5th edaBarCamp „No.5 is alive!“

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1 Artikel

A dialogue about the edaBarCamp by Bodo Hoppe and Florian Leber

Florian: I didn't realize how fast time passed by. It's been almost 2 months since the edaBarCamp took place.

Bodo: It was just before the corona crisis turned all our lives upside down. The edaBarCamp was a great 2-day-event we had in our lab. Since it is the 5th edaBarCamp obviously run mainly by scientists and engineers it was called "No.5 is alive!”. With more than 68 participants from industry, research and of course many IBMers, it was the biggest edaBarCamp by far.

Florian: It was really great that so many participants attended. Especially because the

format was unknown for many of them: The edaBarCamp is a barcamp for Eda. Eda stands for Electronic Design Automation and refers to software tools (e.g. graphic editors or generators) for the development of microelectronic circuits. This is well known to us engineers, but the topic "barcamp" is not. A barcamp is an open conference with open workshops, that means everybody can participate and contribute, e.g. by holding a session. So, the edaBarCamp was created on the event itself: The schedule, which topics, etc. were defined by the participants. At first, I was worried that something like this would not work for us - but it turned out different.

Bodo: The special thing about the edaBarCamp is that it is a network of industry, university and research. I call it the wild little daughter of the Edacentrum. It was a great enrichment for all IBMers, which came from different areas of hardware development such as chip and packing development, from disciplines like logic design, verification and physical design of the fastest microprocessors in the world as well as the according packaging designs that make our systems. It turned out that there is a lot of overlap of the problems we face in our daily work as it is being researched by the participants present in the workshop. These provided a lot of starting points for exchange, discussions and possible collaborations.

Florian: But the edaBarCamp was not only about presentations and the technical exchange in the sessions. There was also a lot of opportunities for interaction: There was a lot of room for networking, discussing new ideas and considering possible cooperation. A great starting point were often the sessions of the other participants. In order to facilitate the first steps into networking, we have also offered an interactive Picture-Wall. This is a touch display on which you can view information about other participants. Remarkable is that the software was developed by Markus Dobler himself, many thanks for that.

Bodo: Eda is a very central and wide-ranging topic spanning the development of microelectronics. Therefore, we have defined three general topics for this edaBarCamp: Continuous HW/SW Engineering, Open Hardware and AI for EDA-EDA for AI. I was so excited in the session pitch. We asked ourselves upfront if it will work, if we will get enough topics and if they will be well received. I got goosebumps – the moment thirty hands raised when the first topic was introduced with an elevator talk. That was the moment I felt it will be a success! The day was quickly organized and after 30 minutes the day was packed with sessions distributed depending on interest in rooms of different sizes. There were deep technical topics but also topics like "how do we express feelings with code?".

The atmosphere of the session pitch was extremely positive. Thanks to Gregor Nitsche's great moderation and the active participation of everyone in the Session Pitch, everyone got involved and contributed.

Florian: By the way: The sessions themselves are also very unique. At classical conferences only successful project results are allowed to be presented. At the edaBarCamp this was different: The focus was on presenting new ideas or even just discussing the problems in general, such as in "AI for Automation of Analog Design". Interesting were also the

sessions, which provocatively took a counter position. For example, a predicted fall of AI was intensively discussed in “AI does not match for eda”. All this gave the sessions a special feeling, as there was less frontal presentation with more interaction and participation. When I think about it, I still feel the enthusiastic mood and a special atmosphere!

Bodo: With me being a verification engineer at heart, I was particularly happy, that Philipp Wagner came all the way from Cambridge, UK. He is co-founder of the Free and Open Source Silicon Foundation (FOSSi) and also maintainer of cocotb, a Python based test bench library for hardware verification. Right before the barcamp, Marius Hegele, a student from the Duale Hochschule, created a prototype with Python connecting to our verification environments and we are very interested in integrating cocotb into our verification environments. Whenever the questions come up, should we treat Hardware Verification like hardware or software verification? Should we use domain specific languages like System Verilog just created for the purpose of hardware development or build on widely accepted software languages such as Python or C++. Should a fixed API be defined for higher abstraction levels such as transactions as it is done in UVM or should we rather document best practices? And Holger Horbach and Philipp discussed this for our example further and since the session was over, we watched them carrying the flip chart outside in the open space to continue the discussion.

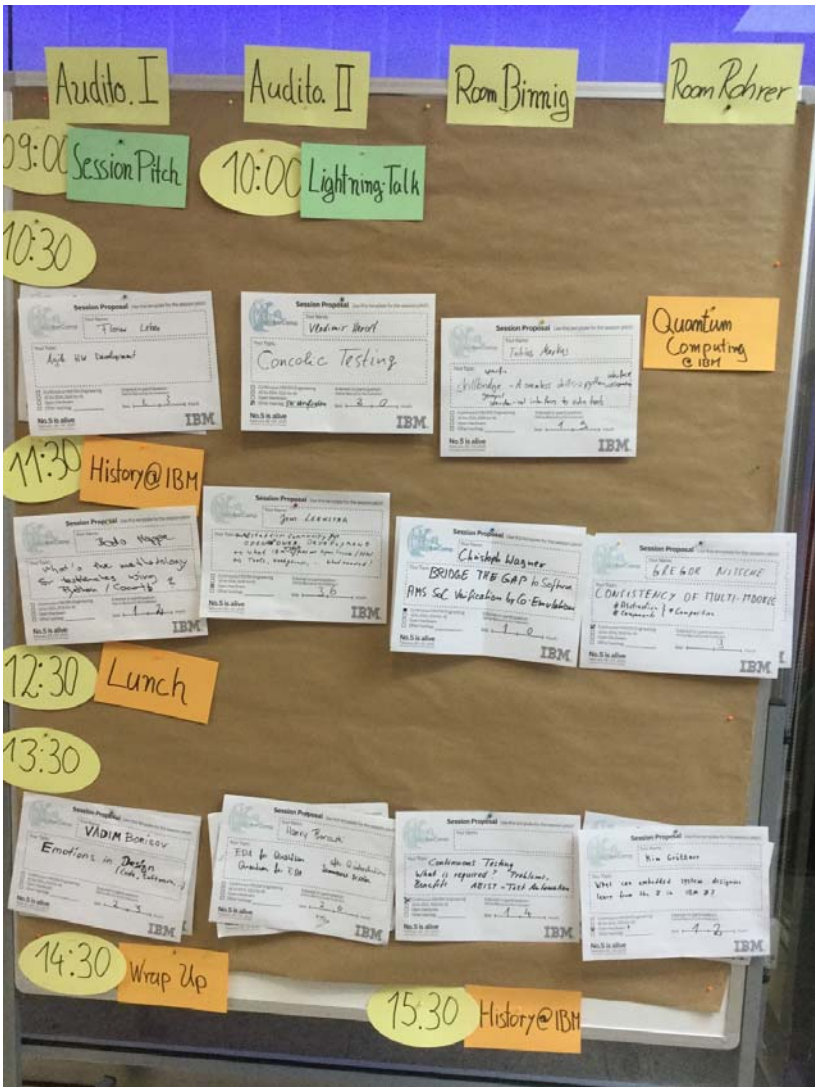
Florian: In addition to these great sessions we also offered some worthwhile program items for the participants. There was a poster session, where everyone had the opportunity to present a topic (poster) of their choice. We had in total 6 posters on various research topics and a lot of discussions. There was also a Future Search Café. This was an open area, designed like a living room, with sofa, carpet and floor lamp. It was used as a creative space and some new ideas were generated there. Especially exciting were the small, impromptu sessions in the Future Search Café where people participated spontaneously. In the evening

we enjoyed the social event at the brewery. With Schweinshaxe and Schönbuch beer we all could get to know each other privately. So we spent nice and sociable hours there.

Bodo: In the morning of the second day, we all met again in the Auditorium. We were curious what would happen today. To our surprise, many new topics surfaced - some of them probably inspired by sessions of the previous day such as "Quantum Computing for EDA?". With the remaining topics that we were not able to hold on the day before, a packed agenda was formed. And as we thought on the first day it couldn't get any better, a lot of very interactive sessions took place, especially the Open Hardware Session caught a huge interest: What does the future of Open Hardware look like? How can we use it? Which Open Hardware development tools do we need to make this possible? How do we as IBM deal with OpenPower specifically with patent rights?

Florian: On the second day we also offered two alternative program items parallel to the sessions: 1) The participants could take part in a workshop about IBM Quantum Experience and got an introduction to Quantum Computing. 2) A tour of the History@IBM exhibition with more than 100 years of data processing - from the first punch card machines and tube computers to the todays known architecture. Once again it was very popular and the

participants were enthusiastic about it - some of them did not want to stop.



Bodo: At the end we all met in the foyer and summarized our event. Everyone could give feedback on post-its: What they feel, what they take home and especially ideas for improvements. Many participants shared their impressions. Everybody was very inspired and had ideas in their mind to follow up, once back in our jobs. For example, the discussions about the reliability features implemented into our System Z were certainly inspiring, whether some of these concepts should be considered for reliable designs based on the Risc-V architecture. Which made my day given that I am a proud System Z hardware developer since many years. By the way the Z in our System Z stands for zero downtime.

Florian: We have also received a lot of good feedback about the Barcamp format itself. The participants experienced the atmosphere as very good and described it with "relax" and "equal". I am especially happy about this, because that was exactly our aim: A safe environment where everyone feels comfortable and confident to get involved. We also

received good feedback on the organization. It all worked out very well and so I would like to thank everyone who made this event happen. Special thanks to the organization team of the edaBarCamp: Gregor Nitsche, Georg Gläser, Kim Grüttner and Dieter Treytnar. I also want to thank you, Bodo - you have made many things possible.

Bodo: Thank you Florian especially for your whole organization. Passing IBMers also noticed the feeling and verbalized it: A very open atmosphere and very active exchange. I guess we were too loud and laughing a lot. Also many thanks to Sybille Schaefer and Dirk Allmendinger, who helped to get everything organized on site.

Florian: Finally, I would like to say one more thing: It is a pity that we are all currently in the home office and therefore interactive barcamps are no longer possible. I already miss ad hoc sessions, networking, open space and the many interactions...

Bodo: Well, but a BarCamp can work remotely! We have been working in remote teams across the whole world for about 20 years, we have already gained a lot of experience. And now we are in the middle of organizing interactive workshops with remote participants. We believe that even highly scalable interactive sessions based on Liberating Structures can work. As long as we don't except to happen it the exact same way, it can be highly inspiring,

effective and goal-oriented to unleash our creative minds! We will see how the sixth edaBarCamp will be held. I will be there for sure where remote or in person.

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A dialogue about the #edaBarCamp of Bodo Hoppe and me. When I think back I still get goose bumps. It was really cool! #edaBarCamp #quantum #openpower #riscv #ai #barcamp