CODEPO

Four students assist MSF in Goma

Cécile Castiaux, Nathan Gartner, Margaux Mannaerts and Nicolas Wallemacq, MA1 students, left in early July to spend a month in Goma, Democratic Republic of Congo, to upgrade the portable wifi cases of Doctors without Borders (MSF). "These cases, designed by Venn Telecom, are very valuable on the ground, since they allow doctors to have a good internet connection wherever they are and to exchange information. The problem is that once the router is turned off, it is impossible to locate it, which leads to many losses», explains Nicolas, IT engineer. For the engineers, the challenge was thus to equip the cases with a small autonomous device that can last three months and transmit the GPS position and the level of battery charge via USSD.

RELIEVED AND PUT BEFORE A CHALLENGE
After several months' work, the students were supposed to go to Goma. "With the public health situation and the eruption of the Nyiragongo volcano in May, we were not sure we would be able to go. So once on the plane, we were super relieved!", remembers Margaux. After having met their Congolese fellow students, the team got down to work. Very soon, they were faced with new problems. "We had to find solutions and deal with the local realities and time constraints", reports Nicolas.

THE PEOPLE'S BEACH
After a month of trial and error, the devices were ready. Even if they did not correspond 100% to the specifications, "the main requirements were met", ensured Nathan. "Our only regret was not to have had the chance for more interaction with the Congolese students. We were very focused on our respective tasks. That did not prevent us from forming ties with them and having some good times together, in particular at the 'Plage du Peuple', according to Cécile and Margaux.

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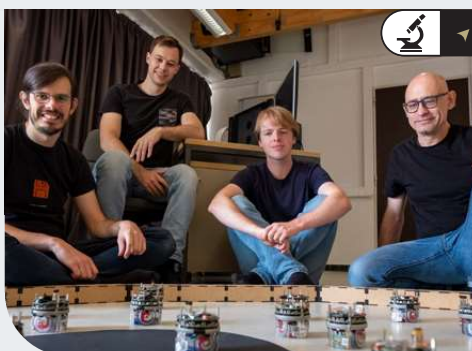
NEURO-EVOLUTIONARY ROBOTICS

A gap between simulation and reality

In a study published in Nature Communications, Ken Hasselmann, Antoine Ligot, Julian Ruddick and Mauro Birattari compared some of the most popular and the most avanced neuro-evolutionary methods for the off-line design of swarm robots. If the operating software produced by most of the methods analysed yielded good results in simulation, things were quite different in reality. The researchers thus concluded that experiments on real robots are necessary to evaluate reliably the performance of neuro-evolutionary methods, and that the robustness of the gap between simulation and reality is the main problem to be solved to develop the application of neuro-evolution to the design of swarm robots.

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