Report on Z User Meeting (ZUM’94)

Jonathan Bowen
Oxford University
Computing Laboratory
Wolfson Building
Parks Road
Oxford OX1 3QD
Jonathan.Bowen@comlab.ox.ac.uk

Mike Hinchey
University of Cambridge
Computer Laboratory
New Museums Site
Pembroke Street
Cambridge CB2 3QG
Michael.Hinchey@cl.cam.ac.uk

ZUM’94, the 8th Z User Meeting, was held at St. John’s College, University of Cambridge, during the last week of June 1994. In a break with tradition, there was no Z User Meeting in 1993. With an 18 month break between ZUM’92 and ZUM’94, the venue was greatly enhanced by the more clement British summer climate than that which had been endured during the previous Z User Meetings, in the previously regular December slot.

The meeting was organized by the Z User Group, in association with BCS-FACS, and kindly sponsored by BT, Logica Cambridge and Praxis, with support from the Commission of the European Communities through the ESPRIT ProCoS-WG Working Group. Jonathan Bowen (Oxford University) was the Conference Chair, Anthony Hall (Praxis) was Programme Chair, and Mike Hinchey (University of Cambridge) acted as Tutorial Chair and Local Organizer, with much support from Rosalind Barden (Logica).

With 140 delegates from 15 countries attending, the numbers were substantially increased from previous years, and the conference was expanded to fill an entire working week. Half-day and full-day tutorials on introductory Z, B and the B-method, project management issues, dependable real-time systems, and object-oriented specification in Z, were presented on Monday and Tuesday, 27th and 28th June, and proved to be very popular indeed. The main sessions were held on Wednesday and Thursday, 29th and 30th June, and were followed by a half-day session on educational issues of formal methods, held in the 12th century School of Pythagoras on the morning of July 1st. This provided an opportunity for educators and industrialists to discuss their ideas on the teaching of formal methods in general, and Z in particular. Four full papers were presented, and there were a number of poster displays.

Fortuitously, the location and timing of the meeting added a historical flavour to the event. Forty-five years previously to the week, the first ever European conference on computer science was held in Cambridge, in which the early EDSAC computer, designed and constructed by Prof. Maurice V. Wilkes and his team at the University of Cambridge, was discussed. This historic event was commemorated with a highly entertaining after-dinner speech at the ZUM’94 conference dinner by the organizer of the 1949 EDSAC meeting, Prof. Wilkes himself. The London Science Museum and the Whipple Museum of the History of Science very kindly organized a small display of some historical memorabilia, including the core memory of EDSAC-2, and a fragment of Babbage’s Difference Engine.

During the main meeting, Mr. Robert Worden of Logica Cambridge gave the opening remarks,
likening the system development process to “Fermenting and Distilling” and concluding with his belief in the benefits of formal methods and object-orientation to software engineering, when appropriately applied. Dr. Jim Woodcock of Oxford University presented “The Formal Specification in Z of Defence Standard 00-56”, work that was performed by Formal Systems (Europe) Ltd. on behalf of the UK Ministry of Defence. Prof. David Garlan of Carnegie Mellon University described the approach taken at his university in “Integrating Formal Methods into a Professional Master of Software Engineering Program”. Dr. Mike Gordon of University of Cambridge described an embedding of Z in HOL (Higher-Order Logic) as a support tool for formal development in Z. Dr. Leslie Lamport of Digital Systems Research Center, USA, described “TLZ”, an extension to Z to make it akin to his own Temporal Logic of Actions (TLA), and hence suitable for use in the development of real-time and concurrent systems.

As well as these invited speakers, refereed papers on applications of formal methods, object-orientation, Z semantics, methods and concurrency were presented by speakers from the US, Australia and Europe. The published proceedings were issued at the meeting itself, an innovation which both saves overall time spent by the editors and which seemed to be appreciated by the attendees.

A session on standards was chaired by John Nicholls (Oxford University) including a status report of the proposed Z standard currently undergoing international standardization under ISO/IEC JTC1/SC22. George Cleland (University of Edinburgh) gave information on a survey undertaken for the UK government DTI (Department of Trade and Industry) to ascertain the best use of funding for the encouragement of the use of formal methods. Randolph Johnson (DoD, USA) reported on the activities of the ANSI X3J21 Technical Committee on FDTs (Formal Description Techniques) including Z and VDM, under the X3 Accredited Standards Committee on Information Processing Systems, which is overseeing the standardization of Z. It is also interested in future developments such as object-oriented extensions to Z and its possible standardization.

In addition to presentations, tools demonstrations, publishers’ stands, and a poster session on Internet access to information relevant to Z, and formal methods in general, on the global on-line World-Wide Web hypermedia system were also available during the meeting. In particular, for on-line details of Z User Meetings and other Z-related information, see:

http://www.comlab.ox.ac.uk/archive/z.html#meetings

We were even blessed with good weather throughout the week in Cambridge.

The AGM of the Z User Group was held in conjunction with ZUM’94. At this meeting, ZUM’95, the 9th International Conference of Z Users, was announced. This will take place at University of Limerick, Ireland, 7–8 September 1995. Jonathan Bowen (Oxford University) will be the Conference Chair, Mike Hinchey (New Jersey Institute of Technology) will be the Programme Chair, and Norah Power (University of Limerick) will be the Tutorial Chair and Local Organizer. Once again the conference will be organized by the Z User Group in association with BCS-FACS, with kind sponsorship from BT, Forbairt, Praxis and University of Limerick, and support from ProCoS-WG. The invited speakers will be: Jean-Raymond Abrial (France), David Lorge Parnas (McMaster University, Canada), John Rushby (SRI International, USA) and Jeannette Wing (Carnegie Mellon University, USA).