BATON BLUES

Daniel Watzenig

In this edition, Daniel Watzenig, a member of the ARTEMIS Presidium and Steering Board, picks up the baton and takes us on his lap. Daniel is currently Head of the Electronics Department at the Virtual Vehicle Research Centre and Associate Professor at Graz University of Technology. Daniel studied Electrical Engineering in Graz and gained his PhD in Signal Processing in Embedded Software, spending six months in New Zealand on an exchange. After gaining his doctorate, Daniel produced a further thesis to become associate professor, which gave him the opportunity to supervise PhD students himself. But he is employed at the university only part-time because in 2009 he joined the Virtual Vehicle Research Centre where he now manages around 50 employees within his department, half of whom are involved in automated driving. All in all, a nice mix of industry and academia to fill up his days.

"My first contact with ARTEMIS-IA came by way of the CESAR project and I found out through this involvement what ARTEMIS-IA was doing and what it stood for. I was attracted by the thinking out of the box and became keen on joining the brokerage events and getting in touch with other projects. Which I did. And through Josef Afenzeller, whose notion of working in a cross-domain and cross-border way motivated me, I became more actively involved. There was a seat open in Chamber A and I was asked if I would fill it. I was lucky to have support from my SME in taking on this role, an important one in my view as I would like to see more SME representation in the ARTEMIS machinery, as it were. And when I was also elected to the Steering Board last year I was very pleased since this gives me an opportunity to gain more insight into the 'brains' of the organisation and the developments in embedded intelligence on a European level. What I am doing in ARTEMIS is well aligned with my work at the Virtual Vehicle Research Centre and the university. And as a member of the Presidium I have also been working on the Strategic Research Agenda due to appear this month.

You see ARTEMIS-IA from both sides of the fence – as both outsider and insider. That's an interesting position to be in. "Certainly, as an SME it's important for us to have access to an organisation like ARTEMIS, which gives us the opportunity to get into contact with other players in the research and industry field, from renowned professors to corporate leaders. Of course, European funding is an incentive but the chance to interact with partners in a consortium – give and take – is where the real benefits lie. And from a Steering Board point of view I am keen to facilitate projects that have a real pay-off, in terms of business prospects and strengthening the European position. From a Presidium perspective it has been a tough time following the merger with EPoSS and ANEAS. The idea was to bring these two industrial sectors under one umbrella but it turned out that the semiconductor roadmap and its implementation plan differ from that of the software and embedded systems roadmap. But if we can overcome these problems, bridge the gaps and align the programmes, then in ECSEL we have the opportunity to become efficient and reshape the landscape. As a matter of fact, software and hardware are closely tied together."

You are involved in 3Ccar, one of the few CPS oriented projects funded in the first call of ECSEL. What is the main added value of 3Ccar for your organisation? "Indeed, I am involved in this project. The three C's stand for comfort, control and cost-effectiveness. It is headed by Infineon and aims to address the vehicle control architecture and its subsystems in order to achieve the next level of efficiency of electrified cars. Such a project with its cross-domain, cross-disciplinary critical mass has significant benefits for us as a research-oriented SME, in terms of knowledge, experience, expertise, contacts and so on. It is a project where the semiconductor and (embedded) software domains are complementary and essential to a successful outcome. On the other hand, I also think it is valuable for ARTEMIS to continue concentrating in parallel on its domain since there are some projects that benefit more from a highly specific

focus. The key should be to select the best projects for funding, whether in an ARTEMIS or ECSEL perspective, those that have a real chance to strengthen the European market and make it globally competitive. After all, we are talking about significant amounts of public money and we have to make sure that gets used in the best way."

In your opinion, what are the main challenges we face in the field of embedded systems in the coming years? "I guess the current SRA deals with this in quite a bit of detail. I would recommend a good read of that. But certainly autonomy and connectivity are two. And in this respect, we have to ensure that we have re-usability, dependability, and security. Altogether, the major trends in embedded Cyber-Physical systems are driven by embedding intelligence, connecting and distributing intelligence (internet of things, cloud and fog technology, digital platforms), as well as making intelligence available at any time and anywhere (e.g. service-orientation). But with things moving at such a dynamic and fast pace, you never quite know what challenges may confront you. We have to be prepared for this and that requires organisational flexibility, too."

And who would you like to hand over the baton to and do you have any particular question to this person? "Yes, I would like to hand over to Ronald Begeer, Programme Manager for Research at Royal Philips Electronics". I would be happy to learn how the healthcare domain might benefit from recent advances in autonomy.

Your musical choice? "Well, we take a lot of strengths from the US … and in my musical choice I would also take one of the legends, Bruce Sprinsteen. Be tougher than the rest. Full-on driving determination. And if things go wrong, then why not a bit of Monty Python's 'Always Look on the Bright Side of Life', because when things do go wrong, and they occasionally do, then why worry. Stay optimistic, stay positive."