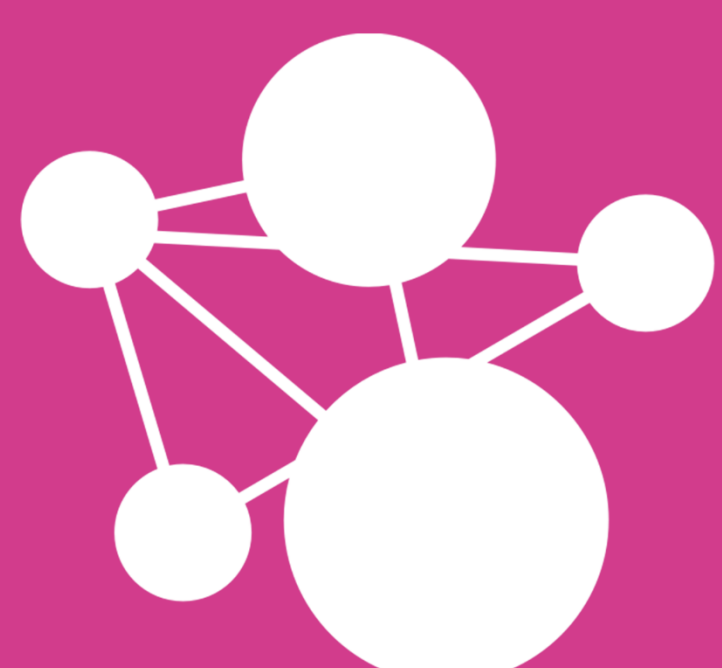
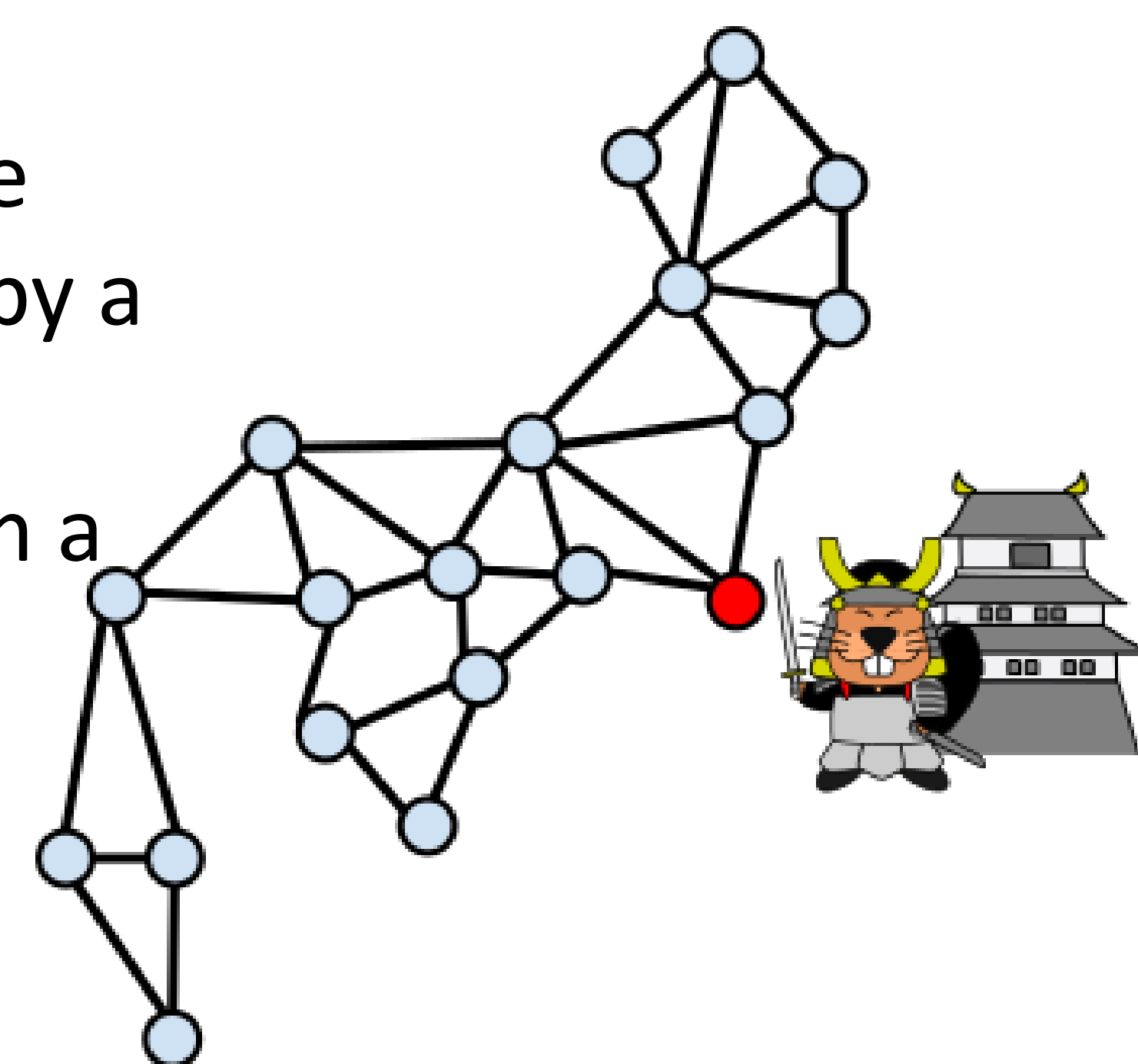
- In 2013 about 4400 participants from Finland.
- Questions were the same as in Lithuania and in Sweden.
- Website: <http://www.majava-kilpailu.fi>.

## Research

- Contest produces huge amount of data from each participant from different countries: gender, grade, geographical location, state, school, answers (correct, wrong, no answer) and answer time.
- Active research collaboration between Finland (University of Tampere, Åbo Akademi), Sweden (Linköping University and Kungliga Tekniska Högskolan) and Lithuania (Vilnius University). In future also with Germany (BWINF).
- Dagiene, V., Mannila, L., Poranen, T., Rolandsson, L., and Stupuriene, G.: Reasoning on Children's Cognitive Skills in an Informatics Contest: Findings and Discoveries from Finland, Lithuania, and Sweden, in ISSEP'2014.
- Dagiene, V., Mannila, L., Poranen, T., Rolandsson, L., and Söderhjelm, P.: Students' Performance on Programming-Related Tasks in an Informatics Contest in Finland, Sweden and Lithuania, in ITiCSE'2014.

## Example task

- Story: A long time ago in Japan, some Ninjas served the shogunate government. In case of emergency, they used smoke signals to communicate with each other.
- In the figure, the red point is the location of the shogunate government. Each blue point is a location where a smoke signal should be lit. Also, two points are joined by a line if their smoke signals can be seen from each other. At every point, there are some Ninjas who stand all day long. They fire a smoke when they see a signal from a point joined to theirs, just 1 minute after this signal was fired.
- Question: How much later there will be a signal lit at all points?  
A) 4 minutes B) 5 minutes C) 6 minutes D) 8 minutes



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