



AMZ News

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Endurance at FSG ©FSG, Schuster

Rollout

Dear ladies and gentlemen

The last time we reached out, most of you were at our rollout event in Hinwil. As tradition, we booked an exciting venue, for this time at Sauber Group. We worked very hard to make it to this event despite all the delays we have faced, and earlier that morning, we finally finished the car to its final presentable state. It was really nice to present our car to our sponsors, family, friends as well as our many alumni from the past years. We would like to thank all our guests for taking their time and sharing this moment with us.

Event Season

FS Switzerland

The team then carried on with the momentum, getting the car to run in both EV and DV mode on time, despite the tight time schedules. We were able to squeeze in some valuable testing days before our first event: the first complete version of Formula Student Switzerland at our home base, Innovationspark Zürich and Dübendorf Air Base.

Just as we finished scrutineering and were looking forward to the upcoming competition, the setback of a requested reupload of our autonomous Vehicle Status Video really hampered our progress. To stay true to our goals, we had to convert the car back into the auto-

nomous mode within the constraints of the event.

This cost us the chance to compete in all the dynamic events, as well as a chance to win our first Engineering Design event due to penalties for not being able to present the car at the final. The resubmitted vehicle status video was successful, securing us our spots at all our further competitions.

FS Austria

Thereafter the team conducted a successful week of testing, solving upcoming issues and putting the car through its paces in preparation for our second event: the Formula Student Austria in Spielberg. There the team was met with significantly tougher competition and got a first taste of the



Podium at FSG ©FSG, Haindl

special logistical challenges of traveling, camping and competing on the road.

Due to technical difficulties, we could run the car with rear wheel drive only for the whole season, hence being limited on performance. However, this event showed us glimpses of pace, despite the lack of reliability. On the static event side, the team proved themselves in the Engineering Design event, claiming a first victory in the discipline for the year.

FS East

A week later, the team travelled to Hungary to attend our first combined DV and EV event, the Formula Student East. The software team was presented with a tough challenge, competing with almost no preparation, whilst the team also participated in all the EV discip-

lines. After loads of hard work, a great 2nd place in DV autocross showcased what we could do, along with some further static event podiums, but the team was hampered again by reliability issues across the disciplines.

FS Germany

The final event of our season, Formula Student Germany (FSG), rolled in right after, with the team only having one day back home to prepare the car and themselves for the event. This was by far the biggest event with the most participants and the team was ever so motivated to end the season on a high, despite the previous lows. As the car accumulated the kilometers during the event season, the team was becoming more familiar with the issues and chal-

lenges we might face and operated as efficiently as never before.

We got off to a great start with both disciplines, and could show our potential in the DV Skidpad event, setting some respectable times. However, some long lasting issues have been looming in the background and disturbing our run plans throughout the first few days of dynamic running.

Despite our best efforts, the DV team had to take the sad decision of giving up on the final discipline of Trackdrive upon unsolvable technical issues. This was a huge disappointment for the team, as our state of the art driverless pipeline was let down by hardware issues.

The final results were unfortunately a mixture of both ends again. We achie-



FSG Dynamic Events ©FSG, Partenfelder

ved an honorable Engineering Design double in both the driverless and the electric category, and could, for the first time, complete all our 4 Autocross runs to set a competitivetime, being in the mix amongst many 4WD cars. However, an unfortunate failure disqualified us again midway from Endurance, the biggest discipline, thus losing us the chance to grab an overall podium place. Still, having a season with 2 engineering design victories, multiple business plan podiums, as well as 7th place out of 70 cars in FSG was a reward for our hard work despite the circumstances.

FSG marked the end of our bernina competition season. Despite the hardship we faced this summer, it was an absolute blast for all of us—the experience of fighting together as a team, exchanging with students from other

universities, making new friends, and as always, serving raclette to all teams after every event, which embody the spirit of this competition beyond the battles for points and trophies. We are proud of what we could achieve and what we were capable of, and what we were able to learn from so many sponsors and partners.

At this opportunity, we would like to express our most heartfelt thanks to everyone who supported us. It has been a difficult year for us all, but you surely managed to make the experience that much more enjoyable for us. Working in AMZ is a great privilege, and the opportunity is unique and priceless. We have since also visited some of our sponsors at their base, showcasing our car, and it was a huge pleasure to meet

so many of those who supported us to make AMZ what it is today.

New season, new team

The focus is now on the future, and we are pleased to introduce the new team here. This year, the core team consists of twelve mechanical and four electrical engineers from ETH, as well as four electrical engineers from the Lucerne University of Applied Sciences and Arts. These are complemented by a team leadership of alumni and many freelancers.

After an instructive 2021/2022 season, numerous discussions were held between the alumni of the previous seasons and the new team at the beginning

of the new project. In the annual «bassecamp», the first task was to draw the most important lessons from the past years, and it quickly became clear that the new team enters the new season with lots of motivation and ambition.

Outlook

According to tradition, our new car will be named after a famous Swiss mountain once again, as was the case for the last 5 cars. The vote having been held at the General Assembly on October 14, we are happy to announce that our race car this year, with which we will

compete all over Europe in the summer of 2023, will be called *castor*.

The time since the start of the project has been used to set goals and a timeline for the coming months. In the period from the project start in mid-September to mid-October, various concepts were developed and discussed, and now that the concept decisions have been made, the phase of detailed elaboration and construction of the subsystems begins. By the end of the year, *castor* will exist as a complete digital model.

After *bernina*, *castor* will become the second car in the history of the AMZ in

which the driverless system is integrated from the very beginning. Now that the recruiting of the software team is done, the new team consisting of 15 core members and two freelancers is starting by understanding the current status of the pipeline and how it can be improved.

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