INTERNATIONAL PROJECTS
ELECTRICAL ENGINEERING AND INDUSTRIAL COMPUTING DEPARTEMENT
VILLE D'AVRAY INSTITUTE OF TECHNOLOGY
UNIVERSITY OF PARIS – UNIVERSITÉ PARIS OUEST NANTERRE LA DÉFENSE

The department of Electrical Engineering and Industrial Computing (Ville d'Avray GEII) has been very eager lately to enhance its international profile. A good command of English is essential today in sciences. We are therefore doing our utmost to offer our students (future skilled technicians and mostly engineers) the possibility to come into contact with British institutions and culture. Over the years Ville d'Avray GEII has formed a partnership with the University of Glyndwr in North Wales (jointly with the Ville d'Avray thermal and mechanical departments) and has just developed another one (exclusive to the Electrical Engineering department) with the University of Kent and the School of Engineering and Digital Arts based in Canterbury.

• PARTNERSHIP WITH THE UNIVERSITY OF KENT'S SCHOOL OF ENGINEERING AND DIGITAL ARTS (EDA):

Our partnership with Kent started in the spring of 2014. The school of Engineering and Digital Arts (EDA), based on the Canterbury campus, enjoys an excellent reputation, and has 30 permanent academic staff members with both academic and industrial experience. It has strong industrial links and offers its undergraduate students courses in Computer Systems Engineering, Electronic and Communications Engineering and Electronic and Computer Systems. Both Kent EDA and the Electrical Engineering department of Ville d'Avray Institute of Technology (Ville d'Avray GEII) focus on computing, communications, hyper-frequencies and robotics. Those common interests allowed our two institutions to develop a partnership and sign a memorandum of understanding.

At the moment our collaboration is twofold mainly: it consists of a yearly robot competition held in March / April and of an annual trip to Kent EDA's facilities organised in June.

• *Robot competition:*

This is a friendly contest. Second year students who choose the relevant module and first year volunteers can take part at Ville d'Avray GEII. The nature of the competition, the details of the rules, the technical characteristics of the robots and of the maze / track are bound to evolve every year. Details about the first (2015) competition can be found at the following address:

http://challengekentparisouest.blogspot.fr/

This is a blog we jointly set up to allow the participants of both Kent EDA and Ville d'Avray GEII to exchange ideas, discuss the difficulties they encounter and post comments and videos.

This first edition of the competition took place on April 9th 2015 and was a success. Both institutions managed to enter several teams. Each side built its own racing circuits (a blank maze and a more complex one) and each team was responsible for building and developing its robots. On the day the competition was held the participants and the members of the jury communicated via a video-conference link set up by our two institutions' IT teams.

Robots are programmed to manage the maze on their own. The robot that succeeds in crossing the finishing line in the smallest amount of time wins. In 2015 a distinct prize was awarded to the winner of the race on the blank circuit and another one to the winner on the complex maze fitted with priorities and short cuts. We are proud of our Ville d'Avray GEII students – they won the 2015 competition on both circuits.

The 2016 competition is scheduled to take place in the week that follows Easter (week 13). 6 to 10 individuals from Kent EDA and Ville d'Avray GEII will take part. The 2014-15 blog was not the resounding success we hoped it would be, the students shunned it mostly. So we have decided to turn it into a compulsory place where students will need to share their experience to make progress. The blog could be renamed and become a "blogbook" or a "logblog". The first edition of the competition took place in our respective institutions at the same time and we communicated via the internet. We would like to stage a live encounter in the future. The idea would be for the winner (or the loser) of the previous competition to host the following one. That would strengthen the ties between Kent EDA and Ville d'Avray GEII, and widen the scope of our collaboration. Both sides have agreed on a new chassis and new characteristics for the 2016 robots. Besides, we plan to introduce a real (probably 3D) maze.

- ***Trip to Kent:***

Ville d'Avray GEII students visited Kent EDA in May 2014 and June 2015. These trips have been a great success. They serve several Ville d'Avray GEII students visited Kent EDA in May 2014 and June 2015. These trips have been a great success. They serve several purposes. First, they allow some participants of the robot contest and other volunteers to meet their competitors in the flesh and to discover first-hand what it is like to study at Kent EDA. This trip is a fitting conclusion to the entire partnership project. Second, this trip brings meaning, life and scope to our activities in class. The hard work the students have to put in to prepare the visits makes sense. Third, the students often say that they learn more about what it is like to live and work in England while being there than in class. They love the experience. For many of them it is their first time in the UK. It offers many shy students a new start and allows those whose English is poor to take a fresh look at a country and a language they had completely ignored or misrepresented so far. Fourth, we stay with host families while in England. So students can exchange a lot with them in English, they can practise what they have just learned, they can introduce themselves, explain what they do at the institute of technology and they can discuss the visits.

The May 2014 and June 2015 stays included visits to London, Rochester, Chatham dockyard and Canterbury cathedral and town centre (besides half a day spent on the Canterbury campus with our Kent EDA partners).

The current format works as follows:

- 4 days in England,
- 16 students in 2015,
- Students and staff stay with host-families,
- A balanced mix of activities including recreational and cultural visits and a visit to our partners of Kent EDA.

For more information, turn to the diary of our 2015 stay below. Our first-year students are the main contributors.

Future developments:

We plan to do more and better. Future improvements will mostly focus on three areas.

1. First, the robot competition could take place in one of Kent EDA's or Ville d'Avray GEII's facilities. Kent EDA and Ville d'Avray GEII could take turns to host the competition instead of having to follow the event from a distance over the internet.
2. Second, the two institutions could further their collaboration and organise an exchange of lecturers who could teach partner students a few hours.
3. Third, some of our students could be allowed to do their ten-week internship with our partners (of course we would gladly welcome English interns in return).
4.

Everything depends on the funds we can secure in the future. We are currently exploring new avenues with the International Relations team of the university to see whether we could not benefit from some European funding via the Eramus Plus scheme.

Two senior lecturers of Kent EDA (Dr Richard Guest, senior lecturer in Image Processing and Pattern Recognition, and Dr John Batchelor, Reader in Antenna Technology) paid a visit to us last November and are planning to come back next autumn accompanied by a third lecturer, Konstantinos Sirlantzis, lecturer in Image Processing and Vision. We hope we can make progress when they come and improve the current format.