

A portrait of Trond Dagfinn Krøvel, a young man with glasses and a dark jacket, smiling. The background is a scenic view of a blue body of water and distant mountains under a clear sky.

The next generation

Nordicspace met the Association President for SSETI, Trond Dagfinn Krøvel

Still very young, very interested and engaged in space exploration and utilisation, but with the Challenger accident in the back of his mind, the Norwegian Trond Dagfinn Krøvel is one of those Europeans who works hard to bring about changes within this engaging field. In addition to his education, he has accepted the demanding position as President of the SSETI organisation.

As a third year student at the Norwegian Technical University (NTNU) in Trondheim, Norway, he has Technical Cybernetic as his professional field, however, his interest in space is so consuming that he has agreed to head the student organisation as well.

How can an education in Technical Cybernetic be a basis for a career within the space related field?

I have moved away from the traditional Technical Cybernetic and last year I chose special areas such as navigation and robot techniques as my project exercise, and as my thesis for my Masters that I am currently working on, I have chosen control of satellites, so I have already taken the first steps to one day finally become an employee within the space-related field. I sincerely hope that my education can provide both proper knowledge and a future job.

What is your job within the SSETI.

The SSETI organisation is a very independent student organisation where students can write an e-mail to the management and say, "We would like to participate, what we can do?" or, "We have an idea, is this something for the SSETI?" In most cases we forward the e-mail to one of the project leaders who then tries to find a place in the organisation for the group. This year we have started the project ESMO (European Student Moon Orbiter), and most of the enquiries go to the project leader. Each project has a subject team that works with the technical aspect, while I, as president for the whole organisation, supervise three teams that participate in the daily operation; PR, communication and data handling. Finally, but equally as important, a team that works to ensure the law of copyrights.

How I was chosen as president? As team leader I participated in the organisation's Annual Meeting last year, found the vacant position of thrust very interesting and signalled I was interested, thus I was chosen.

The work you put down in the organisation, is that a part of your education or an addition to your work?

The duty as President is miles away from what I am normally doing; however, I consider it to be an important part of a life-long experience. Here I get new insight and experience in a whole new area, I learn to work in an international organisation, I associate with new contacts and I learn about other cultures. The duty gives me plenty in return.

How can an independent organisation like the SSETI manage so large and complicated projects such as a satellite?

Our organisation is very independent, that is correct. All over Europe we sort of sit in each our personal corner going about our daily business, but we use the information channels that are available on the Internet very effectively, and that works very well. Every week all project coordinators "hook up" on the Internet on a chat channel, both generally speaking and for a more project related chat. There we can there provide the necessary information and

messages, answer given questions etc. In addition, we have a news server where everybody can see all the information that circulates in the organisation.

Though we all share the fact that we are European students, we vary greatly when it comes to issues like education level, interests, engagement, working methods etc. The ESA, however, has provided very clear guidelines for how to share information and reports, and the system functions very well. It also varies greatly how each student values the work. For most Norwegians, the work is a part of our education, whereas several universities do not approve the work as a part only, and the engagement in SSETI is therefore an activity alongside the education. Developing and building satellite instruments is very demanding and I therefore understand that the students have different levels of ambitions. To develop and build satellite instruments, however, is a high factor of motivation, something that pushes the project forward.

Almost the whole project is student collaboration, but integration of the satellites, negotiations with the launcher operator and different other advanced tasks that hardly can be carried out by students are handled by our project leader at ESTEC.

Yours mainly communicate through different chat channel, what about face to face communication?

Once or twice we have workshops at ESTEC, and the last time we met for a whole week was in March this year. Sixty participants debated common problems, and together we found solutions connected to the main structure and main systems, where to place the different instruments, experiments etc. This workshop is very useful. We finally get to see those we have been communicating with through the Internet, and we become good friends.

Do you think that your method of managing a project can be a model for larger projects?

It is difficult to say, but the method is cheap and effective for small and simple projects, and provides possibilities for small groups to develop, build and launch their own specialised satellites. Such a project can also open the eyes for different ways to solve a problem. The students involved transfer their experience from the projects to their professional careers and thus, the working methods become familiar and hopefully the experience can influence future projects. I hope we are contributing to educating "young experts" for careers in the space-related community.

Is the space-related industry interested and engaged in your projects?

Yes, they are, but their economical situation set restrictions financially. However, we get much



support in the form of advice and directions, besides, we get free components etc. All in all, the industry is interested in our work and is thus supportive.

You are about to finish your education. Has your work within the SSETI influenced your choice of professional career?

Yes, definitively. I have made my career choice. It must be in the European space industry, but where, I cannot say, but I hope and believe I will be useful for the industry. Firstly, I would like to get a technical employment at ESTEC, but that is possibly somewhat ambitious. I know, however, that my network of contacts will be valuable for my future career. About forty years onwards I am convinced that some of the leaders in the European space community have some sort of background from one or other SSETI projects.

With your background, you may prove one day to be one of those leaders yourself. What would be your main issues in terms of research?

I believe I would be most happy working with applications for using space in our daily lives, because I think that is the best way of using the resources. Using space is very fascinating. What can a permanent settlement on the Moon bring us with regards to technology, science of life, basic knowledge etc.? There are no limitations, only possibilities. I hope to become one who works with these subjects and can participate in further research and exploration in space, concludes a very interested and engaged Trond Dagfinn Krøvel.

I am convinced that we will hear from him again....

To use a well known quotation: "I have a dream".

