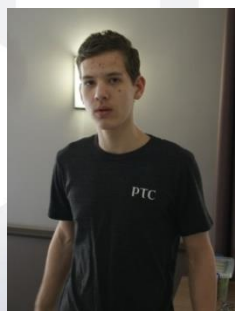


Team PML30-phi

Physics and Mathematics Lyceum №30, Saint-Petersburg, Russia



Georgiy Krylov
Captain, responsible for
efficiency of working in
the team



Evgeniy Maksimyshev
Operator №1,
engineer, responsible for
programming



Nikita Safronov
Operator №2,
engineer, responsible for
technical documentation



Ivan Fokin
Engineer,
responsible for
purchasing materials



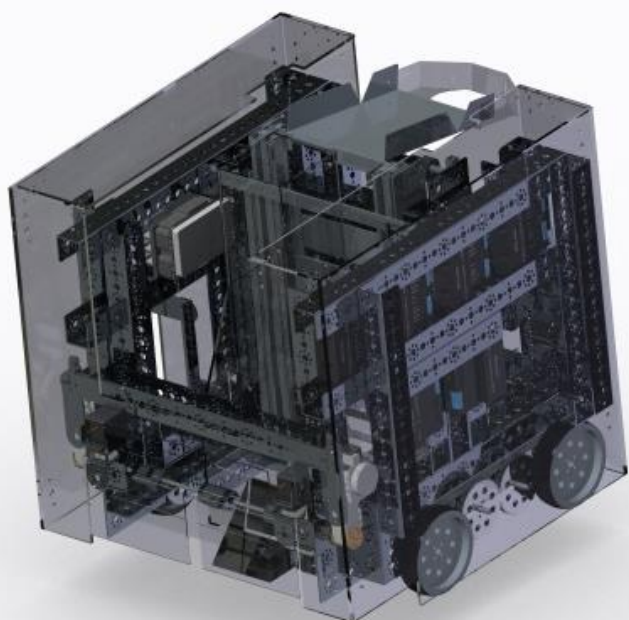
Maksim Radionov
Engineer, responsible for
public relations

Strategy (number of scoring points is noted in brackets):

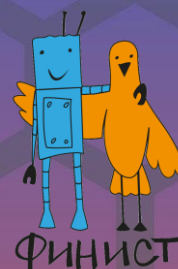
- Autonomus period (2 options):
 - Riding out from the ramp, scoring autonomus balls into 60 and 90 cm rolling goals and delivering them to the parking zone. **(120)**
 - Start from the parking zone, scoring autonomus balls into 30 and 90 cm rolling goals and delivering them to the parking zone. **(100)**
- Driver control period: carrying 90 cm rolling goal and filling it with balls **(200 - 270)**. During end game scoring 4 big balls into central goal **(180)** or delivering rolling goals to the ramp **(120)**.

Construction features (numbers of following pages in engineering notebook is noted in brackets):

- Strength:
 - Most of construction elements are made of metal (aluminum or steel).
 - Elevator works stable, because it is made of furniture rails. (pages 27 and 41)
 - Robot is heavy, so it's hard to turn it over.
 - Robot is protected from collisions with Plexiglas.
- Mobility:
 - Robot has 6-wheel drive. Six motors and gear 2:1 for speed provide maximum power and maneuverability of moving. (page 198)
 - With standard TETRIX omniwheels robot easily turns, and because of special construction it has no problems with riding up to the ramp. (pages 169 and 200)
- Balls control:
 - Gripper for balls consists of two fast rotating vanes. (pages 26, 122 and 176)
 - The bucket for balls rises up with elevator and overturns backwards. (pages 103 and 178)
 - Balls from the bucket move to the guide with hole at the end of it. Balls fall down from the hole vertically, so they always get into the goal. (pages 82 and 108)
 - Robot captures the rolling goal with a special mechanism and carries it with itself. (pages 124, 202)



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