

Report on the activity in the framework of the European Inventor Network



To be sent to:

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Name of the alumnus who implemented the activity

Jean-Luc Issler

Short description of the activity

Talk on Innovation and Space Electronics, in Lycée Felix Le Dantec, in Lannion.

The interest of Scientific or technical clubs have been introduced and shown how useful they are to favour capacities and spirit of innovation.

I then presented the EPO, the interest of protecting the inventions with patents, the European Inventor Network, and shown some related EPO video.

Then generalities on satellites mission and architectures have been introduced.

A simplified presentation has been made about the effects of the space radiations affecting electronics in orbit, and as well about the related mitigation means. The level of radiations in space depends on the solar cycle, having minimum and maximum, correlated to the number and the size of the sunspots. We are currently close to the maximum of the solar activity, as we could see from the sunspots and the aurora borealis. The practical part of the workshop, consisting in using the offered telescope to observe the sunspots thanks to a solar filter, couldn't be made due to unexpected delays in the delivery of the telescope. The delivery of the telescope just occurred this Monday the 23rd of June.



Presentation of the Telescope offered by EPO during the seminar

A next part has been dedicated to the Doppler and Doppler rate effects on space transmissions, to take into account in the architecture of the radiofrequency satellite devices.

Another specificity of space electronics has been described, related to its need to be designed and tested to cope with the space thermal environment, as well as with the vibrations and chocs during the launch to reach the orbit in space.

Then I provided some examples of space electronics equipment, and of the related systems, in radio frequency and optical transmissions, and in radionavigation by satellite.

The conference also included a description of simple way to calculate the CO2 equivalent footprint of space systems, and a sensibilisation about the need to consider such calculations in space system engineering eco conception, having in mind keeping the sustainability of the space sector.

Some fascinating pictures taken by space probes has been finally shown

The international, multicultural and collaboration aspects of space exploration have been also addressed and promoted.

A questions and answers moment concluded the talk.



A few minutes before the seminar

Date and place of the activity

30th of april 2025 in the "Lycée Felix Le Dantec" in Lannion, Britany, France

Audience (number and age of the participants):

More than 170 students, about half of them being 16 and 17, and the other part being between 18 and 20 years old.



Part of the audience (Lycée Felix Le Dantec do not allow this photo to be published on the social networks)

Outcomes and achievement

Ex: qualitative information, such as testimonials or success stories

I confirm that the teenagers were very interested and asked a lot of questions during and after the talk. The teenagers and the other students continued to ask questions during more than one hour after the talk, inside and then outside the conference room!

Recommendations

Suggestions:

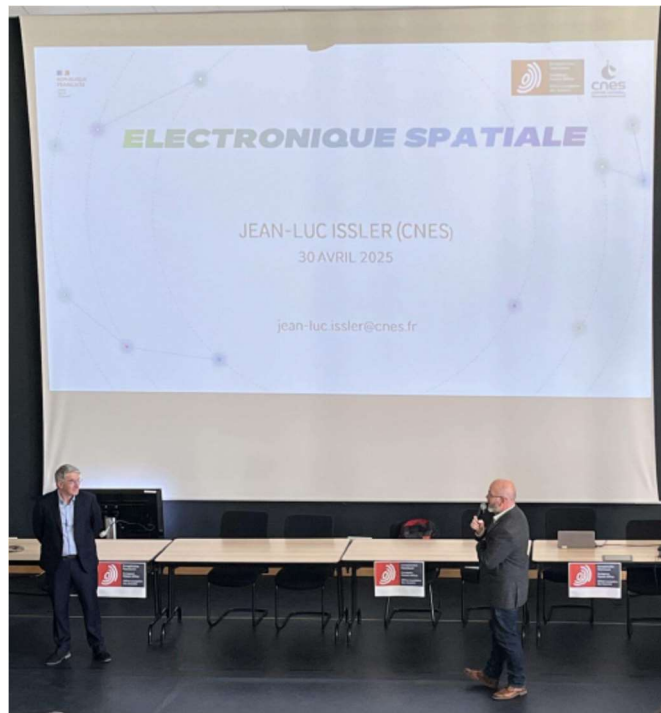
- Maintain the EIN and YIP
- Organize a meeting gathering the EIN members, maybe in the frame of a conference allowing them to share their personal experience in innovation and in the EIN

Ex: any recommendation for Future activities based on the Experience and outcomes of This grant-funded activity

Attachments: Any supporting documents (such as photographs, testimonials or other relevant materials) that help illustrate the activity's impacts and effectiveness should be sent to mchopin@epo.org. These supporting documents might be posted on the European Inventor Network webpage.



Two participants (Logan Laplanche and Owen Chicherie) asking questions to Jean-Luc Issler before the seminar



Beginning of the seminar



Beginning of the seminar



Two pictures taken during the seminar

