

# A brief report on ABZ2010

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## 1 Background to the ABZ series

This is a report on the second ABZ conference, but the pedigree of ABZ goes back much further than just the first conference in London in 2008.

The longest line that can be traced for ABZ goes back 24 years to the first Z meeting, ZUM86 (Z Users' Meeting 1986), organised by Ib Sørensen and held at the Oxford University Computing Laboratory. Meetings were also held in 1987 and 1988, and then in 1989 the first meeting (called the Z User Workshop) was held that produced “proper” proceedings (the first meeting had no published proceedings and the second and third produced OUCL internal reports), published by Springer-Verlag in their Workshops in Computing series.

Meanwhile, B had arrived on the scene and had its first meeting in Nantes in 1996. There were further meetings held in 1998 and 1999, both in France.

Then, in 2000, the first ZB conference was held at York. There were further ZB meetings held in 2002, 2003 and 2005.

Meanwhile, even before B had emerged, ASM had arrived on the scene and a first meeting on this formalism was held in 1994 in Hamburg. By the end of 2007 there had been 14 ASM (or, under its previous name, Evolving Algebras) conferences in France, Germany, Italy, Norway, Spain and Switzerland.

Finally, in 2008 in London at the BCS, the first ABZ meeting was held, bringing together three main state-based specification languages (ASM, B and Z) under one roof for the first time.

This year's ABZ in Canada held a further development, though. If you look very closely you can see that the “A” in ABZ is actually made of two copies of the letter because, the final piece (so far) in our jigsaw, Alloy joined (even though it had been around since 2000).

For a complete list of meetings and publications you should look at [formalmethods.wikia.com/wiki/Z\\_User\\_Meeting](http://formalmethods.wikia.com/wiki/Z_User_Meeting) (and similarly for B, ASM, Alloy and VDM) and the pages referenced therein.

## 2 ABZ2010: when and where

The latest meeting (see [abzconference.org](http://abzconference.org)) was held between 22nd and 25th February 2010 in the Orford Arts Centre near the beautiful village of Orford

in the Eastern Townships of Quebec. The meeting was held during the winter olympics, though they were (luckily?) several thousand kilometres away in Vancouver, and so we had the extra fun of braving the Canadian winter—though it did seem much warmer than I expected it to be.

### 3 Notable moments during ABZ2010

Since the proceedings are all available if you want to read them (published in the LNCS series by Springer-Verlag, number 5977) I'll here just make note of somethings that were said in talks that I found interesting.

Daniel Jackson, in his invited talk, made the point that to get the utmost certainty (of correctness of a system) we have to circumscribe the system, and convince people to keep their requirements modest, and be prepared to weaken that if required. This makes that point that if correctness is your concern, you may need to be less demanding—some things are too intricate, perhaps, to get certainty about. This is a message that needs to be brought home to customers, but I suppose that in the rush to get a contract, developers tend to over-promise and under-deliver (to repeat a well-worn phrase), and might be afraid to rein-in a customer's inflated requirements.

Petra Malik, in her talk (the keynote Z paper) quoted one of her students: "The Alloy Analyser slaps you straight in the face!". I think the point here is that any security you might feel in the goodness of your model gets quickly dispelled once you ask to see counter-examples!

Daniel Jackson re-appeared to give us a brief version of a paper by Reynolds, the author being unable to attend. An interesting question was raised after the presentation: might we look forward to real-time safety checks on Java code that our web browsing causes us to execute? Daniel thought perhaps not, since the current two to three minute wait for an applet to be checked might be unacceptable. Perhaps, though, some trusted source might check applets and sign them off for our assured use, or perhaps pre-fetching of applets might be arranged, where applets are quarantined and then released to us once checked.

Sofène Tahar made two interesting points. Firstly, assumptions, especially when they stay in our heads, are a big problem because the correctness of an argument may depend on them and if they are not stated explicitly then systems that are apparently robust may fail if used in ways that invalidate the (unstated) assumptions—but, if your method is supported by theorem-prover, for example, then you won't be allowed to claim anything ("your theorem-prover will not let you go away") until you have shown everything [holds], including your assumptions. Secondly, he said "CEOs [of typical companies] don't listen to formal methods people when we ask to talk to them. But, after a disaster, they ask why another way [to build the system] was not used."

There were a few more notable quotes, and I'll finish this section with some of them, attributed correctly, I hope:

- Steve Dunne: "the work is basically Circus in a B dialect" and is motivated by "not being a convert to the new religion of Event B"

- Patrizia Scandurra “confirms that the UML world is bizarre and syntax-heavy and rich in vague, wordy descriptions—in short, obscurantism”
- Nestor Catano made the point that “securing software is not the same as securing systems” (perhaps the recent Prius problems are examples of that) and said that we should keep in mind the difference between “provably secure and usably secure”
- Michael Leuschel extolled the virtues of “proof-directed model-checking” and James Williams professed to be “checking models rather than model-checking”.

## 4 The future

Looking to the future, it is quite probable that ABZ2012 in Pisa will also include VDM, thus being formed of an even more complete stable of state-based specification languages and methods. However, there are no plans to change the name—brand stability is a precious thing these days, we are told. Perhaps in time, though, A2Z might be born (or even A..Z, especially for the aficionados).

It seems that at least the B crowd intend to have a meeting during FM2011 in Limerick, and perhaps others will follow their example.

Whatever the future holds, ABZ2010 was a great meeting, very well organised and run by Marc Frappier (even with an injury that meant he could not walk too well) and his team, held in a lovely setting and, I’m sure, fruitful in many ways for all involved. Thanks to all concerned!

And now, a few photos:



Michael Leuschel (L) and Egon Börger (R)



Steve Dunne and Frank Zeyda (L), Marc Frappier (R)



A cold delegate (L), the meeting venue (R), The road out! (C)



David Power, Mark Slaymaker and Nick Wu (L), James Williams (R)